THE ROLE OF META-MOOD EXPERIENCE ON THE MOOD-CONGRUENCY EFFECT IN RECOGNIZING EMOTIONS FROM FACIAL EXPRESSIONS

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ABSTRACT

THE ROLE OF META-MOOD EXPERIENCE ON THE MOOD-CONGRUENCY EFFECT IN RECOGNIZING EMOTIONS FROM FACIAL EXPRESSIONS

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The aim of the current study was to investigate the roles of meta-mood experience on the mood congruency effect in recognizing emotions from neutral facial expressions. For this aim, three scales were translated and adapted to Turkish, namely Brief Mood Introspection Scale (BMIS), State Meta-Mood Scale (SMMS), and Trait Meta-Mood Scale (TMMS). The reliability and validity analyses came out to be satisfactory. For the main analyses, an experimental study was conducted. The experimental design consisted of the administration of the Brief Symptom Inventory, Pre- induction Brief Mood Introspection Scale, Trait Meta-MoodScale, and Basic Personality Traits Inventory in the first step, followed by a sad mood induction procedure and the administration of Post- Brief Symptom Inventory, and State Meta-Mood Scale in the second step. The last step consisted of the administration of the NimStim Set of Facial Expressions. For the main analyses regarding mood congruency only the

mislabelings of neutral faces as sad or happy were considered. The results revealed that among personality traits Agreeableness was negatively associated with perceiving fast displayed neutral faces as sad. After controlling for personality traits; however, unpleasant mood measured before the mood induction procedure was positively associated with perceiving neutral faces as sad. When perceiving slow displayed neutral faces as happy were examined, it was found that anxiety was positively associated with such a bias. After controlling for symptomatology, among personality traits, extraversion and conscientiousness were found to be negatively associated with mislabelling slow displayed neutral faces as happy. Among the evaluative domain of the SMMS, typicality was found to be negatively associated with such a bias; and lastly, among the regulatory domain of the SMMS, emotional repair was found to be negatively associated with mislabelling slow displayed neutral faces as happy.

Keywords: Brief Mood Introspection Scale, State Meta-Mood scale, Trait Meta-Mood Scale, Mood Congruency, Facial Emotion Recognition

ÖZ

YÜZ İFADELERİNİ TANIMADA DUYGUDURUMUNA BAĞLI OLUŞAN YANLILIKTA META-DUYGUNUN ETKİSİ

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Bu çalışmanın amacı meta-duygu deneyiminin yüz ifadelerini tanımada oluşan duygudurumuna bağlı yanlılık üzerindeki etkilerini incelemektir. Bu amaçla, Kısa Duygudurum İçe-Bakış Ölçeği (DİBÖ), Durumluk Meta-Duygu Ölçeği (DMDÖ) ve Meta-Duygu Özellikleri Ölçeği (MDÖÖ) Türkçe'ye çevrilmiş ve uyarlanmıştır. Bu ölçeklerin güvenilirlik ve geçerlilik analizleri istatistiksel olarak yeterli bulunmuştur. Ana çalışma için, deneysel bir işlem yürütülmüştür. Deneysel çalışma için ilk adımda Kısa Semptom Envanteri, indükleme önces Duygudurum İçe-Bakış Ölçeği, Meta-Duygu Özellikleri Ölçeği, ve Temel Kişilik Özellikleri Envanteri uygulanmıştır. İkinci adımda üzgün duygu indüklemesi ve indükleme sonrası Duygudurum İçe-Bakış Ölçeği ve Durumluk Meta-Duygu Ölçeği uygulanmıştır. Son basamakta NimStim Yüz İfadeleri Seti uygulanmıştır. Duygudurumuna bağlı yanlılığın incelenmesi amacıyla yapılan analizlerde sadece nötr yüz ifadelerine verilen üzgün ya da mutlu cevapları göz önüne alınmıştır. Sonuçlara göre kişilik özellikleri

arasında Uyumlu kişilik özellikleri ile hızlı gösterilen yüz ifadelerinin üzgün olarak algınlanması ile negatif bir ilişki bulunmaktadır. Fakat, kişilik özellikleri kontrol edildiğinde, duygudurum indükleme sürecinde once ölçülen nahoş duygudurum ile nötr yüzleri üzgün olarak algılama arasında pozitif bir ilişki bulunmuştur. Yavaş gösterilen nötr yüzlerin mutlu olarak algılanması ile Anksiyete arasında positif bir ilişki bulunmuştur. Semptomlar control edildikten sonra, Dışa dönük ve vicanlılık kişilik özelliklerinin bu tür bir yanlılıkla ters ilişkişi olduğu bulunmuştur. Duruma bağlı duygudurum değerlendirmenin bir alt kolu olan duygusal tipiklik, yavaş gösterilen nötr yüz ifadelerinin mutlu olarak algılanması ile ters ilişkili olduğu bulunmuştur. Son olarak duruma bağlı duygudurum regülasyon süreçlerinden duygudurumu düzeltme özelliğinin de bu tür bir yanlılıkla ters ilişkili olduğu bulunmuştur.

Anahtar Kelimeler: Kısa Duygudurum İçe-Bakış Ölçeği, Durumluk Üst-Duygu Ölçeği, Üst-Duygu Özellikleri Ölçeği, Duyguduruma bağlı yanlılık, Yüz İfadelerini Tanıma

To my parents Serpil and Bahattin Kavcıoğlu

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CHAPTER I

INTRODUCTION

A mood makes manifest 'how one is, and how one is faring.' In this 'how one is', having a mood brings Being to its 'there'.

Heidegger (1927)

Tell me what you can hear, and then tell me what you see, Everybody has a different way to view the world

Iron Maiden (2006)

1.1 Mood

Mood is a concept that applies for everyone and that is always present. In a broad sense, mood may be defined as the affective background, and emotional color to our behaviors (Davidson, 1994). Although mood and emotion are two terms used interchangeably by lay people, as well as psychologists in order to allude to a particular aspect of affect, a distinction between these two terms is mostly based on referring to the duration and intensity of the affective state (Davidson, 1994; Ekman, 1994). Accordingly, moods are referred to longer lasting but milder affective states compared to emotions that are intense and of short duration (Wessman & Ricks, 1966). However, according to Ekman (1994), duration is not the base criterion in

differentiating moods from emotions. Ekman (1994) also proposes that moods are the affective background in that they lower the threshold for an emotion to arise. In other words, a person becomes more readily angry when in an irritable mood. Another distinction he made is that it is more difficult to modulate an emotion when it occurs during a relevant mood. Hereby, he claims that it would be much more difficult to regulate anger when it occurs during an irritable mood, compared to when it occurs during the absence of such a mood. A third distinction was made by Ekman (1994) based on facial expressions. Accordingly, moods do not own a unique, distinguishing facial expression as emotions do. Lastly, he claims that mostly there is no differentiating feature of calling forth a mood; whereas a specific event that arose an emotion can be mostly reported.

The last distinction between mood and emotion mentioned above was initially made by Morris (1992). Accordingly, moods are usually characterized as being "diffuse" or "global"; whereas, emotions are more "focal". The diffuseness of moods can be characterized as not being directed at a specific object; or lacking intentionality (Morris, 1992). That is, emotional states are object focused in terms of affect, appraisal and action readiness; whereas, mood states lack such a focus (Frijda, 1994). As a consequence of moods' lacking intentionality, moods have a pervasive and global influence on various variables (Clore, Wyer, Dienes, Gasper, Gohm & Isbell, 2001). For example, different from object focused features of emotion, moods tend to bias individuals' judgments (Clore & Parrot, 1991).

1.1.1 Mood Congruency

The diffuseness of moods, suggested by Morris (1992), is a widely agreed aspect of mood that differentiates moods from emotions. One theory corresponding to the lack of intentionality of moods, the dispositional theory of moods (DTM), suggests that, the basic feature of mood is that they procreate specific cognitions in order to make specific kinds of emotion-relevant appraisals (Siemer, 2001; 2005). Accordingly, being in a sad mood would result in an increased tendency to appraise situations as uncontrollable; whereas, being in an anxious mood would increase tendency to appraise situations as threatening (Siemer, 2005).

As mentioned above, moods are affective states that color one's outlook to the world. Having a positive outlook mostly depends on being in a positive mood, whereas, being in a negative mood would result in a negative outlook (Clore, 1994). A paradox exists by the distinction of emotions and moods, in that, moods, as mentioned before, are commonly defined as less intense, enduring and diffuse affective states which mostly do not have a preceding factor to occur. Moreover, moods have little cognitive content, in that people define their moods as being in a bad or good mood. According to Forgas (2001), the paradox here is that moods, compared to emotions, moods are less subject to conscious monitoring and control; although, their effects on various cognitive aspects, such as social thinking, memory, and judgments seem to be more durable, subtle and deceptive.

A general assumption that cognitive processes such as selective attention, interpretation and remembering information are influenced by one's current mood state, is referred to as *mood congruency hypothesis*. Accordingly, individuals are expected to retrieve positive memories and make positive judgments, during a positive mood; whereas, they are expected to retrieve negative memories and make negative judgments during a negative mood (Rusting, 2001). This hypothesis was derived from Bower's (1981) associative network theory, which states that memory is constructed as a "network" of emotional nodes. Moreover, emotion relevant memories, ideas and associations are connected to these nodes. In other words, the experience of a specific emotion activates the emotional node, which in turn results in spreading the activation to all information that is bound to that emotion node. Following this model, it is assumed that emotional experiences should result in emotion congruent thoughts/ideas and associations. Bower (1983, p.395) wrote that:

> "When conditions are strongly aroused, concepts, words, themes, and rules of inference that are associated with that emotion will become primed and highly available for use by the emotional subject. We can thus expect the emotional person to use top-down or expectation-driven processing of his social environment. That is, his emotional state will bring into readiness certain perceptual categories, certain themes, certain ways of interpreting the world that are congruent with his emotional state; these mental sets then act as interpretive filters of reality and as biases in his judgments."

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Based on this hypothesis, a person in a bad mood is likely to make negative judgments and/or retrieve negative memories, because the activation of negative ideas are due to their activation in the memory network (Rusting, 2001). A challenging problem with mood congruency, however, is that positive and negative moods do not create the same congruency effect. Accordingly, positive mood leads to a more powerful congruency than negative mood (Isen, 1984). One possible moderator in this asymmetry of positive and negative moods in terms of congruency is attributed to mood repair, which stands for an individual's attempt to rebound from a negative mood to a positive mood (Fiedler, 2001). Moreover, a study conducted by Smith and Petty (1995) has found that inducing negative mood to low and high self-esteem individuals had different affects on mood congruency. The task was to generate thoughts in response to a TAT card, after a sad mood induction. The results regarding self-esteem indicated that when high self-esteem individuals were induced a negative mood they tended to react in counteremotional thinking styles, which was suggested by the authors as a result of reducing unpleasant feelings. On the contrary, low self-esteem individuals were found to be more prone to negative memories and thoughts.

1.1.2   Mood Induction

Cognitive theory assumes that the core vulnerability to depression comes from cognitions that are dysfunctional (Beck, 1967). In order to imitate dysfunctional cognitions, and study the psychological effects of mood on behavior (van der Does, 2002), numerous studies have used mood induction procedures with different techniques (Westermann, Spies, Stahl, & Hesse, 1996). In general, mood induction

can be defined as using a variety of psychological techniques, such as music, movies, or memories, to induce a specific mood in an individual (van der Does, 2002). A meta-analysis conducted by Gerrards-Hesse, Spies and Hesse (1994) examined mood induction procedures and found that imagination of sad/happy moments of one's life, watching a sad/happy movie segment or reading a sad/happy story, giving feedback of success or failure were the most effective procedures in inducing sad/happy mood to non-clinical subjects. Moreover, the film/story procedure was found to be equally effective in both inducing sad and elated moods.

According to Niedenthal and Sutterland (1994) the emotion-congruent perception in the visual field should be increased by emotions, resulting in quicker or more accurate detection, identification, or classification of emotion-congruent stimuli, such as words. Many studies have shown a mood congruency effect based on mood induction procedures. An experiment conducted by Martin (1986) in which participants' emotional thoughts and feelings were activated, followed by rating ambiguous statements about a person revealed that participants' judgments were biased depending on their affective experiences induced by the experimenter. Specifically, participants who were induced a happy mood rated the ambiguous statements about the person more likeable than did participants who were induced a sad mood. This experiment is important in that it shows how prior activation of specific mood states 'contaminate' judgments later on. Clore (1994) claims that, for emotions to be functional it is not enough to just feel them, but such a feeling should also carry distinguishing information to the person. He suggests that whether the

emotional experiences convey information or misinformation is related to how one perceives that experience. Gilboa-Schechtman, Revelle and Gotlib (2000) examined the effects of mood congruence using an emotional stroop task and found sad mood induction had a specific effect on negative-emotion words; whereas, happy mood induction had an effect on positive-emotion words. In other words, affective states, whether positive or negative, increase attention selectiveness to mood-congruent materials.

1.2   Meta-Mood Experience

Differences among individuals exist in terms of their skills about identifying and regulating their moods, as well as using moods as a means of information to behave in an adaptive manner (Salovey, Stroud, Woolery & Epel, 2002). In a general sense these kind of skills are aggregated under the caption of *emotional intelligence* (Salovey & Mayer, 1990), which emphasizes the importance of emotion regulation and the ability to elaborate about one's emotions, or as the authors call it, "the ability to reflect upon one's moods" (Salovey, Stroud, Woolery & Epel, 2002). Reflecting about one's emotions, which consists of monitoring, evaluating and regulating, is a cognitive task that individuals engage in continuously (Mayer & Gaschke, 1988). Accordingly, Mayer and Gaschke (1988) claimed that reflecting upon moods is a response to the direct perception of mood, which they call the meta-mood experience. In short, meta-mood experience integrates cognitive tasks about mood such as monitoring, evaluating and from time to time act of changing moods.

Therefore, meta-mood experience can be thought of integrating mood related cognitions, in that, perceiving such cognitions as functional. The importance of such an experience lays behind that meta-mood, different from mood itself, is under the direct control of the individual which may directly modulate mood (Mayer & Gaschke, 1988).

Regulation of mood occurs either at conscious or unconscious levels. However, at a reflective level of mood regulation, according to Mayer and Gaschke (1988) individuals are aware of both their mood and their thoughts about the mood, which is the meta-experience of mood. Statements such as "I should not feel this way" or "I'm thinking good things to cheer myself up" are examples of reflective thoughts (Mayer & Stevens, 1994). As mentioned before, meta-mood experience is important in that it is under the control of the individual. Therefore, when individuals judge their emotional reactions as maladaptive, as it is commonly encountered in a person's social fields, having adaptive cognitions towards emotional reactions becomes more important (Mayer & Stevens, 1994).

In order to measure moment-by-moment changes in thoughts about mood, Mayer and Gaschke (1988) developed the now called State Meta-Mood Scale, which was improved and became more comprehensive later on (Mayer & Stevens 1994). Accordingly, two main domains emerged from their studies, Evaluative Experiences and Regulatory Experiences. The Evaluative domain consists of four sub-domains, Clarity, Acceptance, Typicality, and Influence. The Regulatory domain on the other hand, consisted of Repair, Dampening and Maintenance of mood. To elaborate,

Clarity and Acceptance were found to be frequently correlated with criterion scales, such as Alexithymia subscales of identifying and current emotions and describing current emotional states. Moreover, both sub-domains were found to be related with lower traits of borderline and negatively related to wishful thinking and self-blame. What differentiates Clarity from Acceptance was found to be their relatedness to regulatory processes. Clarity, for example, was found to be highly unrelated to mood regulation, whereas, Acceptance had moderate correlations to fewer abilities of Repair, but was highly related to Maintenance of mood. That is, one characteristic of people high in Clarity and Acceptance is the skill to know what they are feeling. However, those who are accepting their mood are more prone to maintain their current mood instead of trying to change it. Similar to people high in Acceptance, Typicality also leads to maintaining a current mood especially if it is a pleasant mood. Lastly on the Evaluative domain, Influence was found to be negatively correlated with mood recognition, however was positively correlated with daydreaming and borderline traits, and with the perception that problems are out of one's control. The authors suggested that this might indicate that a too influential mood might be perceived as out of one's control which in turn might lead to daydreaming (Mayer & Stevens, 1994).

When the Regulatory domains are examined, it was found that Repair was positively correlated with positive thinking of Folkman and Lazarus (1985) coping styles; whereas, Dampening was correlated with negative thinking. Moreover, it was found that individuals high on Repair were also high in Borderline traits, Empathic

Distress, but low on Emotion Identification, although they had reported more positive thinking. The authors suggested that in general individuals who Repair and Dampen their moods were actively changing their mood in a suitable direction. The Maintenance sub-domain, however, was not found to be correlated with other scales, but was strongly correlated with Clarity and Acceptance sub-domains of the Evaluative domain.

Whereas the State Meta-Mood Scale measured moment-by-moment changes in reflective mood, Trait Meta-Mood Scale (TMMS) was developed in order to measure more stable individual characteristics with respect to meta-mood experience (Salovey et al., 1995). The trait version of the meta-mood scale consisted of three domains, Attention, Clarity and Repair, namely. The Attention subscale referred to an individual's perceived ability to attend to moods. The Clarity subscale, on the other hand, referred to the perceived ability to differentiate among emotions and moods. Lastly, the Repair subscale, referred to an individual's perceived ability to regulate emotions. Studies have shown that TMMS was related with physical health and reactions to psychological stress. Accordingly, individuals with higher perceived ability to discriminate among emotions (Clarity) were better in overcoming an induced unpleasant mood and reported less ruminative thoughts, compared to individuals low in Clarity (Salovey et. al, 1995). Goldman, Kraemer and Salovey (1996), found that high levels of Attention was associated with higher levels of physical symptoms; whereas, higher levels of Repair was associated with less reported illnesses. It can be concluded that individuals' ability to be clear about their moods and regulating negative moods may be efficient characteristics in relation to

perceived stress and health related behaviors (Goldman, Kraemer, & Salovey, 1996). However, on the contrast, attending too much to emotions may lead to a negative outcome. For example, Goldman, Kraemer, and Salovey (1996) reported that high Attention scores on the TMMS were related to higher reports of physical symptoms under conditions of general distress. Repair, on the other hand, had a protective function, in that, in relation to increasing perceived distress, individuals who scored low on Repair reported more illness, than individuals who scored high on this scale. That is, individuals' effort in recovering from a negative mood to a positive one was related to lower reports of illness.

Regulation strategies of moods depend on and may change accordingly with one's mood and how one evaluates that mood (Mayer & Gaschke, 1988). Palmer, Gignac, Bates, and Stough (2003) studied the subtle associations among Trait Meta-Mood factors and found through a mediation analysis that Clarity mediated the association between Attention and Repair. Their findings supported the notion of Maritnez-Pons (1997) which stated that it is not possible to clarify feelings without a minimum amount of Attention to feelings, and that, it is not possible to Repair emotions without being able to Clarify emotions (Martinez-Pons, 1997; cited in Palmer, Gignac, Bates, & Stough, 2003). Ramos, Fernandez-Berrocal, and Extremera (2007) who examined the associations between meta-mood experience and intrusive thoughts and the adaptation to an acute stressor found that high levels of Repair was associated with lower levels of intrusive thoughts. Moreover, high levels of Clarity were found to be associated with lower scores on depression. Again, Clarity had a protective role towards personal distress. Accordingly, high levels of Clarity were

associated with lower levels of personal distress; whereas, high levels of Attention were associated with high levels of distress. The experimental design of the study consisted of watching a stressful slide and video presentation on sexual assault. The results revealed that individuals who reported high Attention to emotions also became more involved with the feelings of the character in the movie; thereby, experienced more discomfort towards others' suffering. Individuals who reported higher Clarity to emotions, on the other hand, experienced less discomfort. The authors claimed that, this might be due to a higher ability in understanding of one's and others' suffering. This notion was supported as individuals with higher Clarity were also more efficient in perspective taking. Supporting the notion that understanding the underlying reasons of emotional distress is a key feature in decreasing that distress, people high in Clarity were also high in Repair, showing that perspective taking and regulating emotions go hand in hand (Ramos, Fernandez-Berrocal, and Extremera, 2007).

1.2.1 Meta-Mood Experience and Psychopathology

Research examining the relationship of Meta-Mood and psychopathology has increased in recent years (Fernandez-Berrocal & Extremera, 2008). A study conducted by Rude and McCarthy (2003), which analyzed the associations between factors of Trait Meta-Mood and depression revealed that depressed participants had significant lower scores in Attention and Clarity, but, higher scores on thought suppression, compared to non-depressed participants. Moreover, they found a distinguishing factor between individuals with high and low depression

susceptibility. Accordingly, high levels of thought suppression and low levels of emotional Clarity was a distinguishing factor. An important finding about the interrelations of Trait Meta-mood factors came from the study of Thayer, Rossy, Ruiz-Padial, and Johnsen (2003) who studied gender differences in low and high depression severity groups with regard to meta-mood. Accordingly, in the low severity group, although no gender differences were observed in terms of depression, men and women differed in emotional attention, women reporting higher attention to moods than men. In the high severity group, on the other hand, women reported more depressive symptoms than men. In terms of trait meta-mood, women reported higher attention to moods and lower ability of emotional repair. Both genders reported less emotional clarity compared to low intensity group. When the authors statistically controlled for the attention items of the TMMS, it was found that women reported more depressive symptomatology, such as suicidal thoughts, sadness and tiredness, compared to men. The authors claimed that, a balance between higher Attention to emotions with sufficient levels of emotional Clarity and emotional Repair lead to positive outcomes in terms of higher "emotional processing of the information"; therefore, less depressive symptomatology. However, a combination of high emotional Attention with inadequate levels of Clarity and Repair might result in an "emotional spiral" as a consequence of a lack of coping strategies with rumination. Extremera, and Fernandez-Berrocal (2006) studied the relationship among Meta-Mood factors, anxiety, depression and mental, social, physical health in university students. Their results revealed that Attention to emotions was positively related to high anxiety levels, depression and to low levels of emotional, social functioning and

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mental health. On the other hand, high levels of Clarity and Repair had associations with low levels of anxiety, and depression. The authors concluded that Meta-Mood was a predictive component regarding its relation to anxiety, depression, mental and physical health in university students. Similarly, Fernandenz-Berrocal, Alcaide, Extremera, and Pizarro (2006) found that components of Meta-Mood were negatively associated to levels of depression and anxiety, in that, higher levels of Clarity and Repair were related to lower levels of depressive and anxiety symptoms; thus, better psychological adjustment. Moreover, Repair was also positively related to self-esteem. However, even after controlling for self-esteem, meta-mood was still effective in psychological adjustment. These results provided support to the hypothesis that emotional abilities are of importance and are unique protective factors against psychological maladjustment. Wong Oei, Ang, Lee, Ng & Leng (2007) examined the relation among personality trait and meta-mood on state and trait anxiety in Singaporean and Australian samples. Accordingly, they found that Neuroticism and Emotional Repair predicted state anxiety in both samples; in that, higher levels of Neuroticism and lower levels of Emotional Repair were predictors of higher levels of state anxiety. Moreover, Neuroticism, Emotional Repair and Extraversion were predictors of trait anxiety for both samples; in that, higher levels of Neuroticism, and lower levels of Extraversion and Emotional Repair predicted higher levels of trait anxiety. Furthermore, it was also found that lower levels of Emotional Clarity were a predictor of trait anxiety for the Singaporean sample.

1.2.2 Meta-Mood Experience and Personality

Until recent research, there was a limited literature on the relationship among personality traits and Meta-Mood experience (Wong, et al., 2007). In a longitudinal study, Kokkonnen and Pulkkinen (2001) found that the relationship between personality traits and emotion regulation strategies are mediated by one's current mood and mood evaluation. Their results revealed that Neuroticism led individuals to decline attempts to Repair, Dampen or Maintain mood regulation strategies, especially for men. Moreover, Warwick and Hettelbeck (2006) found a moderate correlation of Extraversion and Agreeableness on total scoring of the TMMS. A cultural study, examining differences between Singapore and Australia in terms of relationships between personality and meta-mood experience, and personality's and meta-mood experience's relationship with life satisfaction and anxiety found that in an individualistic culture, i.e. Australia, lower levels of Neuroticism was a significant predictor of Emotional Clarity (Wong, et al., 2007). On the other hand, in a collectivistic culture, i.e. Singapore, a significant predictor for Emotional Repair was higher levels of Extraversion. Moreover, Emotional Repair was found to be an important predictor for life satisfaction in both cultures. Wong et al. (2007) also wound specific relations among the variables. For example, for both cultures, only Agreeableness significantly predicted Meta-Mood experience.

1.3 Facial Emotion Recognition

Emotion recognition can be defined as an individual's ability to accurately identify emotions from faces, music, or designs in a broad sense (Mayer, Caruso &

Salovey, 1999); or accurately perceive, recognize and interpret the emotional state of other individuals in a more specific sense (Banziger, Grandjean, & Scherer, 2009). The ability to recognize and distinguish among facial expressions involves information processing systems (Ekman, 1992). An important feature for individuals to be characterized as emotional competent, according to Scherer (2007), is to be able to produce emotions and to be able to perceive emotions. The ability to recognize someone's facial emotional expressions correctly is important for healthy interpersonal relationships (Ekman, 1992). However, before one can use facial expressions as a communication source to understand emotional states in others, one must be able to recognize and discriminate among various facial expressions. Studies examining the ability of recognizing emotions from facial expression have contributed to the literature in terms of the universality of emotional expression, cultural and gender differences, as well as the effects of psychological problems on this ability. Although there are various studies investigating individual differences in terms of personality on the recognition of facial expressions, the results are inconsistent. Matsumoto et al. (2000) claim individuals who show higher abilities in emotion recognition should be better in social situations, having a more consciousness or concern. As such a skill is an important aspect of nonverbal communication with others, accurately recognizing emotional expressions would contribute to better environmental adaptation and manipulation. As Matsumoto et al. (2000, p. 180) claim:

> "Because ERA [Emotion Recognition Ability] is an important part of our daily lives, it is easy to consider how it

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should be related to various personality constructs, such as those specified in the five factor model. Extraversion, for example, is associated with stimulation seeking from others and the environment. As such, extraverts should be more willing to take in data concerning the emotions of others, being more interpersonally conscious of others in the environment. Individuals who score high on neuroticism, however, tend to be emotionally avoidant; because they are prone to experience negative emotions, they should have a tendency to avoid the recognition and awareness of others' emotions. The personality construct of openness is similar to extraversion in the sense that open individuals tend to be curious and interested in stimulation; they should be more attendant to the emotions of others. Conscientiousness is related to cooperation with and attending to others; conscientious individuals are more thorough, reliable, and efficient. They should be better at recognizing emotions because they are more attentive to details, and are better able to participate in such emotion judgment tasks."

Regarding the influence of personality traits on emotion recognition ability, Terracciano, Merrit, Zonderman, and Evans (2003) examined sex differences and the role of personality traits in Caucasian and Asian samples. Although sex differences in emotion recognition of facial expression was only found in the Caucasian sample, personality traits, especially openness to experience and a lesser extend of conscientiousness were found to be related to emotion recognition in both cultures. The study also included examination of emotion recognition from sentences. Again only openness to experience was found to be associated with recognition of

emotions. These results suggested that being open to experiences is an important personality trait in that it influences affective processing. Moreover, that, women were better in emotion recognition than men only in the Caucasian sample, showed that culture was an important variable in emotional processes; in that, culture shaped emotional processes in women differently than men.

Facial expressions are used by individuals as a communication source in order to alter conversation topics to avoid conflict, to monitor subtle attitudes of others, and to monitor attempts to change emotional states or reactions of interactional partners (Mayer, Salovey &, Caruso, 2004). However, an increasing number of studies in this area have shown that under some circumstances such as depression, and anxiety, people may misinterpret facial expressions (Bouhuys, Geerts, Mersch, 1997). A study conducted by Gollan, McCloskey, Hoxha and Coccaro (2010) revealed that clinically depressed individuals had an attention bias towards less intense facial expressions displaying sadness compared to non-depressed individuals. Moreover, depressed individuals also misidentified other facial expressions as sad more frequently than the control group. To specify, subjects who were clinically diagnosed as depressed, displayed higher accuracy in identifying sad facial expressions, compared to control subjects. This was also true for facial expression displaying sad expressions with low intensity. Such a finding supported the emotion specific magnification of sad stimuli for depressed subjects. In other words, depressed individuals displayed a mood congruency to selectively attend to depression related information, such as sadness, even if the intensity of the expression was so low that it could not be inferred by control subjects. Reserach on

this topic, however, displays inconsistent results. A study conducted by Surguladze, Young, Senior, Brébion, Travis and Phillips (2004) found impaired recognition accuracy of depressed patients in labeling happy and sad facial expressions, when the display duration was short (100ms). This indicated no attentional bias to mood relevant information in depressed patients. The study consisted of 100ms and 2000ms durations of displaying facial expressions. Although, depressed patients had higher impairments in identifying sad, and to a lesser extent happy faces in the 100ms duration condition, no difference was found between patients and controls for the 2000ms duration condition in identifying facial expression. These results indicated that depressed patients showed less response bias to happy expressions; in other words, they less frequently identified happy and neutral faces as happy, compared to controls. Moreover, depressed patients that attended to the study also displayed a significantly lower ability in recognizing happy faces of medium intensity. The authors, thereby, concluded that the impaired ability to identify minor changes in facial expressions in depressed patients may be an indicator of impaired social functioning.

Not only depression, but other psychological disorders also lead to a deficit in perceiving facial emotion expression. Kessler et al. (2007) found patients with panic disorder had impairment in recognizing sad and anger. Moreover, panic disorder patients also had a tendency to interpreting non-anger facial expressions as angry emotions. Richards, French, Calder, Webb and Fox (2002) examined how socially anxious individuals classified emotionally ambiguous facial expression (morphed) images. Their results indicated that individuals high on trait social anxiety had a

tendency to classify morphed images as fearful more frequently than individuals low on trait social anxiety.

Individuals vary in certain ways when perceiving information from facial expressions. This variation also shows itself in the correspondence between the intended expression and the emotional information encoded by the perceiver (Niedenthal, Halberstadt, Margolin, & Innes-Ker, 2000). Besides the effects of psychopathology, a mood congruent bias in information processing exists in interpersonal relationships, which also effects the perception of facial emotion recognition (Hammen, 1992). Bouhuys, Bloem, and, Groothuis (1995) found that in healthy individual musical induction of sad mood temporarily interfered with the perception of emotional expressions. The authors used ambiguous facial line drawings expressing various intensive emotions. According to their results, healthy participants who were induced sad mood using music, perceived more rejection/sadness in less intensive expressions and less invitation/happiness in clear expressions.

The ability to perceive emotions from facial expressions maximizes social outcomes in that it promotes efficient interpersonal behavior (McArthur & Baron, 1983). It is important to investigate whether a mood congruent bias exist in facial emotion recognition in people with normal sadness because such a deficit may indicate proneness to clinical depression due to interpersonal difficulties (Lee, Ng, Tang, and Chan, 2008). Lee, Ng, Tang, and Chan (2008) found that healthy participants in a sad mood demonstrated a mood congruent biased perception

towards ambiguous facial expressions. In other words, participants in a sad mood - compared to neutral and happy mood participants - perceived facial expressions inaccurately, rating an ambiguous facial expression as sad. The authors argue that these results show an emotion specific biased judgment when people are in a sad mood, rather than the impairment of decoding facial expressions. The ability to perceive emotions from facial expressions maximizes social outcomes in that it promotes efficient interpersonal behavior; therefore, Lee et al. (2008) conclude that, one of the reasons of interpersonal difficulty people encounter may be due to a mood related negative bias in the perception of facial expression of emotions.

1.4 Aims of the Study

The current study was designed in accordance with two major goal. The first major goal was to identify the roles of Meta-Mood experience in mood congruency in perceiving facial expressions after a sad mood induction. In part for this, three measurement tools (Brief Mood Introspection Scale, State Meta-Mood Scale, and Trait Meta-Mood Scale) were translated to Turkish and the reliability and validity analyses of these scales were examined, which constituted the second major goal (see chapter 4).

The literature suggests that Meta-Mood experience is related to well-being and psychological adjustment. Opposing to Forgas' (2001) claim that moods are less exposed to conscious monitoring, Meta-Mood, is a term that stands for conscious evaluative and regulatory processes regarding mood states; therefore, it can be

concluded that various Meta-Mood components should influence individuals' cognitive contaminations after a sad mood induction. Moreover, as suggested by Fiedler (2001), mood regulation may influence mood congruency, in that individuals rebound from a negative mood to a positive one, thereby minimizing the mood congruency effect. Although studies examine the mood congruency effect in different populations (i.e. clinical and non-clinical), the underlying factors that influence mood congruency is not yet clear. Therefore, the current study suggests that Meta-Mood experience may be one of the underlying factors in mood congruency. For example, individuals who are better in discriminating among mood states (clarity) may show less levels of mood congruency, in that they may be more accurate in identifying other's emotional states. In fact, the clarity subscale of the SMMS was found to be correlated with empathic concern to others (Mayer & Stevens, 1994). Moreover, an individual's acceptance of his/her emotions which indicates awareness of a current mood state may block the effects of mood on cognitions, thereby preventing mood congruency. Mayer and Stevens' (1994) study revealed that individuals high in Acceptance were found to have a tendency to maintain a current mood rather than change it. Moreover, the study revealed that Typicality and Acceptance of moods, as well as Maintaining a current mood was correlated with pleasant mood. This may indicate that individuals are more prone perceive pleasant mood as Typical and accept Typical Moods and try to maintain such moods, rather than change them. Based on these findings, it can be hypothesized that individuals may try to maintain a pleasant mood even after a stressful event, thereby protecting self from the effects of the event. On the other

hand, being aware of the influence of a mood state was found to be correlated with fantasy-prone thinking, indicating that a feeling is out of one's control (Mayer & Stevens, 1994). Being influenced from a current mood, may be an indicator of changes in cognitions based on a mood state. Lastly, the authors suggested that individuals who Repair and Dampen their mood states were actively changing their moods in an appropriate direction. Repairers, were bouncing off from a negative mood, whereas Dampeners were trying to dampen a too good mood.

In the current study, participants were exposed to a sad mood induction procedure, followed by the assessment of their State Meta-Mood levels. Thus, individuals' evaluations and regulation strategies regarding their current mood was obtained. This was followed by a facial emotion recognition task in order to obtain the mood congruency effect in identifying facial expressions. The aim was to assess how individuals' evaluations and regulation strategies about their current mood influence mood congruency. The State Meta-Mood Scale was thought to be more useful in examining the roles of Meta-Mood Experience for two reasons. Firstly, compared to the Trait Meta-Mood Scale the SMMS is more comprehensive. The Trait Meta-Mood Scale consists of three components (i.e. Attention, Clarity and Repair); whereas, the State Meta-Mood Scale consists of four evaluative (i.e. Clarity, Acceptance, Influence and Typicality) and three regulation domains (i.e. Repair, Dampening and Maintenance). Secondly, the State Meta-Mood Scale measures moment-by-moment changes in individuals' cognitions about their mood states; thus,

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providing more information about one's cognitions about his/her mood after a mood induction procedure.

As psychological symptoms may interfere with mood congruency, the regression analyses regarding mood congruency were conducted by controlling for the measures of the Brief Symptom Inventory. Therefore, analyzes regarding mood congruency were conducted by controlling for participants' symptomatologies, such as anxiety, depression, negative self, somatization, and hostility. Before analyzing the below mentioned questions, however, additional analyzes prior to the main analyzes were conducted in order to examine the effects of personality traits and Trait Meta-Mood levels on psychological symptoms. Moreover, the associates of mood changes after the sad mood induction and accuracy of facial emotion recognition were investigated.

More specifically, the current study aims to answer the following questions:

After controlling for age and gender;

1. What are the associations among Trait Meta-Mood and Personality on Psychological Symptomatology?

2. What are the underlying factors influencing mood change after sad mood induction?

3. How does meta-mood experience influence mood congruency in recognizing neutral facial expressions after a sad mood induction?

Therefore, after controlling for age and sex, psychological symptoms, and personality traits:

3a. Does Emotional Clarity contribute to more accurate recognitions of neutral facial expressions after a sad mood induction?

3b. Does Emotional Acceptance block mood congruent biases in recognizing neutral facial expressions after a sad mood induction and have an opposite effect? In other words, will higher levels of Emotional Acceptance result in lower levels of mood congruent bias?

3c. Perceiving a current mood as Typical indicates awareness and insight of such a mood. Therefore; do higher levels of Emotional Typicality result in lower levels of mood congruent bias in recognizing neutral facial expressions? In other words, although induced with a sad mood, will higher levels of Emotional Typicality result in lower levels of mood congruent bias?

3d. Does Emotional Influence result in less accurate labeling of natural facial expression after a sad mood induction?

3e. If individuals are more apt to Maintain a pleasant mood, does Emotional Maintenance result in a lower levels of bias in recognizing neutral facial expressions? That is, although induced with a sad mood, will higher levels of Emotional Maintenance result in higher accuracy rates in labeling neutral faces?

3f. If emotion regulation minimizes mood congruency effect, do higher levels of Emotional Repair after a sad mood induction result in lower levels of mislabeling neutral faces?

3g. As the Dampening subscale measures attempts to decrease high levels of positive mood, no relation with sad mood induction, as well as mood congruency is expected.

CHAPTER II

STUDY I: PSYCHOMETRIC PROPERTIES OF THE BRIEF MOOD INTROSPECTION SCALE, STATE META-MOOD SCALE AND TRAIT META-MOOD SCALE IN A TURKISH SAMPLE

2.1   Introduction

Mood can be defined as an affective reaction to internal as well as external forces that encounter an individual during a period of time (Mayer & Hanson, 1995). According to Watson and Tellegen (1985), mood has two dominant dimensions, which they named Positive Affect and Negative Affect. Positive Affect was defined as the pleasure one derives from; whereas Negative Affect was conceptualized by unpleasant feelings that arise due to the activation of stress, anger or fear (Gençöz, 2000). Similar to these two dimensions, Mayer and Gaschke (1988) conceptualized two mood dimensions that were defined regarding the pleasantness factor of mood, and developed the Brief Mood Introspection Scale (BMIS). The BMIS consists of two mood states, Pleasant and Unpleasant, representing eight mood states each, yielding in 16 adjectives of mood states (happy, lively, loving, caring, calm, content, and active, under the Pleasant Mood factor; and peppy, jittery, nervous, grouchy, fed up, tired, drowsy, gloomy, and sad, under the Unpleasant Mood factor).

The BMIS was used in several studies as a general mood measure (Baumeister, Bratslavsky, Muraven, & Tice, 1998; Halberstadt, Niedenthal, & Kushner, 1995; Hall & Baum, 1995) as well as a manipulation check measure after

mood induction procedures (Mayer, McCormick, & Strong, 1995; Mayer, Allen, & Beauregard, 1995; Mayer & Hanson, 1995). Therefore, for the current study the BMIS was thought to be a good measurement tool to be used in the main study. In order to examine the validity of the BMIS, the Turkish version of PANAS was selected as a criterion measure due its two dimension similarity and good reliability and validity measures (Gençöz, 2000).

The second measurement tool which was translated and adapted to Turkish in the current study was the State Meta-Mood Scale (SMMS), developed by Mayer and Stevens (1994). The SMMS measures reflective levels of monitoring and regulating moods. Compared to trait scales the SMMS is an important measure in that it is more valid in measuring ongoing mood states. Moreover, reactions to mood states may suggest profiles of mood regulators (http://www.unh.edu/). Based on this notion, Mayer and Stevens (1994) suggest that individuals may evaluate and regulate their mood states with regard to their personality traits. To clarify, the ability to identify with an emotional experience of another person is defined as empathy. However, displaying empathy for another person is highly dependent on the subjects' emotional experience. Moreover, the regulation strategies one uses may also depend on how the emotional state to be regulated is experienced.

The SMMS consists of two meta-mood domains, Meta-Evaluation and Meta-Regulation which separately consist of four (Clarity, Acceptance, Typicality, and Influence) and three (Repair, Dampening, and Maintenance) sub domains, respectively (see chapter 3.2.3 for detail). Mayer and Gaschke (1988) suggested that

evaluations of mood were associated with personality factors and regulation strategies. Accordingly, Emotional Clarity and Acceptance was found to be negatively correlated with personal distress, but positively correlated with empathic concern for others. Moreover, Influence was positively related to inability to influence or predict outcomes in one's life, and negatively correlated with regulation strategies of Dampening mood. Clarity, on the other hand, was positively correlated with Dampening. This suggests that individuals who perceive their emotional states to be influential on their thoughts, showed lesser levels of Dampening a mood that was too positive. However, individuals who were able to clearly discriminate (Clarity) among their mood states, showed higher levels of dampening their moods. Moreover, Acceptability and Typicality were found to be negatively correlated to Emotional Repair, but positively correlated with Maintaining a mood state. As mentioned before, individuals were more prone to Accept a pleasant mood and perceive a pleasant mood as typical. Therefore, it is not surprising that individuals are also apt to maintain moods that are positive.

For the criterion validity of the SMMS Mayer and Stevens (1994) used the Alexithymia Scale (Taylor et al, 1985) and found good correlations among both scales' sub-domains. Accordingly, the Evaluative subscales of the SMMS, Clarity and Acceptance were found to be correlated with the Alexithymia subscales measuring the ability to identify present emotional experience, and the ability to describe those experiences (Mayer & Stevens, 1994). Therefore, in order to examine the criterion validity of the SMMS, the Turkish version of the Toronto Alexithymia

(Motan & Gençöz, 2007) Scale was considered to be used. Moreover, as a secondary criterion scales, the Turkish version of the Difficulties in Emotion Regulation Scale (DERS) (Rugancı & Gençöz, 2010) was also used, in which the Regulatory domain of the SMMS is expected to be correlated with sub measures of the DERS. However, the fact that the SMMS measures state characteristics in evaluating and regulating an ongoing mood must be taken under consideratio. That is, not very high correlations among the SMMS and DERS subscales is expected.

The Trait Meta-Mood Scale (TMMS) which was originally developed by Salovey, Mayer, Goldman, Turvey, and Palfai (1995) aims to measure individuals' beliefs about how they see themselves in terms of Emotional Attention, Emotional Clarity and Emotional Repair; in other words, individuals' perception about their emotional abilities. An increasing number of studies have analyzed the associations of sub-domains of the TMMS with psychopathology (Salovey, Stroud, Woolery, & Epel, 1996; Fernandez-Berrocal, Ramos, & Extremera, 2001), as well as, well being and health (Goldman, Kraemer, & Salovey, 1996; Extremera & Fernandez-Berrocal, 2002). (see Chapter 1.2 for more detail).

The 30-item short version of TMMS was adapted into different languages, such as German (Otto, Döring-Seipel, Grebe & Lantermann, 2001), Farsi (Bayani, 2009), Portuguese (Queirós, Fernández-Berrocal, Extremera, Carral & Queirós, 2005), French (Dalle, & Niedenthal, 2003) and Spanish (Fernández-Berrocal, Extremera & Ramos, 2004) and Turkish (Aksöz, Bugay, & Erdur-Baker, 2010). The Spanish version of the TMMS was found to have as high internal consistency as the

English version. The results revealed that the Repair subscale was positively correlated with Clarity, but not with Attention; whereas, Attention was found to be positively correlated with Beck Depression Inventory and Ruminative Responses Scale. Moreover, Clarity and Repair were negatively correlated with Beck Depression Inventory and positively correlated with Life Satisfaction. Lastly, the Emotional Repair was found to be negatively associated to Ruminative Responses Scale.

Though the Turkish version was adapted by Aksöz, Bugay, and Erdur-Baker (2010) as the criterion measure they used the Ruminative Response Scale (RRS), developed by Nolen-Hoeksema and Marrow (1991) and translated into Turkish by Erdur (2002); however, no significant correlations between the RSS and subscales of were found, indicating, inadequate evidence for criterion related validity among the subscales of TMMS and RRS. For this reason, the adaptation of the TMMS was conducted by using the TAS and DERS as criterion scales. Findings from previous studies have demonstrated that the TMMS-Clarity subscale was strongly related to the TAS-Identification of feelings subscale (Davies et al., 1998). Moreover, a hierarchical cluster analysis revealed that the TMMS-Clartiy, TAS-Identification of feelings and TAS-Describing feelings subscale grouped together in one cluster; whereas, TMMS-Attention and TAS-Externally oriented thinking subscale grouped together in another cluster (Gohm & Clore, 2002). Another study revealed that the TMMS and DERS, and TAS subscales had similar significant correlations to Post Traumatic Stress Disorder Symptom Severity Measures, demonstrating concurrent

criterion related validity between these scales (Frewen, Dozois, Neufeld, & Ruth, 2011).

2.2 Aims of the Study

The current study aimed to establish the Turkish adaptation of the Brief Mood Introspection Scale (BMIS), the State Meta-Mood Scale (SMMS), and the 30-item version of the Trait Meta-Mood Scale (TMMS). Moreover, it was aimed to investigate the associations of these scales with Positive and Negative Affect Schedule (PANAS), Difficulties in Emotion Regulation Scale (DERS), Toronto Alexithymia Scale (TAS) and Basic Personality Trait Inventory (BPTI) (see chapter 3.2 for psychometric properties of the scales). As the literature on meta-mood mostly emphasizes individual trait differences, studies mostly have disregarded the use of the State Meta-Mood Scale. For the main study, a mood induction procedure was used. In order to assess participants' evaluations and regulation strategies regarding their mood state after the induction procedure, it was decided to use the SMMS, which measures meta-mood levels with respect to ongoing moods, rather than trait characteristics, as the TMMS measures. Moreover, it was aimed to translate the Brief Mood Introspection Scale (BMIS) due to its measurement properties of current mood states. The BMIS consists of 16 mood adjectives that are commonly lived in daily lives. Two distinct scores can be obtained from this mood scale, namely, Pleasant and Unpleasant Mood. The frequent use of the BMIS and its measurement properties regarding mood states were the two main reasons for using this scale during the main study. The Positive and Negative Affect scale (PANAS), on the other hand, consists

of strong emotional adjectives that refer to an individual's enthusiasm, activeness and alertness on one end, and anger, disgust, guilt and fear on the other end (Gençöz, 2002). Although both scales measure affective states regarding different intensity levels, both scales are based on two dimensions. Therefore, PANAS was evaluated as a good criterion scale for the BMIS.

As the experience of emotional states are culture dependant (Russell, 1991), the relation among Trait Meta-Mood and State Meta-Mood with personality traits in a Turkish sample were unclear. Therefore, without any predictions, the current study aimed to investigate how these variables would associate with each other.

In the current study, firstly, the factor structures of the BMIS, SMMS and TMMS were examined, followed by separate correlational analysis for each scale with the criterion scales. Afterwards, 4 hierarchical regression analyses were conducted in order to examine the associations among trait meta-mood levels Basic Personality Traits.

CHAPTER III

METHOD

3.1 Participants

The pilot study was conducted in order to determine the reliability and validity of three scales; namely, Brief Mood Introspection Scale (Mayer & Gaschke, 1988), State Meta-Mood Scale (Mayer & Stevens, 1994) and Trait Meta-Mood Scale (Salovey, Mayer, Goldman, Turvey & Palfai, 1995). For this study a total of 865 participants were reached via an internet survey; consisting of 199 males (23%) and 664 females (76.8%); 2 (0.2%) participants did not mark their sex information. However, not all of these participants filled in the whole questionnaire battery. The demographic information of the participants who answered all scales is as the following: *N=568;* consisting of 109 males, age ranging from 18 to 48 with a mean age of *M*=26.35 (*SD=4.84)*; and 459 females, age ranging from 18 to 50 with a mean age of *M=25.24* (*SD=4.66*). The education level of the participants who attended to the Pilot Study ranged from high school graduates to post doc graduates. Accordingly 0.2% (*N*=1) of the participants was a high school graduate, 27.6% (*N*=157) were university graduates; 51.4% (*N*=292) were undergrad students; 12.5% (*N*=71) were graduate students; and 8.1% (*N*=46) were PhD or post-doc students/graduates.

3.2 Instruments

This section aims to introduce three scales that were translated and adapted to Turkish, namely, Brief Mood Introspection Scale (Mayer & Gaschke, 1988), State Meta-Mood Scale (Mayer & Stevens, 1994), and Trait Meta-Mood Scale (Salovey et al., 1995). These three scales were translated to Turkish by a Clinical Psychology PhD student and a Clinical Psychology Post Doc student, both of whom have been speaking fluently English for at least 15 years. The Turkish translations were combined by the researcher for the best fit in Turkish and were back translated to English by another Social Psychology M.S. student. The back translation was quite satisfactory and became decent after negotiations with the translators. For the reliability and validity analysis the following scales were included in the pilot study; The Positive Affect Negative Affect Schedule (Watson, Clark, & Tellegen, 1998), Difficulties in Emotion Regulations Scale (Gratz & Roemer (2004), The Toronto Alexithymia Scale (Taylor et. al., 1985) and The Basic Personality Traits Inventory (Gencoz & Öncül, submitted manuscript).

All these scale were submitted to an online survey website (www.surveymonkey.com) and data was collected in one and a half month.

3.2.1 Brief Mood Introspection Scale

The Brief Mood Introspection Scale (BMIS) was developed by Mayer and Gaschke (1988), and consists of 16 emotion adjectives. It aims to assess the current mood of the participants. Two scores are obtained from the BMIS indicating the participants' pleasant and unpleasant mood levels. These two mood levels consist of

8 mood states and each state is defined by two relevant adjectives: (a) happy (*happy, lively*), (b) loving (*loving, caring*), (c) calm (*calm, content*) (d) energetic (*active, peppy*) (e) fearful/anxious (*jittery, nervous*), (f) angry (*grouchy, fed up*), (g) tired (*tired, drowsy*), and (h) sad (*gloomy, sad*). Therefore, total score of the first four mood states produce the pleasant mood score; whereas the total score of the last four mood states produce the unpleasant mood scores. High scores for each subscale indicate high levels of pleasant or unpleasant mood. The BMIS was a four point Meddis type scale (XX= definitely do not feel; X= do not feel; V= slightly feel; VV= definitely feel). The scale was transformed to a 4-point Likert type scale; which is a more commonly used rating in Turkish.

The BMIS is a factor-valid tool that is appropriate to the mood circumplex (Mayer & Gaschke, 1988). The BMIS was found to have good correlations with the Mood Introspection scale (Mayer, Mamberg, & Volanth, 1988) and the Russell Adjective Scale (Russell, 1979). The Cronbach's alpha coefficients of the original BMIS were .76 and .83 for pleasant and unpleasant mood, respectively. (For the Cronbach's coefficients of the Turkish version refer to chapter 4)

3.2.2 State Meta-Mood Scale (SMMS)

The State Meta-Mood Scale was developed by Mayer and Stevens (1994) in order to measure the moment-by-moment changes about the thoughts of an ongoing mood state that the individual is experiencing. The SMMS consists of 39 items which constitute 2 Meta-Mood subdomains, namely, meta-evaluation and meta-regulation. The meta-evaluation domain consists of 24 items constituting four subscales. These subscales are (a) Clarity (the ability to discriminate among

emotions), (b) Acceptance (accepting or rejecting the current mood), (c) Typicality (whether the current mood is typical or atypical for the individual) and (d) Influence (how the mood influences thinking processes). For each subscale higher scores indicate higher levels of meta-evaluations such as, higher levels of clarity among emotions, higher levels of acceptance of the current mood, higher levels of typicality of the mood, and higher influence of the mood on thinking processes. The second domain, meta-regulation, consists of 15 items, constituting three subscales. These subscales are (a) Repair, (b) Dampening and (c) Maintenance. Higher scores on Repair indicate the levels of using repair strategies to overcome an unpleasant mood. Dampening, on the other hand, measures whether the individual tries to stop feeling a too good mood; whereas, Maintenance, measures whether the individuals let themselves feel the good mood they are currently experiencing. In general, the subscales are measuring the individuals' evaluations and beliefs about controllability of the mood they are experiencing during the measure. All subscales are rated on a 5-point Likert type scale.

The SMMS was found to have good correlations among criterion scales. Accordingly, two of the Evaluative subscales of the SMMS, Clarity and Acceptance were found to be correlated with the Alexithymia subscales (Taylor et al, 1985) that measured the ability to identify present emotional experience, and the ability to describe those experiences. The Typicality subscale however, was not found to be correlated with other criterion measures; but was found to be related to pleasant mood and the attempt to maintain such a mood rather than changing it. The Influence subscale correlated with poorer mood recognition and had positive correlations with

daydreaming of the Emotional Empathy Index (Davis, 1983). Among the Regulatory subscales, Repair was found to be correlated with Positive Thinking of The Ways of Coping Scale (Folkman & Lazarus, 1985). The Dampening subscale, on the other hand, was found to be correlated to Negative Thinking of the same criterion scale. Lastly, the Maintenance subscale, did not have any correlations with criterion scales, but was strongly correlated to two meta-evaluation subscales, Acceptance and Typicality.

In the original study the coefficient alpha reliabilities for the subscales range between .74 and .87 (Mayer & Stevens, 1994). (For the Cronbach's coefficients of the Turkish version refer to chapter 4)

3.2.3   Trait Meta-Mood Scale (TMMS)

The Trait Meta-Mood Scale (TMMS) developed by Salovey et al., (1995) measures relatively stable individual differences in how people attend, discriminate and repair their moods (Salovey et al., 1995). The original scale consists of 48 items. However, the authors recommended the use of the 30-item scale, which revealed a better factor solution. The TMMS has three subcategories, namely Attention, Clarity and Repair. The first sub-category, attention, assesses how much attention is paid to moods. This sub-category is assessed with items, such as "Feelings give direction to life" versus "one should never be guided by emotions" (reversed item). The second sub-category, Clarity, assesses how clear the individual is about defining his/her mood. Clarity is assessed by items, such as "I am rarely confused about my emotions" versus "I can't make sense out of my emotions" (reversed item). Finally,

Repair assesses how well the individual could regulate his/her mood. The sub-category is assessed with items such as "I try to think good thoughts no matter how badly I feel" versus "Although I am sometimes happy, I have a mostly pessimistic outlook" (reversed item) (Salovey et al., 1995). In each sub-category, higher scores indicate higher levels of ability in attending to moods, discriminate among moods and repair moods. The TMMS is a 5 point Likert type scale.

The Attention subscale of the TMMS was found to be correlated with private and self-consciousness, measured by the Self-Consciousness Scale (SCS; Fenigstein, Scheier, & Buss, 1975). This correlation indicated that, to some extents, Emotional Attention was also related to other aspects of conscious experience. Moreover, the Clarity subscale of the TMMS was found to be negatively correlated to ambivalence over emotional expression and with depression, measured by Ambivalence Over Emotional Expressiveness Questionnaire (AEQ; King & Emmons, 1990, 1991) and Expectancy for Negative Mood Regulation (NMR; Catanzaro & Mearns, 1990), respectively. This relation indicated that individuals experiencing their emotions clearly were less likely to experience emotional ambivalence when displaying to their emotions to others, with regard to the amount and quality of their emotions; and tended to be less depressed. Lastly, the Repair factor of the TMMS was found to be negatively related with depression and positively related with optimism and beliefs about negative mood regulation (Salovey et al., 1995). The Cronbach's alpha levels of the original scale were .86, .87, and .82 for Attention, Clarity and Repair, respectively (Salovey et al., 1995). (For the Cronbach's coefficients of the Turkish version refer to chapter 4)

3.2.4 Positive Affect Negative Affect Schedule (PANAS)

The Positive Affect Negative Affect Schedule was developed by Watson, Clark, and Tellegen (1998) and consists of 20 items rated from 1 ("very slightly or not at all") to 5 ("extremely"), on a 5-point Likert type scale. The scale consists of 2 subscales; Positive Affect (PA – degree of becoming attentive, interested, alert, excited, enthusiastic, inspired, proud, determined, strong and active) and the Negative Affect (NA – degree of becoming distressed, upset, hostile, irritable, scared, afraid, ashamed, guilty, nervous, and jittery) and each subscales has been measured by 10 items. Thus, the scores for both subscales (PA and NA) range from 10 to 50.

The reliability for Positive Affect ranges from .86 to .90 and for negative affect it ranges from .84 to .87 (Watson, Clark, & Tellegen, 1988). Studies for the Turkish form of the scale were conducted by Gençöz (2000). Cronbach's alpha for internal consistency was found to be .86 for positive affect and .83 for negative affect. Furthermore, test-retest reliabilities were .54 and .40 for positive and negative affect, respectively. Additionally, in terms of criterion related validity, positive affect negatively correlated with Beck Depression Inventory and Beck Anxiety Inventory; whereas, negative affect positively correlated with Beck Depression Inventory and Beck Anxiety Inventory. In the current study, the internal consistency coefficients for positive and negative affect were .88 and .86, respectively.

3.2.5 Difficulties in Emotion Regulation Scale (DERS)

The Difficulties in Emotion Regulation Scale was developed by Gratz and Roemer (2004) in order to measure emotion dysregulation in a more comprehensive

way, relative to other measures. The scale consists of 36 items and a total of 6 subscales, namely, Awareness (awareness in emotional response), Clarity (clarity in emotional response), Non-acceptance (lack of acceptance of emotional response), Strategies (limited access to effective strategies), Impulse (difficulties in controlling impulses when experiencing negative affect, and lastly, Goals (difficulties in engaging goal directed behavior when experiencing negative affect). The subscales aim to cover a wide range of dimensions of affect regulation. The scale is a 5-point Likert Type scale, ranging from 1 (almost never) to 5 (almost always). Higher scores of each subscale indicate higher difficulties in that area. The original scale has alpha coefficients ranging from .80 to .89 throughout its subscales.

The psychometric properties of the Difficulties in Emotion Regulation Scale were studied by Ruganci and Gençöz (2009). The internal consistency of the Turkish form of DERS was found to be .94 for the total scale and the range of alphas for each subscale ranged from .75 to .90. The Guttman split-half reliability for the scale was reported as .95; and the test-retest reliability was reported as .83 (Ruganci & Gençöz, 2009).

For the current study, a modified version of the DERS was used. The new version of the DERS used in the current study had some minor changes in item statements and some additional punctuation modifications. This current version also yielded in strong reliability and validity coefficients, ranging from 0.74 to 0.90 (Kavcıoğlu, & Gençöz, 2011).

3.2.6 Toronto Alexithymia Scale (TAS)

The Toronto Alexithymia Scale was developed by Taylor et al., (1985) aiming to measure alexithymic characteristics relevant to theoretical information while preventing the socially desirable responses, and obtaining high internal consistency values. TAS is a 26 item, 5 point Likert type scale, which ranges from 1 (strongly disagree) to 5 (strongly agree). Higher scores of the scale indicate higher levels of alexithymia. TAS consists of 4 dimensions. Dimension 1 (TAS-1) is related to identifying feelings and distinguishing them from bodily sensations; Dimension 2 (TAS-2) relates to thinking focused on external experiences rather than internal experiences, Dimension 3 (TAS-3) concerns expressing feelings verbally, and Dimension 4 (TAS-4) is related to lacking in imaginative capacity. Taylor et al. (1985) reported that the total internal consistency of TAS was 0.79 and split half reliability was 0.67. Furthermore, the test retest reliability coefficient was 0.82 for one week and 0.75 for 5 week intervals. The translation, reliability, and validity study of the Turkish version of the scale was conducted by Dereboy (1990, 1991). The internal consistency of the Turkish version of TAS is 0.65 and the test retest reliability coefficient is 0.70 (Okyayuz, 1993). Moreover, Motan and Gençöz (2007) conducted a study in order to emphasize the multidimensionality of alexithymia, and its relation to depression and anxiety symptom intensity. Accordingly, following a factor analysis, they found high internal consistency coefficients for 3 dimensions of TAS; 1. Difficulty in communicating feelings (α=.0.82); 2. difficulty in recognizing and identifying feelings (α=0.86); 3. Lacking in imaginative capacity (α=0.75); (Motan & Gençöz, 2007).

3.2.7 Basic Personality Traits Inventory (BPTI)

The Basic Personality Traits Inventory (BPTI) was developed by Gençöz and Öncül (submitted manuscript) in order to assess six dimensions of personality; namely, Openness to experience, Conscientiousness, Extraversion, Agreeableness, Neuroticism, and Negative Valence. The scale was specifically developed for the Turkish language, consisting of 45 personality related adjectives. The scale is a Likert type scale ranging from 1 for "not suitable at all" to 5 for "fully suitable". Higher scores for each subscale indicate higher characteristics of that personality trait.

The internal consistency coefficients for each personality domain are as the following: Openness to experience, 0.80; Conscientiousness, 0.84; Extraversion, 0.89; Agreeableness, 0.85; Neuroticism, 0.83; and Negative Valence; 0.71.

3.3 Procedure

Initially, necessary permission was taken from Middle East Technical University Ethical Committee. After, the informed consent and all measurement scales were uploaded to an internet based online survey (www.surveymonkey.com). The last page of the survey included a text box, which asked student studying at Middle East Technical University, to leave their e-mail addresses if they wanted to be called for the experiment that would be conducted for the main study. Later, an online event was created on a social networking site (ww.facebook.com) and the link to the survey was displayed on the event. The event included brief information of the aim of the study. At first, individuals from the author's contact list were invited to

the event, and each person was sent a message asking to invite their own contacts to the event. By such an online snowball sampling method it was aimed to reach as many as possible individuals. One problem occurred during data collection, however. Unfortunately, the page that included items of the Meta-Regulation domain of the State Meta-Mood Scale was not active for a while (approximately one and a half week). As soon as the problem was detected, this page was activated. This resulted in a lower number of participants for this scale. As the survey website did not allowed randomization of the scales, no balancing method could be applied; therefore, every participant received the questionnaires in the same order. The whole questionnaire took 30-45 minutes to be completed.

CHAPTER IV

RESULTS OF STUDY I

4.1 Descriptive Analysis

Descriptive information regarding the Brief Mood-Introspection Scale (BMIS), State Meta-Mood Scale (SMMS), Trait Meta-Mood Scale (TMMS), Positive Affect Negative Affect Schedule (PANAS), Difficulties in Emotion Regulation Scale (DERS), Toronto Alexithymia Scale (TAS), and Basic Personality Trait Inventory (BPTI) are presented in Table 4.1.

Table 4.1 Descriptive information regarding the measures of the study

Variable	*N*	Alpha Coefficient	Mean	*SD*	Min-Max
BMIS					
Pleasant	849	0.88	21.37	4.96	8.00-32.00
Unpleasant	849	0.88	19.88	5.62	8.00-32.00
SMMS					
Evaluation					
Influence	759	0.87	17.75	6.18	6.00-30.00
Acceptance	759	0.79	22.04	5.48	6.00-30.00
Typicality	759	0.72	17.13	4.48	6.00-30.00
Clarity	759	0.69	20.76	4.74	6.00-30.00
Regulation					
Repair	399	0.80	16.18	4.84	5.00-25.00
Maintenance	399	0.85	14.83	5.29	5.00-25.00
Dampening	399	0.68	11.59	3.96	5.00-25.00
TMMS					
Attention	620	0.75	52.94	7.50	31.00-70.00
Clarity	620	0.84	35.13	6.78	11.00-50.00
Repair	620	0.77	20.05	4.85	6.00-30.00
PANAS					
PA	864	0.88	28.55	7.72	10.00-50.00
NA	864	0.86	18.43	6.85	10.00-50.00

Table 4.1 Descriptive information regarding the measures of the study cont'd

Variable	N	Alpha Coefficient	Mean	SD	Min-Max
DERS					
Clarity	576	0.87	19.43	3.58	6.00-25.00
Awareness	576	0.74	21.66	3.79	6.00-30.00
Impulse	576	0.90	13.01	4.95	6.00-29.00
Nonacceptance	576	0.72	11.55	4.70	6.00-30.00
Goals	576	0.9	15.75	4.61	5.00-25.00
Strategies	576	0.88	19.20	6.57	8.00-38.00
TAS					
Communicate	590	0.68	19.90	4.67	9.00-41.00
Recognize	590	0.75	20.89	5.20	10.00-40.00
Imagine	590	0.71	21.74	4.65	11.00-36.00
BPTI					
Extraversion	568	0.90	28.68	6.79	9.00-40.00
Conscientiousness	568	0.83	28.30	5.75	11.00-40.00
Agreeableness	568	0.85	33.81	4.09	17.00-40.00
Neuroticism	568	0.80	24.76	6.45	10.00-42.00
Opennes	568	0.76	22.02	3.85	9.00-30.00
Negative Valence	568	0.69	9.71	3.08	6.00-24.00

Brief Mood-Introspection Scale (BMIS), State Meta-Mood Scale (SMMS), Trait Meta-Mood Scale (TMMS), Positive Affect Negative Affect Schedule (PANAS), Difficulties in Emotion Regulation Scale (DERS), Toronto Alexithymia Scale (TAS), and Basic Personality Trait Inventory (BPTI)

4.2   Reliability and Validity Analysis of BMIS, SMMS, and TMMS

This section will cover the Psychometric Properties of the Brief Mood Introspection Scale, State Meta-Mood Scale, and the Trait Meta-Mood Scale. For the analyses, first factor analyses were conducted for each scale. This was followed by correlational analyses in order to examine internal reliabilities and validity structures of the scales.

4.2.1 Psychometric Properties of Brief Mood Introspection Scale

In order to determine the psychometric properties of the Brief Mood Introspection Scale (BMIS), first the factor structure was examined. This was followed by the internal consistency analyses, and split half reliability coefficients of the scale. Lastly, correlational analyses were conducted with the BMIS and the Positive Affect Negative Affect Schedule (PANAS) in order to investigate its validity.

4.2.1.1 Factor Structure and Reliability of Brief Mood Introspection Scale (BMIS)

In the present study, in order to classify separate mood domains for the BMIS, a Principle Component Factor Analysis with a varimax rotation was conducted. The analysis was conducted on a sample of 849 participants. Initially, to verify that the data was suitable for factor analysis, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) was checked and found to be .91. Moreover, the Barlett's Test of Sphericity value was also significant ($p < .001$); indicating that the data was appropriate for factor analysis. A factor loading greater than .20 was required in order for an item to be included in the related factor.

The initial analysis revealed three factors with eigenvalues above 1 (6.921, 2.058, and 1.318). These three components explain a total of 64.35% of the variance. The analysis was repeated by forcing a 2-factor solution based on the scree-plot and Monte Carlo PCA for Parallel Analysis. These two factors; namely Unpleasant and Pleasant, explained a total of 56.12 % of the variance, in which the first factor

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explained 43.26% and the second factor explained 12.86% of the total variance. Furthermore, the item loadings were examined under the rotated component matrix in order to reveal the items from these two components. Accordingly, all items except one ("calm") had loadings under their original factors. The item "calm" had a loading of .42 on the Unpleasant factor, whereas, it originally belongs to the Pleasant factor, from which it had a loading of .23. In order to be consistent with the original scale, this item was kept under the Pleasant factor (for the factor loadings see table 4.2-1). The first factor, labeled as "unpleasant" consists of eight items and includes the items "jittery, nervous, gloomy, fed up, grouchy, sad, tired, and drowsy". The second factor, called "Pleasant" consisted of the following items: "calm, loving, lively, caring, active, peppy, happy, and content".

The internal consistencies of the subscales were calculated and found to be .88 for both factors. In addition the item total correlations for these factors were ranging from .54 to .74 for the first factor and .34 to .72 for the second factor.

Table 4.2-1 Factor Pattern after Varimax Rotation for BMIS

Factors		
	Unpleasant	**Pleasant**
Jittery (Gergin)	**.83**	.12
Nervous (Asabi)	**.76**	.07
Gloomy (Kasvetli)	**.76**	.3
Fed Up (Bıkkın)	**.74**	.32
Grouchy (Huysuz)	**.73**	.13
Sad (Hüzünlü)	**.71**	.17
Tired (Yorgun)	**.57**	.22
Drowsy (Uyuşuk)	**.53**	.32
Calm (Sakin)	.42	**.23**
Loving (Sevgi dolu)	.17	**.79**
Lively (Neşeli)	.29	**.76**
Caring (Şefkatli)	-.02	**.75**
Active (Aktif)	.2	**.74**
Peppy (Enerjik)	.28	**.72**
Happy (Mutlu)	.37	**.70**
Content (Hoşnut)	.37	**.70**
Eigenvalue	6.92	2.06
Explained Variance (%)	43.26	12.86
Alpha Coefficient	0.88	0.88
Range for item-total correlation	.54-.74	.34-.72

4.2.1.2 Concurrent Validity of BMIS

For the concurrent validity of BMIS, the correlations among BMIS and PANAS dimensions were examined. Accordingly, the Pleasant Mood dimension of

BMIS was positively correlated with Positive Affect ($r = 0.65$, $p < .000$) and was negatively correlated with Negative Affect ($r = -0.46$, $p < .001$). On the other hand, the Unpleasant Mood dimension was positively correlated with Negative Affect ($r = 0.70$, $p<.000$), and negatively correlated with Positive Affect ($r = -0.39$, $p < .001$), as expected. Lastly, the BMIS had a one question rating for the overall mood ranging from -10 to +10; which was positively correlated with both Pleasant Mood ($r = .66$, $p < .001$) and Positive Affect ($r = .51$, $p<.001$); whereas it was negatively correlated with Unpleasant mood ($r = -.60$, $p < .001$) and Negative Affect ($r = -.50$, $p< .001$).

Table 4.2-2 Correlations among subscales of BMIS and PANAS

	Pleasant	Unpleasant	Overall mood	Positive Affect	Negative Affect
Pleasant	1	-.57[*]	.66[*]	.65[*]	-.46[*]
Unpleasant		1	-.60[*]	-.39[*]	.70[*]
Overall Mood			1	.51[*]	-.50[*]
Positive Affect				1	-.12[*]
Negative Affect					1

[*]$p<.001$ (2-tailed)

4.2.2 Psychometric Properties of the State Meta-Mood Scale (SMMS)

In order to determine the psychometric properties of the State Meta-Mood Scale (SMMS), first the factor structure was examined. This was followed by the internal consistency analyses, and split half reliability coefficients of the scale. Lastly, correlational analyses were conducted with the SMMS, the Difficulties in Emotion Regulation Scale (DERS), and the Toronto Alexithymia in order to investigate its validity.

4.2.2.1 Factor Analysis and Reliability for the State Meta-Mood Scale (SMMS)

Multi-domain factor analysis was conducted in order to examine the factor loadings under the two sub domains, meta-evaluation and meta-regulation, of the State Meta-Mood Scale. Accordingly the first factor analysis was conducted with a varimax rotation, in order to classify the different evaluative domains of meta-mood. The principle component analysis with a varimax rotation on a sample of 759 participants, revealed a Kaiser Meyer Olkin Measure of Sampling Adequacy of .83; and the Bartlett's Test of Sphericity value was significant at .001; indicating that the data was appropriate for a factor analysis.

The initial analysis for the evaluative subdomain revealed six factors with eigenvalues above 1 (5.126, 3.014, 2.41, 1.663, 1.477, and 1.176). These six components explained a total of 61.94% of the variance. As the original subscale is consisting of five factors, based on Monte Carlo PCA for Parallel Analysis and examining the scree-plot's, it was determined to run a second analysis with a four factor solution. The four components explained a total variance of 50.89%. The first factor, Influence, explained 21.36% of the variance whereas, the second factor, Acceptability, explained 12.56% of the variance. Moreover, the third and fourth factors, Typicality and Clarity, explained 10.04% and 6.93% of the variance, respectively. Furthermore, examining the item loadings under the rotated component matrix revealed that all items, except one (9th item), got loadings under their original factors. The 9th item (It's hard to describe) had a loading of .50 under Acceptability; whereas, it originally belonged to the Clarity factor, from which it got a loading of

.44. As the loadings were close to each other and in order to be consistent with the original scale, this item was presented under the Clarity factor (see table 4.2.3).

All four factors consisted of six items each, with internal consistency coefficients ranging between 0.69 and 0.87. In addition, the item total correlations for the factor Influence was ranging between 0.65 and 0.71; for the second factor, Acceptability, the range was between 0.31 and 0.66; for Typicality the item-total correlations were between 0.29 and 0.56; and for Clarity, the range was between 0.20 and 0.55. In addition, each dimension's split-half reliabilities were analyzed. Accordingly, the first half of Influence had an alpha of .74 and the second half had an alpha of .77. The Guttman Split Half Coefficient for this factor was .91. The second factor, Attention, when split into to two parts, had an alpha coefficient of .65 for the first half, and an alpha coefficient of .64 second half, whereby; the Guttman Split Half Coefficient was .80 for this factor. Thirdly, the factor Typicality consisted of halves which had both alphas of .56 and a Guttman Split Half Coefficient of .77. The last factor of the Evaluation domain, called Clarity, had two halves of alphas of .38 and .42, and a Guttman Coefficient of .69 (see table 4.2.4).

A second analysis of the multidomain factor analysis was conducted to see the factor loadings of the regulation scale. A principle component analysis with a varimax rotation was conducted with a sample of 399 participants. The Kaiser Meyer Olkin Measure of Sampling Adequacy was .84; and the Bartlett's Test of Sphericity value was significant at .001.

The analysis revealed a three factor solution which was compatible with the original scale. Three eigenvalues above 1 were found to be 3.95, 3.61 and 1.56 for

the first, second and third factors, respectively. These three components explained 24.97%, 20.22%, and 15.67% of the variance, separately; which refer to Maintenance, Repair and Dampening domain, respectively. When the item loadings under the rotated component matrix were examined, it came out that all items, but one (26th item), had loadings on their original factors. The 26th item (*I'm planning positive things, to keep my mood going*) got a loading of .48 from the factor Maintenance, and a loading of .32 from the factor Dampening. Originally the item belongs under the Repair factor; however, when the item was examined, although the phrase "*planning positive things*" indicates a repair strategy; the phrase "*keep my mood going*" indicates a maintaining strategy. To be consisted with the original scale, this item was kept and presented under the Repair factor.

The internal consistency for these factors was evaluated by computing Cronbach's coefficients alpha for each scale (Maintenance: 5 items; α = .85; Repair: 5 items; α = .80; Dampening: 5 items; α = .68). The item total correlations for the first, second and third factor had ranges of .65 and .70; .26 and .75; .29 and .56, respectively. In addition, each factor's split-half reliabilities were analyzed. Accordingly, the two halves of the first factor, Repair, had alpha coefficients of .61 and .85, with a Guttman Split Half Coefficient of .79. The second factor, Maintenance, had split half alpha coefficients of .61 and .79 and a Guttman Coefficient of .84. Finally, the two halves of the factor Dampening, had split half coefficients of .45 and .53, and a Guttman Split Half Coefficient of .73 (see table 4.2 - 4).

Table 4.2-3 Factor Structure for SMMS Evaluative Domain

	Factors			
	Meta-Evaluation			
Items	**Influence**	**Acceptability**	**Typicality**	**Clarity**
SMMS23R My thinking hasn't changed.	**.81**	-.03	-.06	-.13
SMMS6 It has changed how I think	**.77**	-.18	.01	0
SMMS22R My beliefs and opinions are unchanged by this mood.	**.77**	.04	-.08	-.12
SMMS17 It's changed my beliefs and opinions.	**.77**	-.22	.04	-.02
SMMS1 It has altered my outlook.	**.76**	-.12	-.04	.09
SMMS7R It hasn't altered my outlook.	**.76**	-.06	-.05	-.05
SMMS11R I shouldn't feel this way.	-.1	**.82**	.1	-.02
SMMS8R I know this feeling is wrong	-.09	**.75**	.26	.01
SMMS13R I'm ashamed of it.	-.07	**.66**	-.1	.06
SMMS10 There's nothing wrong with it.	-.13	**.63**	.13	.12
SMMS4 There's no need to change it.	-.11	**.57**	.46	.06
SMMS9R It's hard to describe.	-.14	.50	.08	**.44**
SMMS3 I'm not ashamed of my mood.	-.04	**.32**	.04	.22
SMMS12 I feel this mood often	-.10	-.07	**.74**	.12
SMMS5 It's very typical for me.	-.14	.13	**.76**	.09
SMMS18 This mood will never change.	.12	-.23	**.65**	.02
SMMS14R This mood will change soon	.02	.23	**.62**	-.12
SMMS20R This mood, too, shall pass	.11	.2	**.62**	-.19
SMMS2R I almost never feel like this	-.14	.19	**.34**	-.03
SMMS24 I know exactly how I'm feeling	-.07	.08	-.02	**.70**
SMMS19 I know why I feel this mood	.01	-.2	-.10	**.61**
SMMS15 It's clear	-.07	.2	.37	**.56**
SMMS16R I don't know why I feel it	.01	.32	-.11	**.55**
SMMS21R It's hard to tell what it is	-.03	.47	-.04	**.53**
Eigenvlaues	5.13	3.01	2.41	1.66
Cumulative Variance (%)	21.36	12.56	10.04	6.93
Alpha Coefficients	.87	.79	.72	.69
Item-total correlations	.65-.70	.31-.66	.29-.56	.20-.55

Note: The bold items represent the right items under theoretically right factors

Table 4.2-4 Factor Structure for SMMS Regulatory Domain

	Meta-Regulation		
	Maintenance	Repair	Dampening
Items			
SMMS39 I'm letting my mood continue, because that will keep it steady and positive.	**.84**	.11	.10
SMMS31 I'm not trying to change this mood.	**.79**	-.17	-.11
SMMS36 I wouldn't want to change my mood.	**.79**	-.06	.04
SMMS29 I'm not trying to change it because I believe it is important to experience.	**.74**	.02	.08
SMMS27 I'm allowing myself to experience it.	**.69**	-.09	-.05
SMMS26 I'm planning positive things, to keep my mood going	.48	**.26**	.32
SMMS33 I'm imagining something better to improve my mood	-.09	**.90**	.13
SMMS32 I'm thinking good thoughts to cheer myself up	-.05	**.89**	.12
SMMS38 I'm thinking of good things to come, so as to make my mood better.	-.14	**.85**	.10
SMMS30 I'm reminding myself of the nice things in life to improve it	.27	**.68**	.22
SMMS37 It's so high I need to dampen it before I make a fool of myself	.08	.02	**.79**
SMMS28 It's so high that I'm trying to bring myself down to better concentrate	.21	.11	**.76**
SMMS34 I'm reminding myself of reality to bring it down a little	-.12	.21	**.66**
SMMS35 I'm trying to relax because it is too positive	.48	.09	**.51**
SMMS25 I distrust how positive it is and am trying to bring myself down.	-.35	.25	**.50**
Eigenvalues	3.95	3.61	1.56
Explained Variance (%)	24.97	20.22	15.67
Alpha Coefficients	.83	.86	.68
Item-total correlations	.65-.70	.26-.75	.29-.56

Note: The bold loadings represent the right items under theoretically right factors. R indicates reverse item.

4.2.2.2 Concurrent Validity of SMMS

In order to examine the concurrent validity of the SMMS, its subscales were compared in accordance with the subscales of DERS and TAS. Initially, the Influence (whether a mood influences thinking) dimension of the SMMS correlated with five of the dimensions of DERS. Accordingly, the Influence factor of SMMS was negatively correlated with the Clarity (Lack of emotional clarity), $r = -.15$, p <.001. Besides, the Influence subscale of SMMS had positive correlations with Impulse (Impulse control difficulties), Nonacceptance (Nonacceptance of emotional responses), Goals (Difficulties engaging goal-directed behavior) and Strategies (Limited access to emotion regulation strategies) in a range between .14 and .27 (p <.001). The second subscale of the SMMS, Acceptance, had correlations with the subscales of DERS, ranging between -.43 and.38 (p <.001). Most importantly, the Acceptance subscale of SMMS had a negative correlation with Nonacceptance subscale of DERS ($r = -.43$, p <.001). The Typicality subscale of SMMS had no correlations with any of the DERS subscales, which may be indicating that it has a discriminant function among these scales. Lastly on the meta-evaluation subscales, the Clarity factor had of the SMMS correlated with five of the dimensions of DERS. Accordingly, the Clarity (ability to discriminate among emotions) was positively correlated with two subscales of DERS; the Clarity (emotional clarity), $r = .49$, p <.001; and the Awareness (emotional awareness), $r = .15$, p <.001. Besides, the Clarity subscale of SMMS had negative correlations with Impulse (Impulse control difficulties), Nonacceptance (Nonacceptance of emotional responses), Goals

(Difficulties engaging goal-directed behavior) and Strategies (Limited access to emotion regulation strategies) in a range between -0.25 and -0.33 (p <.001).

When the subscales of the Regulation domain of SMMS were examined, it was observed that only the Repair subscale did not have any correlations with the subscales of the DERS. The highest correlation that Maintenance (attempt to maintain a mood) had, was -.26 (p <.001) with Strategies. This variable was also negatively correlated with Impulse, Non-acceptance, and Goals, ranging from -.18 and -.23. Besides, Maintenance was positively correlated with Clarity (r = .18, p <.01), and Awareness (r = .17, p <.01).

The Dampening subscale of the SMMS had its highest correlation of .26 (p <.001) with Nonacceptance. Although it did not correlate with Awareness, the rest of the correlations were also low, ranging from -.19 to .16 (p <.001) and .14 with Goals subscale of DERS, at the p < .05 significance level (see table 4.2-5)

The subscales of the SMMS were also compared with the Toronto Alexithymia Scale. Accordingly the Influence subscale of SMMS, was positively correlated with the Recognize subscale of TAS (r = .15, p <.001). Moreover, Acceptance had negative correlations of -.32 and -.20 with Recognize and Communicating feelings at a p <.001 significance level, respectively. The Typicality subscale of SMMS was not correlated with any of the subscales of TAS, which may indicate a discriminant validity of this subscale. The Clarity subscale was negatively correlated with the Recognize (Difficulty in recognizing and identifying feelings) and Communicate (Difficulty in communicating feelings) dimension (r = -.43, p <.001; r = -.21, p <.001; respectively). Moreover, examining the Meta-Regulation

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factors revealed that the Maintenance factor had negative correlations with both communicate ($r = -.13$, $p < .05$) and Recognizing feelings ($r = -.21$, p $< .001$). The Repair subscale had a negative correlation with Imaginative capacity ($r = -.14$, p $< .05$) Lastly, Dampening had a positive correlation with Recognizing feelings ($r = .19$, p $< .001$) (see table 4.2-6)

Table 4.2-5 Correlations among subscales of SMMS and DERS

	S_Inf (1)	S_Acc (2)	S_Typ (3)	S_Clar (4)	S_Main (5)	S_Rep (6)	S_Damp (7)	D_Clar (8)	D_Awar (9)	D_Imp (10)	D_Non (11)	D_Goal (12)	D_Strat (13)
S_Influence (1)	1	-.24***	-.09*	-.18***	-.13**	.20***	.17***	-.15***	.03	.20***	.19***	.14***	.27***
S_Accept (2)		1	.30***	.36***	.59***	-.01	-.20***	.33***	.15***	-.27***	-.43***	-.27***	-.38***
S_Typical (3)			1	.09*	.44***	-.08	-.05	.03	-.01	.04	.02	-.01	.07
S_Clarity (4)				1	.22***	-.01	-.16***	.49***	.15***	-.33***	-.25***	-.29***	-.31***
S_Maintenance (5)					1	.07	.08	.18***	.18***	-.18***	-.26***	-.23***	-.26***
S_Repair (6)						1	.43***	-.07	.03	-.05	.03	.01	-.08
S_Dampening (7)							1	-.19***	-.06	.16**	.26***	.14*	.15**
D_Clarity (8)								1	.39***	-.46***	-.46***	-.41***	-.50***
D_Awareness (9)									1	-.12**	-.19***	-.04	-.12**
D_Impulse (10)										1	.50***	.63***	.71***
D_Nonaccaptance (11)											1	.45***	.63***
D_Goals (12)												1	.65***
D_Strategies (13)													1

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

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

***Correlation is significant at the 0.001 level (2-tailed).

Table 4.2-6 Correlations among subscales of SMMS and TAS

	S_Influence	S_Accept	S_Typical	S_Clarity	S_Maintenance	S_repair	S_Dampening	TAS_Communicate	TAS_Recognize	TAS_Imagine
S_Influence	1	-.24***	-.09*	-.18***	-.13**	.20***	.17***	.07	.15***	-.06
S_Accept		1	.30***	.36***	.59***	-.01	-.20***	-.20***	-.32***	-.02
S_Typical			1	.09*	.44**	-.08	-.05	.07	.02	.06
S_Clarity				1	.22***	-.01	-.16***	-.21***	-.43***	.04
S_Maintenance					1	.07	.08	-.13*	-.21**	-.04
S_Repair						1	.43***	-.07	.01	-.14*
S_Dampening							1	.03	.19***	-.07
TAS_Communicate								1	.50***	.11**
TAS_Recognize									1	-.09*
TAS_Imagine										1

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

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

***Correlation is significant at the 0.001 level (2-tailed).

4.2.3 Psychometric Properties of the Trait Meta-Mood Scale

In order to determine the psychometric properties of the Trait Meta-Mood Scale (SMMS), first the factor structure was examined. This was followed by the internal consistency analyses, and split half reliability coefficients of the scale. Lastly, correlational analyses were conducted with the TMMS, the Difficulties in Emotion Regulation Scale (DERS), and the Toronto Alexithymia in order to investigate its validity.

4.2.3.1 Factor Analysis and Reliability of the Trait Meta-Mood Scale

An initial factor analysis with a varimax rotation was conducted to examine the Trait Meta-Mood Scale's general factor structure after it has been translated to Turkish. The analysis was conducted with a sample of 619 participants. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .86 and the Bartlett's test of Sphericity was significant at the $p < .001$ significance level; indicating the data was appropriate for factor analysis.

The initial factor analysis revealed a factor solution of six factors with eigenvalues above 1, explaining a total variance of 54.80%. Based on the original scale's factor solution, the analysis was repeated by forcing the scale to a 3 factor solution which explained a total variance of 39.72%. The three factors, Clarity, Attention and Repair, explained variances of 19.97%, 10.80% and 8,95%, respectively. Moreover, examining the items under the rotated component matrix revealed all items except one, 11th (*I can never tell how I feel*)item, having highest loadings on their original factors. In addition, all items except the 3rd item (*I don't*

think it's worth paying attention to your emotions or moods) got loadings above .30. When the 11th, which originally belongs to the first factor, was examined, it was seen that it had a cross loading on the first and second factor with loadings of .40 and .42, respectively. To be consistent with the original scale this item was left under its original factor, Clarity. Although the 3rd item did not get a loading above .30, it was not excluded from the scale and was kept under its original factor.

The Cronbach's alpha coefficients were calculated to examine the scales internal consistency, and they came out to be very satisfactory. The first factor, Clarity, consisting of 10 items, had an alpha coefficient of .84 with item total correlations ranging between .31-.71. The second factor called Attention had 14 items and an internal consistency of .75. The item total correlations for this factor were ranging between .10-.59. Lastly, the third factor, Repair, consisted of 6 items with an internal consistency of .78 and item total correlations were ranging between .30-.62 (see table 4.2-7 for factor loadings).

Table 4.2-7 Factor Structure for TMMS

	Factors		
Items	**Clarity**	**Attention**	**Repair**
TMMS28 I usually know my feelings about a matter	**.81**	.08	.06
TMMS30 I almost always know exactly how I am feeling	**.79**	-.01	.06
TMMS25 I am usually very clear about my feelings.	**.77**	-.02	.12
TMMS16R I am usually confused about how I feel	**.75**	.15	.01
TMMS22R I can't make sense out of my feelings.	**.73**	.18	.09
TMMS15 I am often aware of my feelings of a matter	**.70**	.12	.14
TMMS6 I am rarely confused about how I feel	**.50**	-.08	.04
TMMS20 I feel at ease about my emotions.	**.48**	.21	.42
TMMS5R Sometimes I can't tell what my feelings are	**.43**	.22	.02
TMMS14R My belief and opinions always seem to change depending on how I feel	**.41**	-.12	.10
TMMS29R It is usually a waste of time to think about your emotions.	.07	**.70**	.14
TMMS17R One should never be guided by emotions	.01	**.68**	.07
TMMS18R I never give into my emotions	-.11	**.68**	-.05
TMMS23R I don't pay much attention to my feelings	.15	**.61**	-.07

Note: The bold loadings represent the right items under theoretically right factors. R indicates reverse item.

Table 4.2-7 Factor Structure for TMMS cont'd

	Factors		
	Clarity	**Attention**	**Repair**
Items			
TMMS27R Feelings are a weakness humans have	.09	**.59**	.20
TMMS2R People would be better off if they felt less and thought more	.05	**.53**	.15
TMMS4R I don't usually care much about what I'm feeling	.18	**.51**	-.06
TMMS7 Feelings give direction to life	-.14	**.48**	.06
TMMS11R I can never tell how I feel	.40	**.42**	.07
TMMS24 I often think about my feelings	-.04	**.40**	-.17
TMMS10 I believe in acting from the heart	.07	**.35**	.25
TMMS12 The best way for me to handle my feelings is to experience them to the fullest	.17	**.34**	.24
TMMS21 I pay a lot of attention to how I feel	.21	**.33**	-.01
TMMS3R I don't think it's worth paying attention to your emotions or moods	-.01	**.17**	-.12
TMMS1 I try to think good thoughts no matter how badly I feel	.01	-.01	**.80**
TMMS26 No matter how badly I feel, I try to think about pleasant things.	.07	-.02	**.78**
TMMS13 When I become upset I remind myself of all the pleasures in life.	-.07	.02	**.72**
TMMS8 Although I am sometimes sad, I have a mostly optimistic outlook	.16	.03	**.71**
TMMS19R Although I am sometimes happy, I have a mostly pessimistic outlook	.24	.13	**.61**
TMMS9R When I am upset I realize the "good things in life" are illusions.	.28	.03	**.33**
Eigenvlaues	5.99	3.24	2.67
Cumulative Variance (%)	19.97	10.80	8.95
Alpha Coefficients	.84	.75	.78
Item-total correlations	.31-.71	.10-.78	.30-.60

Note: The bold loadings represent the right items under theoretically right factors. R indicates reverse item.

4.2.3.2 Concurrent Validity of Trait Meta-Mood Scale

Correlations among the subscales of the TMMS, DERS and TAS were examined for the concurrent validity of the TMMS. The correlations between TMMS and DERS were satisfactory. The Clarity subscales of the TMMS was positively correlated with the Clarity subscale of the DERS ($r = .80$, $p < .001$). The correlations of Clarity with the other subscales of the DERS ranged from -.49 to .37 ($p < .001$). Moreover, the highest correlation of Attention was with Awareness ($r = .56$, $p < .001$). Lastly, the Repair dimension of the TMMS had its highest correlation with Strategies ($r = -.61$, $p < .001$), as expected (see table 4.2-8)

The correlations of TMMS and TAS were also satisfactory. Clarity had its highest correlation with Recognize (difficulty in recognizing feelings), which was $r = -.70$, $p < .001$. Moreover, the Attention and Repair subscales were negatively correlated with the Communication (difficulty communicating feelings) subscale of TAS; $r = -.44$ and $r = -.34$ at $p < .001$ significance level, respectively (see table 4.2-9).

Table 4.2-8 Correlations among subscales of TMMS and DERS

	TClarity	TAttention	TRepair	DClarity	DAwareness	DImpulse	DGoals	DNonaccaptance	DStrategies
TClarity	1	.26**	.31**	.80**	.37**	-.41**	-.39**	-.44**	-.49**
TAttention		1	.16**	.20**	.56**	-.07	.01	-.17**	-.10*
TRepair			1	.31**	.17**	-.38**	-.37**	-.32**	-.61**
DClarity				1	.39**	-.46**	-.41**	-.46**	-.50**
DAwareness					1	-.12**	-.04	-.19**	-.12**
DImpulse						1	.63**	.50**	.71**
DGoals							1	.45**	.65**
DNonaccaptance								1	.63**
DStrategies									1

Note: Subscales beginning with "T" belong to TMMS; beginning with "D" belong to DERS

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

**. Correlation is significant at the 0.001 level (2-tailed).

Table 4.2-9 Correlations among subscales of TMMS and TAS

	TClarity	TAttention	TRepair	TASCommunicate	TASRecognize	TASImagine
TClarity	1.00	.26**	.31**	-.51**	-.70**	.08
TAttention		1.00	.16**	-.44**	-.24**	-.27**
TRepair			1.00	-.34**	-.30**	-.12**
TASCommunicate				1.00	.50**	.11*
TASRecognize					1.00	-.09*
TASImagine						1.00

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

**. Correlation is significant at the 0.001 level (2-tailed).

Moreover, as the TMMS was measuring the trait characteristics in meta-mood, it was determined to examine its subscales' correlations with Basic Personality Traits. Accordingly, Clarity had positive correlations with Extraversion ($r = .36$, $p <.001$), Conscientiousness ($r = .22$, $p <.001$), Agreeableness ($r = .18$, $p <.001$) and Openness to Experience ($r =0.37$, $p <.001$); whereas it had negative correlations with Neuroticism ($r = -.21$, $p <.001$) and Negative Valance ($r = -.28$, $p<.001$). Moreover, Attention had positive correlations with Extraversion ($r = .21$, $p <.001$), Agreeableness ($r =0.28$, $p <.001$), and Openness to Experience ($r = .15$, $p <.001$); and a negative correlation with Negative Valance ($r = - .29$, $p <.001$). Lastly, the Repair factor had positive correlations with Extraversion ($r = .38$, $p <.001$), Conscientiousness ($r = .29$, $p <.001$), Agreeableness ($r = .32$, $p <.001$) and Openness to Experience ($r = .36$, $p <.001$); whereas it had negative correlations with Neuroticism ($r = -.37$, $p <.001$) and Negative Valance ($r = - 25$, $p < .001$).

Finally the TMMS-Total was significantly correlated with all six personality traits. Accordingly, the total scale had positive correlations with Extraversion ($r = .39$, $p <.001$), Conscientiousness ($r = .24$, $p <.001$), Agreeableness ($r = .36$, $p <.001$) and Openness to Experience ($r = 37$, $p <.001$); whereas it had negative correlations with Neuroticism ($r = -.16$, $p <.001$) and Negative Valance ($r = -.31$, $p <.001$) (see table 4.2-10).

Table 4.2-10 Correlations among subscales of TMMS and BPTI

	TCla(1)	TAtt(2)	TRep(3)	TTOT(4)	Ext (5)	Con(6)	Agr (7)	Neu (8)	Ope(9)	NeVa(10)
TClarity (1)	1	.26***	.31***	.67***	.36***	.23***	.18***	-.21***	.37***	-.28***
TAttention(2)		1	.16***	.70***	.21***	.01	.28***	-.04	.15***	-.29***
TRepair(3)			1	.53***	.38***	.29***	.32***	-.37***	.36***	-.25***
TMMSTOTAL(4)				1	.39***	.24***	.36***	-.16***	.37***	-.31***
Extraversion(5)					1	.25***	.37***	-.20***	.61***	-.28***
Conscientiousness(6)						1	.25***	-.16***	.23***	-.28***
Agreeableness(7)							1	-.22***	.41***	-.45***
Neuroticism (8)								1	-.14***	.39***
Opennes (9)									1	-.28***
NegativeValence(10)										1

*** Correlation is significant at the 0.001 level (2-tailed).

4.3   Regression Analysis

In order to examine the associations among trait meta-mood levels with other measures 4 hierarchical regression analyses were conducted. Thus, Trait Meta-Mood Experience (TMMS total score), and subscales of TMMS (i.e. Attention, Clarity, and Repair) were dependent variables; whereas, Demographic Variables (i.e. age & sex), Basic Personality Traits (i.e. Extraversion, Openness to Experience, Neuroticism, Agreeableness, Conscientiousness, and Negative Valance) were predictor variables. For these analyses, demographic variables were entered in the first step, whereas Basic Personality Traits were entered in the second step by the stepwise method.

4.3.1   Associations of Meta-Mood Experience with Basic Personality Traits

To identify the associations of Meta-Mood Experience, several regression analyses were examined by using the steps mentioned above. The results were listed in an ascending order with respect to their order of significance. The results revealed that, among demographic variables, initially sex [t (564) = -3.57, β= -.15, p <.001] entered into the equation and explained 2% of the variance [F_{change} (1,564) = 12.72, p <.001]. This means that being female is associated with higher levels of meta-mood experience. For the personality variables, initially Extraversion [t (563=9.73, β= .38, p <.001] entered into the equation, explaining a variance of 14% [F_{change} (1,563) = 94.75, p<.001]. Following Extraversion, Agreeableness entered into the equation [t (562) = 5.69, β = .23, p < .001] and explained 4.6% of the variance [F_{change} (1,562) = 34.40, p <.001]. Afterwards, having controlled for these variables, Openness to Experience entered the equation [t (561) = 4 .75, β = .16, p <.001] and explained a variance of 1.5% [F_{change} (1,561) = 10.52, p <.001]. Moreover, Negative Valance,

which explained a variance of 1.2% [$F_{chanege}$ (1,560) = 8.66, p <.01] by entering into the equation also had significant associations with Meta-Mood Experience [t (560) = -2.94, β = -.11, p <.01]. Lastly, Conscientiousness entered into the equation [t (559) = 2.12, β = .08, p <.05] and explained 0.6% of the variance [F_{change} (1,559) = 4.47, p <.05]. These six variables totally explained 24% of the total variance for Meta-Mood Experience.

Totally, six factors, sex, Extraversion, Agreeableness, Openness to Experience, Negative Valance, and Conscientiousness had significant associations with Meta-Mood Experience. That is, being a woman, having higher levels of Extraversion, Agreeableness, Openness to Experience, and Conscientiousness traits were associated with higher levels of Meta-Mood experience; whereas, higher levels of Negative Valance was associated with lower levels of Meta-Mood Experience.

Table 4.3-1 Associations of TMMS-Total with Basic Personality Traits

Variables in Set	*F* Change	df	*t*	*ß*	*pr*	R^2 change
1. Demographic Variables						
Sex	12.72***	1, 564	-3.57***	-.15	-.15	.022
2.Basic Personality Traits						
Extraversion	94.75***	1, 563	9.73**	.38	.38	.141
Agreeableness	32.40***	1, 562	5.69***	.23	.21	.046
Openness	10.52***	1, 561	3.24	.16	.12	.015
Negative Valance	8.66**	1, 560	-2.94**	-.13	-.11	.012
Conscientiousness	4.47*	1, 559	2.12*	.08	.08	.006

*p <.05;   **p <.01;   ***p<.001

4.3.2   Associations of Emotional Clarity with Basic Personality Traits

A hierarchical regression analysis was conducted to examine the associations between Basic Personality Traits and Emotional Clarity. The analysis included age and sex in the first step, followed by personality traits in the second step. The results were listed in an ascending order with respect to their order of significance. The results revealed that among demographic variables age had a significant associations on Emotional Clarity [t (564) = 2.74, β = .15, p <.01) and explained 1.3% of the variance [F_{change}(1, 564) = 7.50, p <.01]. Following age, Openness to Experience entered the equation [t (563) = 9.25, β = .36, p <.001], explaining 13% of the variance [F_{change}(1, 563) = 85.48, p <.001]. Afterwards, Openness to Experience, Negative Valance had a significant association with Clarity in a negative direction [t (562)= -4.76, β= -.19, p <.001], explaining 3.3% of the variance [F_{change}(1, 562) = 22.65, p <.001]. Next, Extraversion [t (561) = 3.68, β = .18, p <.001] entered into the equation, explaining 2% of the variance [F_{change}(1, 561) = 13.51, p <.001], which was followed by Conscientiousness [t (560) = 2.25, β = .09, p <.05], explaining 0.7% of the variance [F_{change}(1, 560) = 5.07, p <.05]. Following Conscientiousness, Neuroticism [t (559) = -2.05, β = -0.09, p <.05] explained 0.6% of the variance [F_{change} (1, 559) = 4.20, p <.05]. Lastly, Agreeableness entered the equation [t(558)=-2.02, β = -0.09, p <.05], also explaining 0.6% of the variance [F_{change}(1, 558) = 4.06, p <.05]. These 7 variables totally explained 21% of the total variance for Emotional Clarity.

To sum up, from the demographic variables, only age had a significant influence on Emotional Clarity, increasing age was associated with increasing Emotional Clarity. Moreover, all basic personality traits that were entered to the equation had significant associations with Emotional Clarity; high levels of to Openness to Experience, Extraversion, and Conscientiousness traits were associated with higher levels of Emotional Clarity. On the other hand, high levels of Negative Valance, Neuroticism, and, Agreeableness traits indicated lower levels of Emotional Clarity.

Table 4.3-2 Associations of Emotional Clarity with Basic Personality Traits

Variables in Set	F Change	df	t	β	pr	R^2 change
1. Demographic Variables						
Age	7.50**	1, 564	2.74**	.12	.12	0.013
2.Basic Personality Traits						
Opennes	85.476***	1, 563	9.25***	.36	.37	0.130
Negative Valance	22.645***	1, 562	-4.76***	-.19	-.28	0.033
Extraversion	13.511***	1, 561	3.68***	.17	.36	0.019
Conscientiousness	5.066*	1, 560	2.25*	.09	.22	0.007
Neuroticism	4.204*	1, 559	-2.05*	-.09	-.21	0.006
Agreeableness	4.062*	1, 558	-2.01*	-.09	-.18	0.006

**p<= .05;   **p< =.01;   ***p<=.001

4.3.3 Associations of Emotional Attention with Basic Personality Traits

A third hierarchical regression was conducted in order to examine the association of Personality characteristics on Emotional Attention. The same procedure as above was conducted in which age and sex were entered into the equation as demographic variables in the first step followed by Basic Personality Traits in the second step. The results were listed in an ascending order with respect to their order of significance. The results revealed that among demographic variables, sex had a significant association with Emotional Attention (t (564) = -.33, β = -.26, p <.001) and explained 7% of the variance [F_{change}(1,564) = 40.07, p <.001]. This indicated that being female was related to higher Emotional Attention. Following sex, Agreeableness entered into the equation [t (563) = 6.16, β= .25, p <.001], explaining 6% of the variance [F_{change}(1, 563) = 37.94, p <.001]. Afterwards, Negative Valance had a significant association with Attention in a negative way [t (562) = -3.79, β= -.17, p <.001], explaining 2% of the variance [F_{change}(1,562) = 14.34, p <.001]. Next, Conscientiousness [t (561) = -2.66, β = -.11, p <.01] entered into the equation, explaining 1% of the variance [F_{change}(1, 561) = 7.31, p <.01]. Lastly, Extraversion [t (560) = 2.70, β = .11, p <.01] entered into the equation explaining 1% of the variance. These 5 variables totally explained 17% of the total variance for Emotional Attention.

To sum up, from the demographic variables, only sex had a significant influence on Emotional Attention, in which being male was associated with decreasing Emotional Attention. Moreover, four of basic personality traits that were entered into the equation had significant associations with Emotional Attention; in

which, high levels of Agreeableness, and Extraversion, were associated with higher

levels of Emotional Attention. On the other hand, high levels of Negative Valance,

and Conscientiousness traits indicated lower levels of Emotional Clarity.

Table 4.3-3 Associations of Emotional Attention with Basic Personality Traits

Variables in Set	F Change	df	t	β	pr	R^2 change
1. Demographic Variables						
Sex	40.078[***]	1, 564	-6.33[***]	-.26	-.26	0.066
2.Basic Personality Traits						
Agreeablness	37.94[***]	1, 563	6.16[***]	.25	.24	0.059
Negative Valance	14.34[***]	1, 562	-3.79[***]	-.17	-.15	0.022
Conscientiousness	7.08[**]	1, 561	-2.66[**]	-.11	-.10	0.011
Extraversion	7.31[**]	1, 560	2.70[**]	.11	.10	0.011

*$p<= .05$; **$p< =.01$; ***$p<=.001$

Dependent Variable: TMMS-Attention

4.3.4 Associations of Emotional Repair with Basic Personality Traits

A fourth hierarchical regression was conducted in order to examine the influence of Personality characteristics on Emotional Repair. The same procedure as above was conducted in which age and sex were entered into the equation as demographic variables in the first step followed by Basic Personality Traits in the second step. The results were listed in an ascending order with respect to their order of significance. The results revealed that among demographic variables neither sex nor age had a significant influence on Emotional Repair. Thus, Extraversion entered into the equation [t (564) = 15.22, β= .05, p <.001] in the first place, explaining 15% of the variance [F_{change}(1, 564) = 97.49, p <.001]. Afterwards, Extraversion, Neuroticism had a significant association with Repair in a negative way [t (563) = -8.20, β = -.31, p <.001], explaining 9% of the variance [F_{change}(1, 563)= 67.20, p <.001]. Next, Conscientiousness [t (562)=4.64, β= .17, p <.001] entered the equation, explaining 3% of the variance [F_{change}(1, 562) = 21.51, p <.001]. Following Conscientiousness, Openness to Experience was found to have a significant association [t (561) = 3.90, β= .18, p <.001] with Emotional Repair, explaining %2 of the variance F_{change}(1, 561) = 15.21, p <.001]. Lastly, Agreeableness entered into the equation [t (560) = 2.59, β = .10, $p\leq$ .01], explaining 1% of the variance [F_{change}(1, 560)= 6.72, $p \leq$ .01]. These five personality traits totally explained 30% of the total variance for Emotional Repair.

To sum up, from the demographic variables, neither sex nor age had a significant influence on Emotional Repair. Moreover, five of basic personality traits that were entered to the equation had significant associations with Emotional Repair;

in which, high levels of traits belonging to Extraversion, Conscientiousness, Openness to Experience, and Agreeableness were associated with higher levels of Emotional Repair. On the other hand, high levels of traits belonging to Neuroticism indicated lower levels of Emotional Clarity.

Table 4.3-4 Associations of Emotional Repair with Basic Personality Traits

Variables in Set	F Change	df	t	β	Pr	R^2 change
1.Basic Personality Traits						
Extraversion	97.49***	1, 564	9.87***	.38	,38	0.15
Neuroticism	67.20***		-8.20***	-.308	-.30	0.09
Conscientiousness	21.51***	1, 563	4.64***	.17	.17	0.03
Opennes to Experience	15.21***	1, 562	3.90***	.18	.14	0.02
Agreeablness	6.72**	1, 561	2.59**	.10	.09	0.01

***$p< = .001$;   **$p< =.01$

Chapter V

Discussion of Study I

The main purpose of study one was to translate and adapt three related scales, namely, Brief Mood Introspection Scale (BMIS), Trait Meta-Mood Scale (TMMS), and State Meta-Mood Scale (SMMS) into Turkish and examine the reliability and validity of these measures. First, the factor structures of these scales were examined, followed by criterion validity measures. Next, multiple hierarchical regression analysis were conducted in order to examine the associations of the TMMS with Basic Personality Traits. Therefore, in this chapter, findings of the current study; which include psychometric property analyses of the BMIS, SMMS, and TMMS are presented and multiple hierarchical regression result of the TMMS will be discussed in the light of the current literature. Moreover, the possible use of these scales will be discussed, followed by the limitations and strengths of the current study, and suggestions for future research will be presented.

5.1 Findings Related to Psychometric Analyses

This section will discuss the findings related to the psychometric properties of the BMIS, SMMS and TMMS with the relation to the findings in the literature.

5.1.1 Findings Related to Brief Mood Introspection Scale (BMIS)

In this part the factor structure of the Brief Mood Introspection Scale were investigated, followed by Reliability analyses of the BMIS in terms of

internal consistencies, and validity analysis in terms of its correlations with the Positive Affect Negative Affect Schedule.

Although the BMIS can be scored in many ways to obtain scores of Pleasant-Unpleasant Mood, Arousal-Calm Mood, Positive Tired Mood and Negative-Relaxed Mood, for the purpose of the main study, only scorings for the Pleasant-Unpleasant Mood were considered. Moreover, originally the Pleasant-Unpleasant Mood factor is calculated by adding Pleasant Mood adjectives and the reversed scorings of the Unpleasant Mood factor, therefore, establishing a single score; however, for the main study, the Pleasant and Unpleasant Mood factors were calculated and analyzed separately. The factor structure of the BMIS came out to be very similar to the original scale indicating its construct validity. The first analysis of the scaled revealed a three factor solution explaining a total variance of 64.35%. Kokkonen and Pulkkinen (2001), on the other hand, had found a four factor solution explaining a total of 48.4% of the variance. For the aim of the main study a two factor solution, namely, Pleasant-Unpleasant was necessary. Therefore, the analysis was repeated with a two factors solution, explaining a total of 56.12% of the variance. When the item loadings were examined all items except one (calm/sakin) got loadings under the originally correct factor. The item "calm" had a loading of .42 on the Unpleasant factor, whereas, it originally belongs to the Pleasant factor, from which it had a loading of .23. In terms of the ascending order of factor loadings, the item 'calm' followed two adjectives, (tired and drowsy) which may be perceived by individuals to be related. In other words, this suggested that the word '*sakin*' may be perceived as a

negative adjective, or an adjective that may be related with Unpleasant Mood adjectives such as '*tired*' and '*drowsy*'. This item may be replaced with a synonym that may indicate more Pleasantness. Rather than the word '*sakin*', the synonym word "*dingin*" may be used as a replacement. In order to be consistent with the original scale, this item was decided to be kept under the Pleasant factor. The Cronbach's coefficients for both scales were high at .88 for both scales, which were higher than the original scale's loading which ranged from .76-.83.

Moreover, the correlation analyses were conducted in order to compare the subscales of BMIS with subscales of PANAS. Accordingly, the Pleasant Mood factor had a moderate positive correlation with Positive and negative correlation with Negative Affect. The Unpleasant Mood factor had a high positive correlation with Negative Affect (.70) and a weak to a moderate negative correlation with Positive Affect (-.39). The BMIS also had a one question scale ranging from -10 to +10, on which individuals were asked to rate their Overall Mood. Accordingly, the Overall Mood scale had moderate correlation coefficients of .51 and -.50 with Positive and Negative Affect, respectively.

In general, the subscales of BMIS correlated moderately with the subscales of PANAS, which can be interpreted by examining the adjectives used for both scales. Accordingly, as the names also imply, the BMIS includes adjectives indicating mood states, such as happy, loving, calm, energetic, angry, and tired, to name a few (Mayer & Gaschke, 1988). The PANAS, on the other hand, includes some relatively intense affective states measuring

individuals' alertness, enthusiasm, disgust, and guilt (Gençöz, 2000); which may be seen as a distinguishing factor between these two scales.

5.1.2 Findings Related to Psychometric Properties of State Meta-Mood Scale (SMMS)

In this part the factor structure of the State Meta-Mood Scale were investigated, followed by Reliability analyses of the SMMS in terms of internal consistencies, and validity analysis in terms of its correlations with the Difficulties in Emotion Regulation Scale (DERS) and the Toronto Alexithymia Scale (TAS).

The SMMS consisted of two meta-mood domains, Evaluative and Regulatory, namely. Moreover, each domain is divided into sub-domains, Influence, Acceptability, Typicality, and Clarity tallied under the Evaluative domain, and Maintenance, Repair, and Dampening, tallied under the Regulatory domain. The rotated factor solutions for both domains yielded very similar eigenvalues as the original scale. The four factor solution for the Evaluative domain came out to be similar to the original scale. All items, except one, had loadings on their theoretically correct factors. The 9th item (*It's hard to describe / Bu ruh halimi tarif etmesi zor*) had a loading of .50 under Acceptability; whereas, it originally belonged to the Clarity factor, from which it got a loading of .44. This item may be replaced with an item that has more emphasis on clarity but still includes a meaning of description, such as "*Bu ruh halimi tanımlamak zor*" As the loadings were close to each other and in order to be consistent with the original scale, this item was presented under the Clarity factor.

When the Meta-Regulation factors were examined it came out that all items, except one, had loadings on their theoretically correct factors. The 26th item (*I'm planning positive things, to keep my mood going/ Ruh halimin devam etmesi için olumlu şeyler planlıyorum*) got a loading of .48 from the factor Maintenance, and a loading of .32 from the factor Dampening. Originally the item belongs under the Repair factor; however, when the item was examined, although the phrase "*planning positive things*" indicates a repair strategy; the phrase "*keep my mood going*" indicates a maintaining strategy. A replacement for this item should have more emphasis on Repairing Mood. This can be established by inverting the first and second halves of the sentences, as the emphasis in a Turkish sentence is mostly given at the end of the sentence. Thus, the new version may be suggested as *"Olumlu şeyler planlıyorum ki, bu ruh halim iyiye gitsin".* This item also was kept under the original factor, for the consistency of the Turkish version of the scale with the original version.

The examination of the correlational analyses of the SMMS with criterion scales reveal moderate to low relations. Accordingly, the Influence scale of the SMMS was found to be negatively correlated with the Clarity (emotional clarity) scale of DERS. Moreover, the Influence subscale was also positively correlated with the Recognize (difficulties in recognizing emotions) subscale of TAS. This indicated that the higher levels of perceiving a current mood to be influential on thinking, was related to lower levels of emotional clarity, although a cause and effect relationship cannot be referred from these correlational analyses. Mayer and Stevens (1994) also found similar results in that Influence was negatively related to mood recognition. In addition, when

the correlation of the Influence was examined with other measures of the DERS it was found that Emotional Influence was positively related to Impulse control difficulties, Non-acceptance of emotional response, difficulties in engaging goal directed behavior, and limited access to emotion regulation strategies. These findings were also related to the findings of Mayer and Stevens (1994). The authors found that Influence was related to Borderline related pathology, and a feeling that problems are out of one's control. The authors suggested that if a mood is too influential, it is perceived as out of one's control. The scale's correlations with the above mentioned variables also suggest similar notions. The higher the mood is perceived to be influential, the more difficulties in impulse control and goal directed behavior, and less access to emotion regulation strategies was indicated from the results.

The second subscale of the SMMS, Acceptance, was found to be negatively correlated to Non-acceptance scale of the DERS, suggesting the scales concurrent validity. Moreover, Acceptance was found to be negatively correlated to difficulties in impulse control, difficulties in goal directed behavior and limited access to emotion regulation strategies. This indicated that Acceptance of emotional states was related to lower levels of emotion related problems. Moreover, Acceptance subscale was positively correlated with both emotional Clarity and emotional Awareness of DERS. Lastly, Acceptance was found to be negatively correlated to difficulties in recognizing emotions and difficulties in communicating feelings (TAS). This result was similar with the original scale's validity findings (Mayer & Stevens, 1994).

The Typicality subscale of the SMMS did not correlate with any of DERS and TAS subscales. The study of Mayer and Stevens (1994) also did not find any correlations between Typicality and other criterion scales, but found correlations with meta-mood measures. Similar to the original study, Typicality was found to be positively correlated to Maintenance. When the items of the Typicality scale were examined, all items refer to the mood states presently active, (i.e '*I feel this mood often', 'This mood, too shall pass'*). Therefore, it can be suggested that different from criterion scales, this scale would be useful after a mood induction procedure, and it shall be examined with one's current mood. Analyses that were not included in the study have shown that Typicality was positively correlated to Pleasant Mood similar to the original scale.

Lastly, the Clarity scale of the Meta-Evaluation domain was found to be positively correlated with the Awareness and Clarity subscale of DERS, indicating its concurrent validity. Moreover, Clarity was found to be negatively correlated to impulse control difficulties, non-acceptance of emotional responses, goal directed behavior difficulties, and limited access to emotion regulation strategies. When the Clarity scale was examined with regard to TAS, it was found that, similar to the original study, emotional clarity was negatively correlated to Emotion recognition difficulties and difficulties in Communication of feelings, indicating the scale's concurrent validity. These results indicated that higher levels of emotional clarity would indicate higher levels of emotion recognition and communication through feelings. Moreover, as the correlations of Clarity with the DERS subscales revealed, emotional clarity was related to be higher levels of emotional competence; which is also

suggested by the literature Salovey, et al. 1995; Extremera, and Fernandez-Berrocal, 2006).

When the Meta-Regulation domains of the SMMS were examined it was found that attempts to maintain a current mood was negatively correlated with limited access to emotion regulation strategies, impulse control, and difficulties in goal directed behavior. This indicated that, letting oneself experience and maintain a mood was related to less emotion regulation difficulties. Moreover, it came out that in order to maintain a mood, one has to be aware of and be able to clarify the mood, as maintenance was positively correlated with emotional Awareness and Clarity of the DERS. In addition, when the relation of Maintenance was examined with regard to TAS, it was found that Maintaining mood was negatively correlated with communication of feelings and imagining capacity. The original study found that maintenance of a mood state was related to describing feelings, optimism, and negatively related to personal distress. Although not similar criterion scales were used, it can be inferred that in order maintaining a mood states, one has to be aware of this mood, and able to describe. Similar to the original findings, the Maintenance subscale had good correlations with both Acceptance and Clarity of the SMMS.

The Repair subscale of the SMMS was not correlated with any of the subscales of DERS and TAS. However, the Repair subscale had good correlations with Dampening, as it was also found in the original study. The reason why Repair did not correlate with any of the DERS subscales may be due the scale's construct it hat it measures state moods. In order to repair an

emotional state, one has to be in a negative mood. The DERS subscales refer to states of being upset; whereas the Repair subscale refers to the current mood.

Finally, the Dampening scale was positively correlated with Non-acceptance scale of the DERS. This finding was logical in that, individuals who do not accept their emotional responses, most probably would try to dampen their feelings. Moreover, this notion was also supported with the finding that dampening was positively correlated with difficulties in goal directed behavior and limited access to emotion regulation strategies. Although these correlations were low, they indicated difficulties in emotion regulation may be related to dampen emotions. Moreover, dampening was found to be positively correlated with difficulties in recognizing emotions, measured by TAS. Similarly, Mayer and Stevens (1994) also found that dampening was related to difficulties in identifying emotions.

5.1.3 Findings Related to Psychometric Properties of Trait Meta-Mood Scale (TMMS)

In this part the factor structure of the Trait Meta-Mood Scale were investigated, followed by Reliability analyses of the TMMS in terms of internal consistencies, and validity analysis in terms of its correlations with the Difficulties in Emotion Regulation Scale (DERS) and the Toronto Alexithymia Scale (TAS). Lastly, in order to examine the associations of the TMMS with Basic Personality Traits, regression analyses were elaborated.

The Cronbach's alpha coefficients of the three subscales were quite satisfactory. In fact, the Clarity and Repair subscales had higher internal consistency coefficients than the original scale. Correlations among the

subscales of the TMMS, DERS and TAS were examined for the concurrent validity of the TMMS. The correlations between TMMS and DERS were satisfactory, and all subscales were correlated with the expected direction. The Clarity subscale of the TMMS had positively strong correlations with the Clarity subscale of DERS, indicating good concurrent validity. Salovey et al. (1995) found that higher levels of Clarity were correlated with higher levels of emotional adjustment. Similarly, the current study revealed that Clarity was negatively correlated to difficulties in impulse control, difficulties in goal directed behavior, and limited access to emotion regulation strategies. Moreover, Attention was positively correlated with Awareness. In the original study, Salovey et al. (1995) reported that Attention to feelings was related to private and self-conscious; indicating that high levels of Emotional Attention was related to other aspects of conscious experiences. The findings of the current result revealed similar results in that higher Attention to emotions was correlated with higher emotional awareness, indicating its concurrent validity.

Lastly, the findings of the current study also revealed concurrent validity of the Repair subscale. The Repair dimension of the TMMS had satisfactory correlations with Strategies, as expected, and also correlated negatively with other subscales of DERS, such as difficulties in impulse control, difficulties in goal directed behavior and non-acceptance of emotional responses. Salovey et al. (1995) indicated that Repair was positively correlated with negative mood regulation.

When the correlation coefficients of the TMMS was compared to the findings of the SMMS, the fact that TMMS measures trait characteristics of

mood, the subscales Attention Clarity and Repair of the TMMS, yielded better correlation coefficients with the DERS, compared to correlations between SMMS and DERS.

The correlations of TMMS and TAS were also satisfactory. Clarity had negatively high correlations with difficulties in recognizing emotions. Davies et al. (1998) also found that the Clarity subscale was negatively high correlated with the Recognizing and Identifying emotion subscale of the TAS. The authors conducted a hierarchical cluster analysis and revealed that the TMMS-Clartiy and TAS-Identification of feelings subscales grouped together in one cluster. This finding also supported the concurrent validity of the Clarity subscale in the current study. The Attention subscale was negatively correlated with the difficulties in Communicating feelings of TAS, indicating that emotional attention were related to less difficulty in communicating feelings. Unfortunately, the literature does not suggest relations between Attention to feelings and communicating feelings. However, from this finding it can be concluded that higher levels of Emotional Attention was related to less difficulty in communicating feelings.

Lastly, the TMMS-Repair scale was negatively correlated to all three subscales of the TAS. Unfortunately, the literature does not include any similar analyses; therefore, a comparison could not be made.

As the TMMS was measuring the trait characteristics in meta-mood, it was determined to examine its subscales' correlations with Basic Personality Traits. The TMMS-Total was significantly correlated with all six personality traits. Accordingly, the total scale had positive correlations with Extraversion,

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Conscientiousness, Agreeableness and Openness to Experience; whereas it had negative correlations with Neuroticism and Negative Valance. Except Negative Valance, the same findings were reported by Davis et al. (1998).

The literature suggests that higher levels of Clarity and Repair inferred to higher levels of emotional competence. Therefore, it was expected to find correlations between these two components and Extraversion, Agreeableness, and Openness to experience. Moreover, with respect to the literature, Neuroticism was expected to be negatively correlated to emotional clarity and repair but positively correlated to emotional attention. As expected, Neuroticism was negatively correlated to Clarity and Repair. However, Attention to emotions was not found to be correlated with Neuroticism.

In sum, Clarity had positive correlations with Extraversion, Conscientiousness, Agreeableness and Openness to Experience; whereas it had negative correlations with Neuroticism and Negative Valance. Moreover, Attention had positive correlations with Extraversion, Agreeableness, and Openness to Experience; and a negative correlation with Negative Valance. Lastly, the Repair factor had positive correlations with Extraversion, Conscientiousness, Agreeableness and Openness to; whereas it had negative correlations with Neuroticism and Negative Valance. The correlational findings are consistent with the literature (Law et al., 1995). Although Law et al. (1995) found that Attention to emotions was related to Neuroticism, such finding was not the case in the current study. The difference may be due the cultural differences, as Law et al. (1995) used a Hong Kong sample. Relations of Neuroticism and Emotional Attention are inconsistent in the literature. In a

Singaporean sample, Neuroticism was negatively correlated with Attention (Wong et al. 2007), whereas no such correlation was found in the Turkish sample, indicating cultural differences. Except the relations of Attention and Neuroticism the findings of the current study were consistent with samples of Singapore and Australia.

In order to examine the associations TMMS-Total, Clarity, Attention and Repair with BPTI several regression analyses were conducted. The results revealed exploratory findings of the associations of trait-meta mood and personality. It was found that in a Turkish sample, female was related to higher meta-mood experience levels. Moreover, extraversion was found to be most important personality trait, predicting meta-mood experience. Neuroticism on the other hand was found to be unrelated to meta-mood experience. These findings differ from the findings of Wong et al. (2007) who found that Agreeableness was the only predictor of meta-mood in Singaporean and Australian sample. In the Turkish sample, however, following Extraversion, Agreeableness, Openness to experience, and Conscientiousness were positively predicting meta-mood, whereas, Negative Valance had a negative relationship. These findings suggest higher relatedness between personality traits and meta-mood experience in the Turkish sample, compared to the Singaporean and Australian sample.

When each subscale's association with demographic variables and personality traits were examined, it was found that increasing age was related

to higher levels of Emotional Clarity; however, gender had no associations. Moreover, higher levels of Openness to Experience, Extraversion, and Conscientiousness were associated with higher levels of Emotional Clarity; whereas high levels of Negative Valence, Neuroticism, and Agreeableness yielded to lower levels of Emotional Clarity. Interestingly, it was found that, although Neuroticism did not correlate with Emotional Attention, when gender was controlled, higher levels of Neuroticism also predicted lower levels of Emotional Clarity. In the Australian sample; however, only Neuroticism was a predictor of Emotional Clarity in the Australian sample; whereas none of the personality traits predicted Clarity in the Singaporean sample (Wong et al. 2007). This result revealed that, as mentioned above, personality traits have much more influence on the levels of individuals' Emotional Clarity, compared to cultures from the east and west.

In terms of Attention to mood states, being female was positively associated with this variable. Moreover, high levels of Agreeableness and Extraversion were related to higher levels of Attention to feelings, whereas Negative Valance and Conscientiousness were negatively associated. This finding was somewhat similar to the Australian sample, in which, Agreeableness predicted emotional attention. For the Singaporean sample; in addition to Agreeableness, Neuroticism was also found to be a predictor of Emotional Attention.

Lastly, for the Repair factor, it was found that neither gender, nor age was related with Emotional Repair. For the personality traits it was found that high levels of Extraversion, Conscientiousness, Openness to Experience, and

Agreeableness contributed to Emotional Repair; whereas, Neuroticism had an opposing effect. As expected, Neuroticism traits inhibited Emotional Repair. Following Extraversion, Neuroticism was the strongest predictor of Emotional Repair. In the Australian and Singaporean sample Neuroticism was a predictor for Emotional Repair. In addition, Extraversion also predicted Repair for the Singaporean sample (Wong et al., 2007).

5.2   Limitations of the Study

The data for the study was conducted by an internet survey. Using the internet as a data collection source has its limitations as well as advantages. The advantage was that a very large number of participants were reached (N=865). As filling out the questionnaire battery was based on voluntary choice, the dropout rate was high, leaving 568 participants left, who answered all the questions. In fact this number is relatively high, for a data collection procedure that lasted one and a half month. Moreover, participants could fill in the measurement scales without any time limitation, and at times and places when they felt comfortable. The BMIS and SMMS requested from the individuals to focus on their current mood states. Therefore, answering these scales at places where the participants could feel at ease in thinking about their moods was important.

One important limitation faced during data collection procedure was that the Regulatory Factors scale of the SMMS was not activated for a while. That is, the first 360 participants were not able to see the Regulatory Scale (N = 399), which yielded smaller number compared to the Evaluative scale (N =

759). Fortunately, as Mayer and Stevens (1994) claim, the Evaluative and Regulation domain of the SMMS are distinct measures, which should be factor analyzed separately. Therefore, the data was analyzed with respect to the original scale.

A second limitation of the data collection via the internet was that, the scales could not be counterbalanced. Therefore, all participants received the questionnaires in the same order.

Lastly, the sample consisted of individuals who were either university students, or graduates, master students or graduates, doctorate students or graduates. Although the sample was distributed to many universities in Turkey, which were not reported here due to coding difficulties, the results could only be generalized to university students and individuals with higher educational status. Moreover, the sample consisted of individuals that ages ranged between 18 and 50. Therefore, the results of the study cannot be generalized to a younger or older population.

5.3 Clinical Implications of the Study

The current study aimed to translate and adapt the BMIS, SMMS and TMMS into Turkish. Although most analyses were correlational due to concurrent validity examinations, the results revealed satisfactory relations. Especially, the TMMS was found to be a comprehensive measure of perceived emotional intelligence, although not as comprehensive as the DERS, in that the TMMS lacked measurements appropriate goal directed behavior, and inhibition of impulsive behavior (Gratz & Roemer, 2004). However, the current study

revealed relations among TMMS and DERS, in that the components of TMMS correlated with Goal directed behavior and impulse control. Therefore, it can be implied that the meta-mood experience may act as a roof, covering emotion regulation strategies.

In order to regulate emotions, one first has to attend and be able to discriminate among mood states (Mayer, Salovey, Caruso, & Sitarenios, 2001). For therapeutic applications, the use of the meta-mood scale may be important in order to assess individuals' emotional intelligence. The TMMS would reveal a general view of the individuals' emotional intelligence, which would be easier to use compared to the Mayer Salovey Caruso Emotional Intelligence, which requires 30 to 45 minutes to administer.

It may be important to assess individuals' thoughts about their moods, especially if they are experiencing high emotional states, such as depressive feelings due to depression or trauma. Meta-mood experience is defined as the cognitive aspect of moods. Due to this, different from mood itself, it is under the control of the individual (Mayer & Gaschke, 1988). One of cognitive therapy's techniques is to normalize the patient with his/her emotions and cognitions. In order words, patients are told that what they are going through is totally normal. Therefore, accepting an experienced mood and attempting to maintain that mood has been shown to be related to emotion regulations. As cognitions about moods are changed, it can be indicated that cognitions about problems would also change, leading to higher emotionally competence. As, problems indicating emotional attention, clarity and repair difficulties, are supported to be related with depression (Thayer, Rossy, Ruiz-Padial, &

Johnsen; 2003), the improvement of meta-mood levels may be effective in changes of the individuals' general cognitions; which is partly the aim of the main study, and will be discussed later.

CHAPTER VI

METHOD

6.1   Participants

A total of 164 participants (41 males; 123 females) attended to the study either voluntarily or received a bonus for a course. The age of the participants was ranging between 20 and 34 with a mean of $M= 22.16$ ($SD= 2.56$). Participants were Middle East Technical University students from different departments, with a majority of psychology students. Accordingly, 61.6% ($n = 101$) of the participants were psychology graduate and undergraduate students, whereas 38.4% ($n = 63$) were non-psychology undergrad students. Descriptive information of demographic variables are shown in table 6.1-1.

Table 6.1-1 Demographic Characteristics of Participants

Variables	*N* (164 Participants)	%
Gender		
Female	123	75
Male	41	25
Age	Total: 160 (4 missing/2.44)	
20	29	17.68
21	48	29.27
22	35	21.34
23	25	15.24
24	5	3.05
25	3	1.83
26	4	2.44
27	4	2.44
28	3	1.83
29	2	1.22
30	1	0.61
34	1	0.61
Department		
Psychology	101	61.6
Non-Psychology	63	36.4
Mother's Education Level	Total: 156 (8 missing/4.9%)	
Illiterate	2	1.22
Literate	1	0.61
Primary	32	19.51
Secondary	15	9.15
High School	44	26.83
University	58	35.37
Graduate	1	0.61
Other	3	1.83
Father's Education Level	Total: 156 (8 missing/4.9%)	
Illiterate	2	1.22
Literate	3	1.83
Primary	18	10.98
Secondary	14	8.54
High School	37	22.56
University	71	43.29
Graduate	9	5.49
Other	2	1.22

Table 6.1-1 cont'd

Number of Siblings	Total:156 (8 Missing/4.9%)	
0	2	1.22
1	13	7.93
2	99	60.37
3	28	17.07
4	6	3.66
5	3	1.83
6	3	1.83
7	1	0.61
8	1	0.61

6.2 Instruments

6.2.1 Demographic Information Form

The demographic information form was constructed in order to gain information about the participants in terms of their gender, age, department, family history of psychological problems and treatment, and the individuals' history of psychological problems and treatment history. Moreover, the education levels of the individuals' parents, the number of siblings and the participants' birth order among siblings were also asked.

6.2.2 Brief Mood Introspection Scale

The Brief Mood Introspection Scale was developed by Mayer and Gaschke (1988), and consists of 16 emotion adjectives. It aims to assess the current mood of the participant. Two scores are obtained from the BMIS indicating the participants' pleasant and unpleasant mood levels (for descriptive details refer to chapter 3.2). The Cronbach's alpha of the BMIS was reported to be.76 and .83 for pleasant and unpleasant mood, respectively

(Mayer & Gaschke, 1988) The scale was translated to Turkish as part of the pilot study of the current research and revealed good internal consistency. Accordingly, the Guttman split half-reliability for each part were both .84; and the Cronbach's alphas were .88 for both Pleasant and Unpleasant Mood. The Cronbach's alpha of the whole scale was found to be .91. Moreover, the Pleasant and Unpleasant mood factors were found to have significant correlations with the Positive Affect Negative Affect Schedule (see chapter 4.2 for details). The scale was used as a baseline for the current mood of each participant and as a manipulation check after the mood induction procedure.

6.2.3 Brief Symptom Inventory

The Brief Symptom Inventory (BSI) is self-report symptom inventory that consists of 53 items. The scale was developed by Derogatis (1993) in order to reflect psychological symptom patterns of psychiatric patients, as well as medical patients, and non-patient individuals. The BSI was adapted into Turkish by Şahin & Durak (1994). As a result of its construct validity analysis 5 factors have emerged, which are anxiety, depression, negative self, somatization, and hostility. These factors were found to have significant correlations with some clinically relevant constructs. Each item of the BSI is evaluated by the participants on a 5 point (0 to 4) Likert type scale. Chronbach Alpha of the subscales ranged from .55 to .86, and for the Global scale ranged from .96 to .95 in three different studies indicating considerable internal consistency (Şahin and Durak, 1994). For the current study, the Cronbach's alpha for the global scale was found to be .96. The alpha coefficient of the subscales for the current study ranged between .75 and .89.

6.2.4   State Meta-Mood Scale

The State Meta-Mood Scale was developed by Mayer and Stevens (1994) in order to measure the moment-by-moment changes about the thoughts of an ongoing mood state that the individual is experiencing. The SMMS consists of 39 items which constitute 2 Meta-Mood sub domains, namely, meta-evaluation and meta-regulation (see chapter 3.2 for descriptive details). All subscales are measured by a 5-point Likert type scale. Mayer and Stevens (1994) reported that the coefficient alpha reliabilities for the subscales range between .74 and .87. The pilot study revealed that the Cronbach's alphas ranged between .69 and .87 for the Evaluative domain; and between .68-.86 for the Regulation domain. The Global scale had an alpha coefficient of .79. For the main study, the Cronbach's alphas ranged between .66 and .84 for the Evaluative; and between .68-.86 for the Regulation domain ranged. The Global scale had an alpha coefficient of .67.

For the main study the Turkish version of the SMMS was used in order to explore individuals' changes of their mood experience after the mood induction procedure. The SMMS was found to have valid correlations with criterion scales (Difficulties in Emotion Regulation and Toronto Alexithymia Scale).

6.2.5   Trait Meta-Mood Scale

The Trait Meta-Mood Scale (TMMS) developed by Salovey et al., (1995) measures relatively stable individual differences in how people attend, discriminate and repair their moods (Salovey et al., 1995). The scale consists of 48 items and has three subcategories, namely Attention, Clarity and Repair.

In each sub-category, higher scores indicate higher levels of ability in attending to moods, discriminate among moods and repair moods (for descriptive detail refer to chapter 3.2). The TMMS is a 5 point Likert type scale. The Cronbach's alpha levels were found to be .86, .87, and .82 for Attention, Clarity and Repair, respectively (Salovey et al. 1995).

For the main study, the Turkish version of the TMMS-30 was used in order to explore individuals' trait meta-mood experiences. The scale was translated to Turkish in Study I, revealing good internal consistencies, ranging from .75 to .84. . The TMMS was found to have valid correlations with criterion scales (Difficulties in Emotion Regulation and Toronto Alexithymia Scale).For the main study the internal consistencies were found to range between .83 and .86.

6.2.6 Basic Personality Trait Inventory

The Basic Personality Traits Inventory (BPTI) was developed by Gençöz and Öncül (submitted manuscript) in order to asses six dimensions of personality; namely, Openness to experience, Conscientiousness, Extraversion, Agreeableness, Neuroticism, and Negative Valence. The scale was specifically developed for the Turkish language, consisting of 45 personality related adjectives. The scale is a Likert type scale ranging from 1 for "not suitable at all" to 5 for "fully suitable". Higher scores for each subscale indicate higher characteristics of that personality trait.

The scale was added to the research in order to reveal individual differences in terms of mood induction, meta-mood and facial emotion recognition. The internal consistency coefficients for each personality domain

are as the following: Openness to experience; .80, Conscientiousness; .84, Extraversion; .89, Agreeableness; .85, Neuroticism; .83 and Negative Valence; .71.

6.2.7 NimStim Set of Facial Expressions

The NimStim Set of Facial Expressions is a set of facial expressions developed by Tottenham, Tanaka, Leon, McCarry, Nurse, Hare, Marcus, Westerlund, and Nelson (2009). This set was developed in order to provide facial expressions that could be recognized by untrained individuals. The NimStim Set of Facial Expressions consists of 672 images of facial expressions belonging to 43 actors. Actors of the set had posed eight emotions; happy, sad, angry, fearful, surprised, disgusted, neutral, and calm, namely. Each expression had an open mouth and closed mouth component, except for surprise, which had only the open mouth component, and happy, which had three components, which were closed mouth, open mouth, and high arousal open mouth/exuberant. The happy expression's consisting of three components was due to the fact that negative valenced faces were more displayed with higher aroused expressions compared to other expressions such as happy. The facial expression set was shown to have high proportion correct and kappa score validities (Tottenham et al., 2009).

For the main study a total of 64 images of 2 actors and 2 actresses were used. The selection of the expressions was based on the high percentage of their recognition in the original validation process (Tottenham et al., 2009). The second criterion was based on the actors' and actresses' ethnicity. Accordingly, individuals with too much ethnicity differences were excluded.

Therefore, individuals who had European characteristics were chosen, rather than African, Asian or Latino-American individuals. Permission was gained by the first author, Nim Tottenham, Ph.D. As the author asked not to share the pictures of the facial expression, they could not be presented in this paper.

The NimStim Set of Facial Expressions is used in order to assess mood congruent bias based on facial expressions. Individuals will be administered a sad mood induction procedure, followed by the facial emotion recognition task. Positive and negative bias will be assessed in that, individuals mislabeling a neutral expression as sad will be positive bias; whereas, labeling a neutral expression will be a negative bias. In addition, individuals' total accurate responses will also be analyzed; however, facial expressions of happy, sad, anger, disgust, surprised, and fearful will not be analyzed separately.

6.3   Procedure

During the data collection for the pilot study, at the end of the online survey, a text box was available for participants to leave their e-mail addresses if they wanted to attend to the experiment. Moreover, instructors at the Psychology Department of Middle East Technical University (METU) were asked for their permission to recruit students to the experiment. Participants who were recruited from psychology courses gained a bonus reward for attending to the study. Those who were recruited from the pilot study attended to the study voluntarily. All participants were given a chocolate after the experiment was over. An online calendar was prepared before the study and the link to the calendar was sent to each participant via e-mail, in which every

participant could fill in their appropriate times to participate in the study. The e-mail sent to participants also included information of the location of the laboratory where the experiment took place. This link was also sent to Psychology undergraduate students and students who were taking General Psychology courses from METU Psychology Department. The link was sent to students by the instructors of the courses. Each participant was sent a reminder e-mail about the experiment one day before their scheduled date.

Each participant was welcomed by the instructor. The experiment was conducted in three phases. In the first phase, each participant was provided with a written informed consent, which explained the aim of the study and its procedure. Next, participants filled in the Trait Meta-Mood Scale and the Basic Personality Traits Inventory for the hypothetical purposes of the study and the Brief Mood Introspection Scale to have baseline mood levels. The order of the scales was fixed. The questionnaires were filled by the participants in a waiting room. After the participants filled in the questionnaires, they were invited to the lab room where the second and third phase took place.

In the second phase, participants were sat in front of a desktop computer where the instructions for the facial emotion recognition task were provided by DirectRT, which also was used to collect responses of the task. The refresh rate of the screen was 60Hz. The experimenter briefly explained each participant the procedure and told that instructions would be provided in more detailed information by computer. The laboratory room was sound proof. Therefore, they were told that in case they had any questions, they could open the door

and call out for the experimenter. Then, the experimenter left the room and closed the door.

The instructions of the facial emotion recognition task were provided by the computer. The instructions informed participants that they were going to take a facial emotion recognition task and what they had to do. Moreover, after the instructions about the facial emotion recognition task, participants were informed that they were going to make an exercise of the task which will be followed by a movie segment. The exercise of the facial emotion recognition task was provided in order to make participants feel familiar with the task. The exercise was a replication of the main task, except that the number of facial expressions was less, and the pictures were different from those used in the main task. The emotion recognition exercise task consisted of two sets of facial expressions; each consisting of the same 10 facial expressions presented in two different exposures. The facial expression in the first set was presented at 50ms of exposure; followed by the second set of pictures, each of which was displayed for 2000ms. Before each facial expression, a fixation of a "+" sign appeared for 1000ms. After each facial expression, a list of emotions were presented with numbers assigned to each emotion (Sad = 1; Happiness = 2; Anger = 3; Surprise = 4; Fear = 5; Disgust = 6; Calm = 7; and Neutral = 8). Participants had to press the corresponding number using the keyboard. There was no time limit to give a response.

After the exercise, an instruction appeared on the screen, informing that the participant had to read the storyline of the movie, which was provided beforehand. At the end of the storyline, they were instructed to press the Enter

key in order to start the movie. Participants watched the final 10:22 minute segment of the movie *The Champ* (Zeffirelli, 1979) which was used a mood induction media. The movie had been validated to be an effective sad mood induction video by Gross and Levenson'ın (1995). After the movie, an instruction appeared on the screen that informed the participant to fill in the before handed scales (BMIS and SMMS) and press the Enter key after filling the scales, in order to initiate the facial emotion recognition task.

The third phase of the study was the emotion recognition task. The procedure of the main facial emotion recognition task was as mentioned about, only rather than 10 pictures for each set, 66 pictures were used, that were different from those that appeared during the exercise.

Studies have shown that an induced mood would last mostly for 10 to 15 minutes (Frost & Green, 1982). Therefore; the exercise was provided before the mood induction procedure in order to prevent it to be a distracter right before the facial emotion recognition task.

The procedure of the facial emotion recognition task was very similar to the one used by Besel and Yuille (2010). Based on the studies of Sonnby-Börgström, Jönsson and Svensson (2003) the set of 50ms and 2000ms were selected to be good contrast levels of exposure. Accordingly, the 50ms set is defined by the authors as an automatic level in which participants' recognition would be more subjective than objective. At such a short exposure time, the authors claim, individuals identify the expression with difficulty. The 2000ms exposure time, on the other hand, is a good contrast in which individuals recognize the facial expression objectively, rather than subjectively. With such

an exposure time, participants had enough time to recognize and identify the

facial expression correctly (Sonnby-Börgström, Jönsson & Svensson, 2003).

CHAPTER VII

RESULTS

7.1 Descriptive Analysis

Descriptive information regarding the Brief Symptom Inventory (BSI), Brief Mood-Introspection Scale_Pre-test (BMIS), Brief Mood-Introspection Scale (BMIS), State Meta-Mood Scale_Post-test (SMMS), Trait Meta-Mood Scale (TMMS), Basic Personality Traits Inventory, facial emotion recognition and mood congruent bias regarding emotion recognition are presented in Table 7.1-1.

Table 7.1-1 Descriptive information regarding the measures of the study

Variable		N	Alpha Coefficient	Mean	SD	Min-Max
BMIS Pre-Test		163				
	Pleasant		0.84	24.00	4.21	12.00-32.00
	Unpleasant		0.84	21.39	4.97	9.00-32.00
	General		-	4.60	3.40	-8.00-10.00
BMIS post-Test		163				
	Pleasant		0.80	19.56	3.92	9.00-31.00
	Unpleasant		0.77	20.93	4.04	10.00-30.00
	General		-	1.54	4.04	-8.00 – 9.00
SMMS						
	Evaluation	160				
	Influence		0.89	15.62	5.70	6.00-28.00
	Acceptance		0.70	24.44	3.64	7.00-30.00
	Typicality		0.66	14.99	3.39	7.00-25.00
	Clarity		0.75	21.93	4.39	7.00-30.00
	Regulation	161				
	Repair		0.90	14.38	4.78	5.00-25.00
	Maintenance		0.76	15.69	4.06	5.00-25.00
	Dampening		0.57	11.34	3.17	5.00-19.00
TMMS		164				
	Attention		0.86	49.41	8.05	21.00-65.00
	Clarity		0.83	38.16	6.73	17.00-52.00
	Repair		0.85	20.67	5.40	6.00-30.00

Table 7.1-1 continued

Variable	N	Alpha Coefficient	Mean	SD	Min-Max
FACES	163				
Slow		-	48.04	4.31	22-53
Fast		-	41.23	4.99	39-61
MOOD CONGRUENT BIAS	163				
Fast Faces Sad Bias		-	1.06	1.62	0-9
Slow Faces Sad Bias		-	0.66	1.52	0-10
Fast Faces Happy Bias		-	0.33	0.72	0-4
Slow Faces Happy Bias		-	0.29	0.72	0-4
BRIEF SYMTPOM INVENTROY	164				
Anxiety		0.86	8.80	7.12	0.00-35.00
Depression		0.89	12.92	9.00	0.00-47.00
Negative Self		0.85	9.03	7.49	0.00-35.00
Somatization		0.75	4.51	4.43	0.00-26.00
Hostility		0.76	6.41	4.49	0.00-22.00
BPTI	164				
Extraversion		0.85	28.34	6.11	9.00-40.00
Conscientiousness		0.87	28.31	6.47	10.00-40.00
Agreeableness		0.87	34.09	4.18	13.00-40.00
Neuroticism		0.79	34.09	6.27	11.00-40.00
Opennes		0.74	21.58	3.83	7.00-29.00
NegativeValence		0.72	9.80	3.40	6.00-27.00

7.2   Differences of Demographic Variables on the Measures of the Study

Separate Multivariate Analyses of Variance (MANOVA) were conducted in order to analyze differences of demographic variables on the measures of the study. Categorizations of the demographic variables were done using median split, in order to get categorical independent variables. These categorizations and number of cases in each category can be seen in Table 7.2-1.

Table 7.2-1 Demographic Characteristics of Participants

Variables	N (164 Participants)		%
Gender			
Female		123	75
Male		41	25
Age	Total: 160 (4 missing/2.44)		
20		29	17.68
21		48	29.27
22		35	21.34
23		25	15.24
24		5	3.05
25		3	1.83
26		4	2.44
27		4	2.44
28		3	1.83
29		2	1.22
30		1	0.61
34		1	0.61

Table 7.2-1 Continued

Department			
Psychology		101	61.6
Non-Psychology		63	36.4
Mother's Education Level	Total: 156 (8 missing/4.9%)		
Illiterate		2	1.22
Literate		1	0.61
Primary		32	19.51
Secondary		15	9.15
High School		44	26.83
University		58	35.37
Graduate		1	0.61
Other		3	1.83
Father's Education Level	Total: 156 (8 missing/4.9%)		
Illiterate		2	1.22
Literate		3	1.83
Primary		18	10.98
Secondary		14	8.54
High School		37	22.56
University		71	43.29
Graduate		9	5.49
Other		2	1.22
Number of Siblings	Total:156 (8 Missing/4.9%)		
0		2	1.22
1		13	7.93
2		99	60.37
3		28	17.07
4		6	3.66
5		3	1.83
6		3	1.83
7		1	0.61
8		1	0.61
Family History of Psychological Problems	Total:155 (9 Missing/5.8%)		
Yes		14	8.5
No		141	86
Participant's History of Psychological Problems	Total: 156 (8 missing/4.9%)		
Yes		27	16.5
No		129	78.7
Participant's Current Psychological Problems			
Yes		10	6.1
No		146	89

7.2.1 Differences of Age on Measures of the Study

In order to examine the differences between age groups on the measures of the study several MANOVAs were conducted. Results revealed no significant differences between age groups on Facial Emotion Recognition for Fast displayed faces and Slow displayed faces [Multivariate F (2, 156) = 0.33, p = n.s.; Wilks' Lambda = .97; partial η^2 = .04].

Table 7.2-2 Age differences on Facial Emotion Recognition

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η2	Uni. F	Uni. df	Uni. η^2
Facial Emotion Recognition	0.99	0.33	2, 156	0.04	-	-	-
Fast	-	-	-	-	0.04	1, 157	0.01
Slow	-	-	-	-	0.65	1, 157	0.04

Moreover, Age groups did not significantly differ from each other in terms of mood congruent biases for perceiving "fast displayed neutral faces as sad", "fast displayed neutral faces as happy", "slow displayed neutral faces as sad" and "slow displayed neutral faces as happy" [Multivariate F (4, 154) = 0.43, p = n.s. ; Wilks' Lambda = .99; partial η^2 = .01].

Table 7.2-3 Age differences on Mood Congruent Bias

Variables	Wilks' Lambda	Multi. F	Multi. df	Multi. η2	Uni. F	Uni. df	Uni. η^2
Mood Congruent Bias	0.99	0.43	4, 154	0.01	-	-	-
Fast displayed neutral faces as sad	-	-	-	-	1.29	1, 157	0.08
Slow displayed neutral faces as sad	-	-	-	-	0.07	1, 157	0.01
Fast displayed neutral faces as happy	-	-	-	-	0.34	1, 157	0.02
Slow displayed neutral faces as happy	-	-	-	-	0.08	1, 157	0.01

In terms of psychological symptoms, MANOVA was conducted where dependent variables were anxiety, depression, negative self, somatization and hostility. No significant differences between age groups were found in terms of these symptoms [Multivariate F (5,154) = 0.99, p = n.s.; Wilks' Lambda = .97; partial η2 = .03].

Table 7.2-4 Age differences on Symptoms

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η2	Uni. F	Uni. df	Uni. η^2
Symtpoms	0.97	0.99	5, 154	0.03	-	-	-
Anxiety	-	-	-	-	0.21	1, 158	0.01
Depression	-	-	-	-	2.18	1, 158	0.01
Negative Self	-	-	-	-	1.12	1, 158	0.01
Somatization	-	-	-	-	1.09	1, 158	0.01
Hostility	-	-	-	-	1.02	1, 158	0.01

To examine age group differences on State Meta-Mood subdomains, MANOVA was conducted where dependent variables were Influence, Acceptance, Typicality, Clarity, Repair, Maintenance, and Dampening. The results revealed no significant difference between age groups on State Meta-Mood domains [Multivariate F (7,148) = 1.56, p = n.s.; Wilks' Lambda = .93; partial η^2 =.07].

Table 7.2-5 Age differences on State Meta-Mood

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η2	Uni. F	Uni. df	Uni. η^2
SMM	0.93	1.56	7, 148	0.07	-	-	-
Influence	-	-	-	-	1.30	1, 154	0.01
Acceptance	-	-	-	-	1.02	1, 154	0.01
Typicality	-	-	-	-	0.48	1, 154	0.01
Clarity	-	-	-	-	0.03	1, 154	0.01
Repair	-	-	-	-	0.04	1, 154	0.01
Maintenance	-	-	-	-	0.02	1, 154	0.01
Dampening	-	-	-	-	4.84	1, 154	0.03

Lastly, to examine the age group differences on Trait Meta-Mood domains, MANOVA where the dependent variables were Attention, Clarity and Repair, was conducted. No significant differences were observed between age groups on Trait Meta-Mood domains [Multivariate F (3,156) = 2.35, p = n.s.; Wilks' Lambda = .98; partial η2 = .04].

Table 7.2-6 Age differences on Trait Meta-Mood

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η2	Uni. F	Uni. df	Uni. η^2
TMMS	0.95	2.35	3, 156	0.04	-	-	-
Attention	-	-	-	-	1.35	1, 158	0.01
Clarity	-	-	-	-	2.79	1, 158	0.02
Repair	-	-	-	-	0.66	1, 158	0.01

7.2.2 Differences of Gender on Measures of the Study

In order to examine gender differences on the measures of the study, several separate MANOVAs were conducted. The first MANOVA where the dependent variables were Facial Emotion Recognition displayed as Fast and Slow, revealed no significant differences between males and females [Multivariate F (2,160) = 1.21, p = n.s.; Wilks' Lambda = .99; partial η2 = .02].

Table 7.2-7 Sex differences on Facial Emotion Recognition

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η2	Uni. F	Uni. df	Uni. η^2
Facial Emotion Recognition	0.99	1.21	2, 160	0.02	-	-	-
Fast	-	-	-	-	2.37	1, 161	0.01
Slow	-	-	-	-	0.08	1, 161	0.01

Moreover, Age groups also did not significantly differ from each other in terms of mood congruent biases for perceiving "fast displayed neutral faces as sad", "fast displayed neutral faces as happy", "slow displayed neutral faces as sad" and "slow

displayed neutral faces as happy" [Multivariate F (4,158) = 1.87, p = n.s.; Wilks'

Lambda = .96; partial η^2 = .05].

Table 7.2-8 Sex differences on Mood Congruent Bias

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η2	Uni. F	Uni. df	Uni. η²
Mood Congruent Bias	0.96	1.87	4, 158	0.05	-	-	-
Fast displayed neutral faces as sad	-	-	-	-	0.03	1, 161	0.01
Slow displayed neutral faces as sad	-	-	-	-	0.05	1, 161	0.01
Fast displayed neutral faces as happy	-	-	-	-	7.07	1, 161	0.04
Slow displayed neutral faces as happy	-	-	-	-	0.64	1, 161	0.01

In terms of psychological symptoms, MANOVA was conducted where dependent variables were anxiety, depression, negative self, somatization and hostility. Again, no significant differences between gender were found in terms of these symptoms [Multivariate F (5,158) = 1.81, p = n.s.; Wilks' Lambda = .95; partial η^2 = .05].

Table 7.2-9 Sex differences on Symptoms

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η2	Uni. F	Uni. df	Uni. η²
Symtpoms	0.95	1.81	5, 158	0.05	-	-	-
Anxiety	-	-	-	-	1.20	1, 162	0.01
Depression	-	-	-	-	0.01	1, 162	0.01
Negative Self	-	-	-	-	3.06	1, 162	0.2
Somatization	-	-	-	-	0.11	1, 162	0.01
Hostility	-	-	-	-	1.25	1, 162	0.01

To examine gender differences on State Meta-Mood subdomains, MANOVA was conducted where dependent variables were Influence, Acceptance, Typicality, Clarity, Repair, Maintenance, and Dampening. The results revealed no significant difference between males and females on these variables [Multivariate $F (7, 152) = 1.39$, $p = $ n.s.; Wilks' Lambda = .94; partial $\eta^2 = .06$].

Table 7.2-10 Gender differences on State Meta-Mood

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
SMM	0.94	1.39	7, 152	0.06	-	-	-
Influence	-	-	-	-	1.04	1, 158	0.01
Acceptance	-	-	-	-	4.37	1, 158	0.03
Typicality	-	-	-	-	0.38	1, 158	0.01
Clarity	-	-	-	-	0.57	1, 158	0.01
Repair	-	-	-	-	1.05	1, 158	0.01
Maintenance	-	-	-	-	0.03	1, 158	0.01
Dampening	-	-	-	-	3.03	1, 158	0.02

Lastly, to examine gender differences on Trait Meta-Mood domains, MANOVA where the dependent variables were Attention, Clarity and Repair, was conducted. The results revealed significant differences between males and females on Trait Meta-Mood domains [Multivariate $F (3,160) = 4.51$, $p < .01.$; Wilks' Lambda = .92; partial $\eta^2 = .08$]. Furthermore, univariate analyses following Bonferroni correction were examined. Thus, the .05 significance level was divided by 3, resulting in .017 significance level. Accordingly, it was found that males and females differed from each other only in terms of Attention [$F (1, 162) = 13.32$, $p < .001$]. This result

revealed that females ($M = 3.52$) paid significantly more attention to their moods compared to males ($M = 3.33$).

Table 7.2-11 Gender differences on Trait Meta-Mood

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
TMMS	0.92	4.51*	3, 160	0.08	-	-	-
Attention	-	-	-	-	13.31*	1, 162	0.08
Clarity		-	-	-	2.93	1, 162	0.02
Repair	-	-	-	-	0.06	1, 162	0.01

*$p < .001$
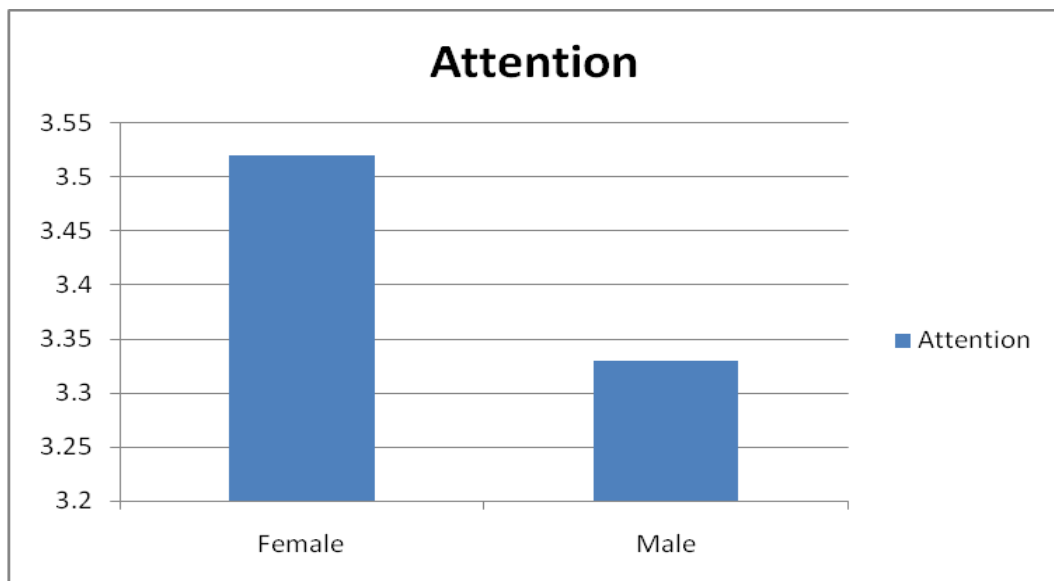
Figure 1

7.2.3 Differences of Departments on Measures of the Study

In order to examine the differences between departments (psychology vs. non-psychology) on the measures of the study several MANOVAs were conducted.

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Results revealed no significant differences between departments on Facial Emotion Recognition for Fast displayed faces and Slow displayed faces [Multivariate F $(2,160) = 0.41$, p = n.s.; Wilks' Lambda = .99; partial $\eta^2 = .01$].

Table 7.2-12 Department differences on Facial Emotion Recognition

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
Facial Emotion Recognition	0.99	0.41	2, 160	.001	-	-	-
Fast	-	-	-	-	0.01	1, 160	0.01
Slow	-	-	-	-	0.06	1, 160	0.01

Moreover, departments did not significantly differ from each other in terms of mood congruent biases for perceiving "fast displayed neutral faces as sad", "fast displayed neutral faces as happy", "slow displayed neutral faces as sad" and "slow displayed neutral faces as happy" [Multivariate F $(4,158) = 1.06$, p = n.s.; Wilks' Lambda = .97; partial $\eta^2 = .03$].

Table 7.2-13 Age differences on Mood Congruent Bias

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
Mood Congruent Bias	0.97	1.06	4, 158	0.03	-	-	-
Fast displayed neutral faces as sad	-	-	-	-	1.91	1, 161	0.01
Slow displayed neutral faces as sad	-	-	-	-	2.02	1, 161	0.01
Fast displayed neutral faces as happy	-	-	-	-	1.31	1, 161	0.01
Slow displayed neutral faces as happy	-	-	-	-	0.01	1, 116	0.01

In terms of psychological symptoms, MANOVA was conducted where dependent variables were anxiety, depression, negative self, somatization and hostility. Significant differences between departments were found in terms of these symptoms [Multivariate F (5,158) = 2.27, p = .05; Wilks' Lambda = .93; partial η^2 = .07]. Following a Bonferroni correction (.05/5 = .01), univariate analyses were examined. Accordingly, only Negative Self was found out to be significantly differing in terms of departments [F (1, 164) = 8.37, p = .004, partial η^2 = .05]. This result revealed that participants from the psychology department had significantly lower Negative Self scores (M = 0.68) compared to participants from other departments (M = 0.97).

Table 7.2-14 Department differences on Symptoms

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
Symtpoms	0.93	2.27[*]	5, 158	.07	-	-	-
Anxiety	-	-	-	-	5.37	1, 162	0.03
Depression	-	-	-	-	1.63	1, 162	0.01
Negative Self	-	-	-	-	8.37[*]	1, 162	0.05
Somatization	-	-	-	-	1.27	1, 162	0.01
Hostility	-	-	-	-	3.66	1, 162	0.02

[*]p <.01
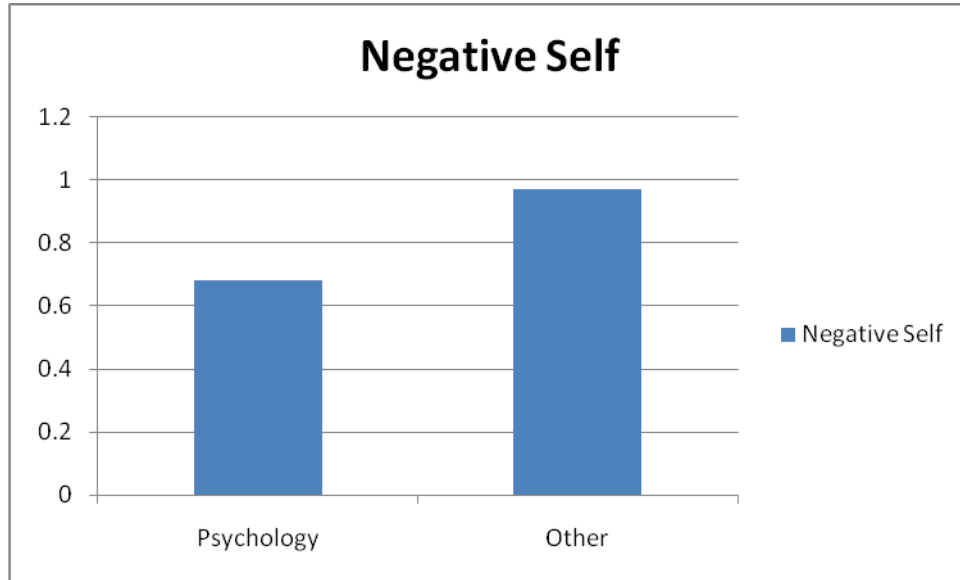
Figure 2

To examine department differences on State Meta-Mood subdomains, MANOVA was conducted where dependent variables were Influence, Acceptance, Typicality, Clarity, Repair, Maintenance, and Dampening. The results revealed no significant difference between departments on these variables [Multivariate F (7,152) = 0.55, p = n.s.; Wilks' Lambda = .98; partial η^2 = .03].

Table 7.2-15 Department differences on State Meta-Mood

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
SMM	0.98	.55	7, 152	.03	-	-	-
Influence	-	-	-	-	0.81	1, 158	0.01
Acceptance	-	-	-	-	1.11	1, 158	0.01
Typicality	-	-	-	-	0.14	1, 158	0.01
Clarity	-	-	-	-	0.01	1, 158	0.01
Repair	-	-	-	-	0.10	1, 158	0.01
Maintenance	-	-	-	-	0.01	1, 158	0.02
Dampening	-	-	-	-	2.39	1, 158	0.03

Lastly, to examine the department differences on Trait Meta-Mood domains, MANOVA where the dependent variables were Attention, Clarity and Repair, was conducted. Again, no significant differences were observed between departments on Trait Meta-Mood domains [Multivariate F (3,160) = 2.04, p = n.s.; Wilks' Lambda = .96; partial η^2 = .04].

Table 7.2-16 Department differences on Trait Meta-Mood

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
TMMS	0.96	2.04	3, 160	0.04	-	-	-
Attention	-	-	-	-	1.76	1, 162	0.04
Clarity	-	-	-	-	5.84	1, 162	0.01
Repair	-	-	-	-	0.20	1, 162	0.01

7.2.4   Differences of Mother's Education on Measures of the Study

In order to examine the differences between Mother's Educations on the measures of the study several MANOVAs were conducted. Results revealed no significant differences between Mother's Education on Facial Emotion Recognition for Fast displayed faces and Slow displayed faces [Multivariate F (2,153) = 0.33, p = n.s.; Wilks' Lambda = .99; partial η^2 = .01].

Table 7.2-17 Differences of Mother's Education on Facial Emotion Recognition

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
Facial Emotion Recognition	0.99	0.33	2, 153	0.01	-	-	-
Fast	-	-	-	-	0.43	1, 154	0.01
Slow	-	-	-	-	0.06	1, 154	0.01

Moreover, Mother's Education did not significantly differ from each other in terms of mood congruent biases for perceiving "fast displayed neutral faces as sad", "fast displayed neutral faces as happy", "slow displayed neutral faces as sad" and "slow displayed neutral faces as happy" [Multivariate F (4,151) = 1.28, p = n.s.; Wilks' Lambda = .97; partial η^2 = .03].

Table 7.2-18 Differences of Mother's Education on Mood Congruent Bias

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
Mood Congruent Bias	0.97	1.28	4, 151	0.03	-	-	-
Fast displayed neutral faces as sad	-	-	-	-	1.53	1, 154	0.01
Slow displayed neutral faces as sad	-	-	-	-	0.01	1, 154	0.01
Fast displayed neutral faces as happy	-	-	-	-	3.54	1, 154	0.02
Slow displayed neutral faces as happy	-	-	-	-	0.01	1, 154	0.01

In terms of psychological symptoms, MANOVA was conducted where dependent variables were anxiety, depression, negative self, somatization and hostility. Again, no significant differences between Mother's Education were found in terms of these

symptoms [Multivariate F (5,150) = 0.84, p = n.s.; Wilks' Lambda = .97; partial η^2 = .03].

Table 7.2-19 Differences of Mother's Education on Symptoms

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
Symtpoms	0.97	0.84	5, 150	.03	-	-	-
Anxiety	-	-	-	-	0.01	1, 154	0.01
Depression	-	-	-	-	0.01	1, 154	0.01
Negative Self	-	-	-	-	0.25	1, 154	0.01
Somatization	-	-	-	-	0.24	1, 154	0.01
Hostility	-	-	-	-	1.22	1, 154	0.01

To examine Mother's Education differences on State Meta-Mood subdomains, MANOVA was conducted where dependent variables were Influence, Acceptance, Typicality, Clarity, Repair, Maintenance, and Dampening. The results revealed no significant difference between Mother's Education on these variables [Multivariate F (7,145) = 1.23, p = n.s.; Wilks' Lambda = .94; partial η^2 = .06].

Table 7.2-20 Differences of Mother's Education on State Meta-Mood

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
SMMS	0.94	1.23	7, 145	0.06	-	-	-
Influence	-	-	-	-	3.14	1, 151	0.02
Acceptance	-	-	-	-	1.08	1, 151	0.01
Typicality	-	-	-	-	0.60	1, 151	0.01
Clarity	-	-	-	-	0.50	1, 151	0.01
Repair	-	-	-	-	0.19	1, 151	0.01
Maintenance	-	-	-	-	0.43	1, 151	0.01
Dampening	-	-	-	-	0.06	1, 151	0.02

Lastly, to examine Mother's Education differences on Trait Meta-Mood domains, MANOVA where the dependent variables were Attention, Clarity and Repair, was conducted. Again, no significant differences were observed between Mother's Education on Trait Meta-Mood domains[Multivariate F (3,152) = 0.34, p = n.s.; Wilks' Lambda = .99; partial η^2 = .01].

Table 7.2-21 Differences of Mother's Education on Trait Meta-Mood

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
TMMS	0.99	0.34	3, 152	0.01	-	-	-
Attention	-	-	-	-	0.68	1, 154	0.01
Clarity	-	-	-	-	0.26	1, 154	0.01
Repair	-	-	-	-	0.49	1, 154	0.01

7.2.5 Differences of Father's Education on Measures of the Study

In order to examine the differences between Father's Education on the measures of the study several MANOVAs were conducted. Results revealed no significant differences between Father's Education on Facial Emotion Recognition for Fast displayed faces and Slow displayed faces [Multivariate $F (2,153) = 1.10$, $p =$ n.s.; Wilks' Lambda = .99; partial $\eta2 = .01$].

Table 7.2-22 Differences of Father's Education on Facial Emotion Recognition

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η2	Uni. F	Uni. df	Uni. η2
Facial Emotion Recognition	0.99	1.10	2, 153	0.04	-	-	-
Fast	-	-	-	-	2.14	1, 154	0.01
Slow	-	-	-	-	0.57	1, 154	0.01

Moreover, Father's Education also did not significantly differ from each other in terms of mood congruent biases for perceiving "fast displayed neutral faces as sad", "fast displayed neutral faces as happy", "slow displayed neutral faces as sad" and "slow displayed neutral faces as happy" [Multivariate $F (4,151) = 0.12$ $p =$ n.s.; Wilks' Lambda = .99; partial $\eta^2 = .01$].

Table 7.2-23 Differences of Father's Education on Mood Congruent Bias

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
Mood Congruent Bias	0.99	0.12	4, 151	0.01	-	-	-
Fast displayed neutral faces as sad	-	-	-	-	0.30	1, 154	0.01
Slow displayed neutral faces as sad	-	-	-	-	0.01	1, 154	0.01
Fast displayed neutral faces as happy	-	-	-	-	0.13	1, 154	0.01
Slow displayed neutral faces as happy	-	-	-	-	0.23	1, 154	0.01

In terms of psychological symptoms, MANOVA was conducted where dependent variables were anxiety, depression, negative self, somatization and hostility. Again, no significant differences between Father's Education were found in terms of these symptoms [Multivariate F (5,150) = 2.25, p = n.s.; Wilks' Lambda = .93; partial η^2 = .07].

Table 7.2-24 Differences of Father's Education on Symptoms

| Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
Symtpoms	0.90	2.25	5, 154	0.07	-	-	-
Anxiety	-	-	-	-	0.30	1, 154	0.01
Depression	-	-	-	-	0.07	1, 154	0.01
Negative Self	-	-	-	-	0.01	1, 154	0.01
Somatization	-	-	-	-	1.79	1, 154	0.01
Hostility	-	-	-	-	1.94	1, 154	0.01

To examine Father's Education differences on State Meta-Mood subdomains, MANOVA was conducted where dependent variables were Influence, Acceptance, Typicality, Clarity, Repair, Maintenance, and Dampening. The results revealed no significant difference between Father's Education on these variables [Multivariate F (7,145) = 0.43, p = n.s.; Wilks' Lambda = .98; partial η^2 = .02].

Table 7.2-25 Age differences on State Meta-Mood

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
SMM	0.98	0.43	7, 145	0.02	-	-	-
Influence	-	-	-	-	0.23	1, 151	0.01
Acceptance	-	-	-	-	0.58	1, 151	0.01
Typicality	-	-	-	-	0.21	1, 151	0.01
Clarity	-	-	-	-	0.01	1, 151	0.01
Repair	-	-	-	-	1.80	1, 151	0.01
Maintenance	-	-	-	-	0.18	1, 151	0.01
Dampening	-	-	-	-	0.03	1, 151	0.01

Lastly, to examine Father's Education differences on Trait Meta-Mood domains, MANOVA where the dependent variables were Attention, Clarity and Repair, was conducted. Again, no significant differences were observed between Father's Education on Trait Meta-Mood domains[Multivariate F (3,152) = 0.12, p = n.s.; Wilks' Lambda = .99; partial η^2 = .01].

Table 7.2-26 Age differences on Trait Meta-Mood

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
TMMS	0.99	0.12	3, 152	0.041	-	-	-
Attention	-	-	-	-	0.07	1, 154	0.01
Clarity	-	-	-	-	0.04	1, 154	0.01
Repair	-	-	-	-	0.21	1, 154	0.01

7.2.6 Differences of Number of Siblings on Measures of the Study

In order to examine the differences between numbers of siblings on the measures of the study several MANOVAs were conducted. Results revealed no significant differences between Number of siblings on Facial Emotion Recognition for Fast displayed faces and Slow displayed faces [Multivariate F (2,160) = 0.03, p = n.s.; Wilks' Lambda = .99; partial η^2 = .01].

Table 7.2-27 Differences of Number of Siblings on Facial Emotion Recognition

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
Facial Emotion Recognition	0.99	0.03	2, 1160	0.01	-	-	-
Fast	-	-	-	-	0.03	1, 161	0.01
Slow	-	-	-	-	0.01	1, 161	0.01

Moreover, Number of siblings also did not significantly differ from each other in terms of mood congruent biases for perceiving "fast displayed neutral faces as sad",

"fast displayed neutral faces as happy", "slow displayed neutral faces as sad" and "slow displayed neutral faces as happy" [Multivariate F (4,158) = 0.16 p = n.s.; Wilks' Lambda = .99; partial η^2 = .01].

Table 7.2-28 Differences of Number of Siblings on Mood Congruent Bias

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
Mood Congruent Bias	0.99	0.16	4, 158	0.01	-	-	-
Fast displayed neutral faces as sad	-	-	-	-	0.05	1, 161	0.01
Slow displayed neutral faces as sad	-	-	-	-	0.02	1, 161	0.01
Fast displayed neutral faces as happy	-	-	-	-	0.43	1, 161	0.01
Slow displayed neutral faces as happy	-	-	-	-	0.07	1, 161	0.01

In terms of psychological symptoms, MANOVA was conducted where dependent variables were anxiety, depression, negative self, somatization and hostility. No significant differences between Number of siblings were found in terms of these symptoms [Multivariate F (5,158) = 1.23, p = n.s.; Wilks' Lambda = .96; partial η^2 = .04].

Table 7.2-29 Differences of Number of Siblings on Symptoms

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
Symtpoms	0.96	1.23	5, 158	0.04	-	-	-
Anxiety	-	-	-	-	1.04	1, 162	0.01
Depression	-	-	-	-	3.10	1, 162	0.02
Negative Self	-	-	-	-	3.55	1, 162	0.02
Somatization	-	-	-	-	1.65	1, 162	0.01
Hostility	-	-	-	-	0.45	1, 162	0.01

To examine Number of siblings differences on State Meta-Mood subdomains, MANOVA was conducted where dependent variables were Influence, Acceptance, Typicality, Clarity, Repair, Maintenance, and Dampening. The results revealed no significant difference between Number of siblings on these variables [Multivariate F (7,152) = 0.90, p = n.s.; Wilks' Lambda = .96; partial η^2 = .04].

Table 7.2-30 Differences of Number of Siblings on State Meta-Mood

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
SMMS	0.96	0.93	1, 152	0.04	-	-	-
Influence	-	-	-	-	0.03	1, 158	0.01
Acceptance	-	-	-	-	0.18	1, 158	0.01
Typicality	-	-	-	-	2.81	1, 158	0.02
Clarity	-	-	-	-	0.34	1, 158	0.01
Repair	-	-	-	-	0.57	1, 158	0.01
Maintenance	-	-	-	-	3.20	1, 158	0.02
Dampening	-	-	-	-	0.02	1, 158	0.01

Lastly, to examine Number of siblings differences on Trait Meta-Mood domains, MANOVA where the dependent variables were Attention, Clarity and Repair, was

conducted. Again, no significant differences were observed between Number of siblings on Trait Meta-Mood domains [Multivariate F (3,160) = 1.11, p = n.s.; Wilks' Lambda = .98; partial η^2 = .02].

Table 7.2-31 Age differences on Trait Meta-Mood

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
TMMS	0.98	1.11	3, 160	0.02	-	-	-
Attention	-	-	-	-	0.08	1, 162	0.01
Clarity	-	-	-	-	0.06	1, 162	0.01
Repair	-	-	-	-	2.45	1, 162	0.02

7.2.7 Differences of Residence on Measures of the Study

In order to examine the differences between residences on the measures of the study several MANOVAs were conducted. Results revealed no significant differences between Residence on Facial Emotion Recognition for Fast displayed faces and Slow displayed faces [Multivariate F (2,160) = 0.65, p = n.s.; Wilks' Lambda = .99; partial η^2 = .01].

Table 7.2-32 Residence differences on Facial Emotion Recognition

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
Facial Emotion Recognition	0.99	0.65	2, 160	0.01	-	-	-
Fast	-	-	-	-	0.49	1, 161	0.01
Slow	-	-	-	-	0.36	1, 161	0.01

Moreover, Residence also did not significantly differ from each other in terms of mood congruent biases for perceiving "fast displayed neutral faces as sad", "fast displayed neutral faces as happy", "slow displayed neutral faces as sad" and "slow displayed neutral faces as happy" [Multivariate F (4,158) = 0.39 p = n.s.; Wilks' Lambda = .99; partial η^2 = .01].

Table 7.2-33 Residence differences on Mood Congruent Bias

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
Mood Congruent Bias	0.99	0.39	4, 158	0.01	-	-	-
Fast displayed neutral faces as sad	-	-	-	-	0.01	1, 161	0.01
Slow displayed neutral faces as sad	-	-	-	-	0.90	1, 161	0.01
Fast displayed neutral faces as happy	-	-	-	-	0.06	1, 161	0.02
Slow displayed neutral faces as happy	-	-	-	-	0.33	1, 161	0.01

In terms of psychological symptoms, MANOVA was conducted where dependent variables were anxiety, depression, negative self, somatization and hostility. Again, no significant differences between Residence were found in terms of these symptoms [Multivariate F (5,158) = 0.29, p = n.s.; Wilks' Lambda = .99; partial η^2 = .01].

Table 7.2-34 Residence differences on Symptoms

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
Symtpoms	0.99	0.29	5, 158	0.01	-	-	-
Anxiety	-	-	-	-	0.17	1, 162	0.01
Depression	-	-	-	-	0.01	1, 162	0.01
Negative Self	-	-	-	-	0.02	1, 162	0.01
Somatization	-	-	-	-	0.19	1, 162	0.01
Hostility	-	-	-	-	0.01	1, 162	0.01

To examine Residence differences on State Meta-Mood subdomains, MANOVA was conducted where dependent variables were Influence, Acceptance, Typicality, Clarity, Repair, Maintenance, and Dampening. The results revealed no significant difference between Residence on these variables [Multivariate F (7,152) = 0.53, p = n.s.; Wilks' Lambda = .98; partial η^2 = .02].

Table 7.2-35 Residence differences on State Meta-Mood

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
SMMS	0.98	0.53	1, 152	0.02	-	-	-
Influence	-	-	-	-	0.56	1, 158	0.01
Acceptance	-	-	-	-	0.14	1, 158	0.01
Typicality	-	-	-	-	0.05	1, 158	0.01
Clarity	-	-	-	-	2.87	1, 158	0.02
Repair	-	-	-	-	0.23	1, 158	0.01
Maintenance	-	-	-	-	0.01	1, 158	0.01
Dampening	-	-	-	-	0.06	1, 158	0.01

Lastly, to examine Residence differences on Trait Meta-Mood domains, MANOVA where the dependent variables were Attention, Clarity and Repair, was conducted. Again, no significant differences were observed between Residence on Trait Meta-Mood domains [Multivariate F (3,160) = 1.29, p = n.s.; Wilks' Lambda = .98; partial η^2 = .02].

Table 7.2-36 Residence differences on Trait Meta-Mood

Variables	Wilks' Lambda	Multi. F	Multi.df	Multi. η^2	Uni. F	Uni. df	Uni. η^2
TMMS	0.98	1.29	3, 160	0.02	-	-	-
Attention	-	-	-	-	0.19	1, 162	0.01
Clarity	-	-	-	-	2.35	1, 162	0.01
Repair	-	-	-	-	0.01	1, 162	0.01

7.3 Correlation Coefficients between Groups of Variables

7.3.1 Correlations among Trait Meta-Mood Scale Subscales and Personality Traits

The correlation analysis among Trait Meta- Mood subscales and Personality Traits revealed that Emotional Clarity was positively correlated with Extraversion, Conscientiousness, Agreeableness, and Openness to Experience, ranging from .26 to .36; and, negatively correlated with Neuroticism and Negative Valance, ranging from -.29 to -.26. Emotional Attention, on the other hand, was positively correlated with Extraversion (r = .19, p < .01) and Agreeableness (r = .21, p < .001), and negatively correlated with Negative Valance (r = -.27, p < .001). Lastly, Emotional Repair was found to be positively correlated with Extraversion, Conscientiousness,

Agreeableness and Openness to experience ranging from .27 to .36; and negatively

correlated to Neuroticism with a correlation coefficient of -.37 (see Table 7.3-1).

Table 7.3-1 Correlations among TMMS subscales and Personality Traits

	Extraversion	Conscientiousness	Agreeableness	Neuroticism	Open	NegativeValence
Clarity	.36***	.30***	.26**	-.29***	.36***	-.26***
Attention	.19**	-.03	.21***	-.13	.10	-.27***
Repair	.27***	.32***	.34***	-.37***	.36***	-.14

***Correlation is significant at the 0.001 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

7.3.2 Correlations among Trait Meta-Mood Scale Subscales and Psychological Symptoms

The correlation analysis among Trait Meta- Mood subscales and subscales of

Brief Symptom Inventory revealed that Emotional Clarity and Repair was negatively

correlated with all the symptomatologies, ranging from -.26 to -.30 for Clarity and

ranging from -.54 to -.32 for Repair. Emotional Attention, on the other hand, was not

significantly correlated with any of the symptoms (see Table 7.3-2).

Table 7.3-2 Correlations among TMMS subscales and Symptoms

	Anxiety	Depression	Negative Self	Somatization	Hostility
Clarity	-.46***	-.39***	-.46***	-.30***	-.30***
Attention	-.08	-.02	-.09	.03	-.09
Repair	-.40***	-.53***	-.41***	-.32***	-.43***

**. Correlation is significant at the 0.001 level (2-tailed).

7.3.3 Correlations among State Meta-Mood Scale Subscales and Personality

Correlation analysis among State Meta-Mood subscales and Personality traits

revealed that Mood Influence was negatively correlated with Agreeableness and

Openness, both with a -.17 correlation coefficient. Moreover, Mood Acceptance was positively correlated with Extraversion, and Agreeableness ranging from .17 to .20; and negatively correlated with Neuroticism. Mood typicality was found to be positively correlated with Neuroticism, and negatively correlated with Openness to experience. At the state level, Emotional Clarity was positively correlated only with Conscientiousness and negatively correlated with Neuroticism. Lastly, Mood Maintenance was significantly correlated only with Conscientiousness. Emotional Dampening was not correlated with any of personality traits. But all these significant correlations were ranging from low to moderate degrees; there were no strong correlation coefficients (i.e. exceeding .30) (see Table 7.3-3).

Table 7.3-3 Correlations among SMMS subscales and Personality Traits

	Extraversion	Conscientiousness	Agreeableness	Neuroticism	Openness	NegativeValence
SInfluence	-.14	-.10	-.17*	.15	-.17*	.09
SAccept	.20*	.11	.19*	-.13	.06	-.14
STypical	-.15	-.06	-.15	.20*	-.23**	.03
SClarity	.05	.26**	.13	-.20*	.15	-.06
SRepair	.13	.25**	-.15	-.04	-.04	.03
SMaintenance	.10	.-15	-.07	-.07	.01	.02
SDampening	.06	-.15	-.07	.06	.01	.02

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

7.3.4 Correlations among SMMS subscales and Mood-Congruent bias in Facial Emotion Recognition

Correlation analysis among State Meta-Mood and Mood Congruent bias in facial emotion racognition revealed that emotional clarity $(r = -.20, p < .05)$ and Emotional

Repair ($r = -.24$, $p < .01$) were negatively correlated with judging long displayed neutral faces as happy.

Table 7.3-4 Correlations among SMMS subscales and Mood-Congruent bias in Facial Emotion Recognition

	FastBiasSad	SlowBiasSad	FastBiasHappy	SlowbiasHappy
SInfluence	-.01	.10	-.09	-0.11
SAccept	.02	.01	-.01	-0.05
STypical	-.01	-.03	-.07	-0.14
SClarity	-.02	.03	-.10	-.20*
SRepair	.03	.01	-.02	-.24**
SMaintenance	.02	-.01	-.12	-.10
SDampening	.07	.06	.11	-0.07

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

7.4 Associations of Psychological Problems

Five multiple regression analyses were performed separately with personality and Trait Meta-Mood on Psychological symptoms derived from the Brief Symptom Inventory. Thus, anxiety, depression, negative self, somatization and hostility were dependent variables of these regression analyses. For these analyses the independent factors that were entered into the equations were Demographic Variables, Basic Personality Traits and Trait Meta-Mood domains. The first step consisted of Demographic Variables (i.e. sex and age) which were hierarchically entered into the equation. For the second step Basic Personality Traits (i.e. Extraversion, Conscientiousness, Agreeableness, Neuroticism, Openness to Experience, and Negative Valance) were entered hierarchically into the equation. Lastly, the third step, consisted of Trait Meta-Mood domains (i.e. Attention, Clarity, and Repair), also entered hierarchically into the equation.

7.4.1 Factors Associated with Anxiety

To identify the associates of Anxiety a multiple regression equations were examined by using the steps mentioned above. The results revealed that none of the demographic variables entered into the equation. Among the Basic Personality Traits, initially Neuroticism [t (145) = 6.57, β = .48, pr = .48] entered into the equation, explaining 23% of the variance [F_{change} (1, 145) = 43.19, p <.001]. Afterwards, Extraversion entered into the equation [t (144) = -3.94, β =- .28, pr = -.27] and explained 8% of the variance [F_{change} (1, 144) = 15.50, p <.001]. Following Extraversion, Conscientiousness entered into the equation [t (143) = -2.78, β = -.20, pr = -.19] explaining a variance of 4% [F_{change} (1, 143) = 7.75, p <.01]. Thus, Basic Personality Traits totally explained 35% of the variances. These findings indicated that high scores of Neuroticism were positively associated with Anxiety; whereas high scores of Extraversion, and Conscientiousness were negatively associated with Anxiety. As for the Trait Meta-Mood domains, only Clarity entered into the equation [t (142) = -3.58, β =- .26, pr = -.23] and explained a total of 6% of the variances [F_{change} (1, 142) = 12.79, p <.001]. This result indicated that, being able to clarify among emotions was negatively associated with Anxiety. As a result, these four variables totally explained 41% of the total variance for Anxiety.

Table 7.4-1 Factors associated with Anxiety

Variables in Set	F Change	df	t	β	pr	R^2 change
1.Basic Personality Traits						
Neuroticism	43.19***	1, 145	6,57***	.48	.48	0.23
Extraversion	15.50***	1, 144	-3,94***	-.28	-.27	0.08
Conscientiousness	7.75**	1, 143	-2,27**	-.20	-.19	0.04
2.Trait Meta-Mood						
Clarity	12.79***	1, 142	-3.58**	-.26	-.23	0.06

***p <.001; **p <.01

7.4.2 Factors Associated with Depression

To identify the associates of Depression a multiple regression equation was examined by using the steps mentioned above. The results revealed that none of the demographic variables entered into the equation. Among the Basic Personality Traits, initially Neuroticism [t (142) = 5.86, β = .44, pr = .44] entered into the equation, explaining 20% of the variance [F_{change} (1, 142) = 34.38, p <.001]. Afterwards, Extraversion entered into the equation [t (141) = -3.67, β = -.22, pr = -.27] and explained 7% of the variance [F_{change} (1, 141) = 13.43, p <.001]. Following Extraversion, Conscientiousness entered into the equation [t (140) = -2.45, β = -.19, pr = -.17] explaining a variance of 3% [F_{change} (1, 140) = 6.01, p <.05]. Thus, Basic Personality Traits totally explained 30% of the variances. These findings indicated that high scores of Neuroticism were positively associated with Depression; whereas high scores of Extraversion, and Conscientiousness were negatively associated with Depression. As for the Trait Meta-Mood domains, only Repair entered into the equation [t (139) = -4.51, β =- .34, pr = -.30] and explained a total of 9% of the variances [F_{change} (1, 139) = 20.30, p <.001]. This result indicated being able to repair

negative emotions was negatively associated with Depression. As a result, these four variables totally explained 39% of the total variance for Depression.

Table 7.4-2 Factors associated with depression

Variables in Set	F Change	df	t	β	pr	R^2 change
1.Basic Personality Traits						
Neuroticism	34.38***	1, 142	5.86***	.44	.44	0.20
Extraversion	13.43***	1, 141	-3.67***	-.27	-.27	0.07
Conscientiousness	6.01**	1, 140	-2.45**	-.19	-.17	0.03
2.Trait Meta-Mood						
Repair	20.30***	1, 139	-4.51***	-.34	-.30	0.09

***p <.001; **p <.01

7.4.3 Factors Associated with Negative Self

To identify the associates of Negative Self a multiple regression equation was examined by using the steps mentioned above. The results revealed that only age among the demographic variables entered into the equation [t (143) = -2.00, β = -.17, pr = -.17] and explained a variance of 3% [F_{change} (1, 143) = 3.98, p <.05]. Therefore, this indicated only age among the demographic variables totally explained a 3% of the variance; in which lower age indicated lower Negative Self evaluation. Among the Basic Personality Traits, initially Neuroticism [t (142) = 6.00, β = .48, pr = .44] entered into the equation, explaining a variance of 20% of the variance [F_{change} (1, 142) = 36.00, p <.001]. Afterwards, Extraversion entered into the equation [t (141) = -3.77, β = -.28, pr = -.27] and explained 7% of the variance [F_{change} (1, 141) = 14.24, p <.001]. Following Extraversion, Conscientiousness entered into the equation [t (140) = -2.20, β = -.17, pr = -.16] explaining a variance of 2% [F_{change} (1, 140) = 4.92, p <.05]. Thus, Basic Personality Traits totally explained 29% of the variances.

These findings indicated that high scores of Neuroticism were positively associated with Negative Self; whereas high scores of Extraversion, and Conscientiousness were negatively associated with Negative Self. As for the Trait Meta-Mood domains, initially Clarity entered into the equation [t (139) = -3.68, β = - .28, pr = -.25) and explained a total of 6% of the variances [F_{change} (1, 139) = 13.57, p <.001]. Afterwards, Repair entered into the equation [t (138) = -2.36, β = - .18, pr = -.16) and explained 2% of the variance [F_{change} (1, 138) = 5.56, p <.05]. Therefore, Trait Meta-Mood totally explained 8% of the variance on Negative Self. This result indicated being able to clarify among emotions and repair negative emotions was negatively associated with Negative Self. As a result, these four variables totally explained 37% of the total variance for Negative Self.

Table 7.4-3 Factors associated with Negative Self

Variables in Set	F Change	df	t	β	pr	R^2 change
1.Demographic Variables						
Age	3.98*	1, 143	-2.00*	-.17	-.17	.03
2.Basic Personality Traits						
Neuroticism	36.00***	1, 142	6.00***	.48	.44	.20
Extraversion	14.24***	1, 141	-3.77***	-.28	-.27	.07
Conscientiousness	4.92*	1, 140	-2.22*	-.17	-.16	.02
3.Trait Meta-Mood						
Clarity	13.57***	1, 139	-3.68***	-.25	-.25	.06
Repair	5.59*	1, 138	-2.36**	-.18	-.16	.02

***p <.001; **p <.01; * p <.05

7.4.4 Factors Associated with Somatization

To identify the associates of Somatization a multiple regression equation was examined by using the steps mentioned above. The results revealed that none of the demographic variables entered into the equation. Among the Basic Personality Traits, initially Neuroticism [t (145) = 4.06, β = .32, pr = .32] entered into the equation, explaining 10% of the variance [F_{change} (1, 145) = 16.50, p <.001]. Afterwards, Extraversion entered into the equation [t (144) = -2.24, β = -.18, pr = -.17] and explained 3% of the variance [F_{change} (1, 144) = 5.01, p <.05]. Thus, Basic Personality Traits totally explained 13% of the variances. These findings indicated that high scores of Neuroticism were positively associated with Somatization; whereas high scores of Extraversion were negatively associated with Somatization. As for the Trait Meta-Mood domains, only Repair entered into the equation [t (143) = -2.59, β = - .22, pr = -.20) and explained a total of 4% of the variances [F_{change} (1, 143) = 6.72, p <.05.This result indicated that being able to repair negative emotions was negatively associated with Somatization. As a result, these three variables totally explained 16% of the total variance for Somatization.

Table 7.4-4 Factors associated with Somatization

Variables in Set	F Change	df	t	β	pr	R^2 change
1.Basic Personality Traits						
Neuroticism	16.50**	1, 145	4.06**	.32	.32	.10
Extraversion	5.01*	1, 144	-2.24*	-.18	-.17	.03
2.Trait Meta-Mood						
Repair	6.72*	1, 143	-2.60*	-.22	-.20	.04

**p <.001; *p <.05

7.4.5 Factors Associated with Hostility

To identify the associates of Hostility a multiple regression equation was examined by using the steps mentioned above. The results revealed that none of the demographic variables entered into the equation. Among the Basic Personality Traits, only Neuroticism [t (145) = 8.70, β = .59, pr = .59] entered into the equation, explaining 34% of the variance [F_{change} (1, 145) = 75.64, p <.001]. These findings indicated that high scores of Neuroticism were positively associated with Hostility. As for the Trait Meta-Mood domains, only Repair entered into the equation [t (144) = - 4.01, β = - .28, pr = -.26) and explained a total of 7% of the variances [F_{change} (1, 14) = 16.08, p <.001. This result indicated that being able to repair negative emotions was negatively associated with Hostility. As a result, these two variables totally explained 41% of the total variance for Hostility.

Table 7.4-5 Factors associated with Hostility

Variables in Set	F Change	df	t	β	pr	R^2 change
1.Basic Personality Traits						
Neuroticism	76.64***	1, 145	8.70***	.59	.59	.34
2.Trait Meta-Mood						
Repair	16.08***	1, 144	-4.01**	-.28	-.26	.07

***p <.001

7.5 Manipulation Check

In order to analyze the effectiveness of the mood induction procedure a within subject multivariate analysis of variance was conducted, in which time was the

independent variable, and pleasant mood, unpleasant mood, and overall mood were the dependent variables. The results revealed a significant difference in participants' moods, between time 1 and time 2. [Multivariate F (3,159) = 79.73, $p<.001$; Wilks' Lambda = .40; partial η^2 = .60]. Accordingly, there were significant mood changes from pre-test to post-test analyses of mood induction.

Moreover, following MANOVA, univariate analyses were examined for time main effects in mood, applying a Bonferroni correction (.05/3= .017). Accordingly, the univariate analyses revealed a significant difference for pre-test pleasant mood [F (1,161) = 200.97, $p <.001$; η^2 = .55]. That is, participants' pre-test pleasant mood scores (M = 3.00) decreased significantly after the mood induction procedure, measured by their post-test pleasant scores (M = 2.45). However, a significant increase in unpleasant mood was not observed after mood induction. Moreover, another significant drop was observed in participant's overall mood scores, one question scale ranging from -10 to +10. [F (1,161) = 137, 67, $p<.001$; partial η^2= .46]. Participants' mood in general before the mood induction (M = 4.62) displayed a significant drop after the sad mood induction (M= 1.56).

Table 7.5-1 **Mood differences based on pre-assesment and post-assesment**

Variables	Wilks' Lambda	Multivariate F	Multi. df	Multi. η2	Univariate F	Uni. df	Uni. η2
Mood	0.40	79.73*	3, 159	0.6	-	-	-
Pleasant	-	-	-	-	200.97*	1, 161	.56
Unpleasant	-	-	-	-	1.83	1, 161	.01
Overall	-	-	-	-	137.67*	1, 161	.46

*$p <.001$

Afterwards, for the analysis of the effects of mood decrement, the difference of participants' pre-test pleasant score and post-test pleasant scores were taken as the

mood difference criterion. For a manipulation check, the differences between pre-test and post-test mood scores were categorized and two groups were established as high difference and low difference, based on a median split. Minimum and maximum difference scores ranged between -.63 to 2.00. This difference had a mean score of 0.55 (SD= 0.50), and a median of 0.50. Participants whose pleasant mood increased after the mood induction (n=13) were not included in the analysis. After deselecting these cases the new categorical variable for low and high mood difference was tiled to 51% (n= 77) and 49% (n= 74), respectively. (see Table 7.3-2)

Table 7.5-2 Pleasant Mood Difference Categories

	Frequency	Percent
*Low difference	77	51%
**High difference	74	49%
Total	151	100%

*Post – Pre mean score differences ranging between 0.00-0.99

**Post – Pre mean score differences ranging between 1.00-2.00

For the manipulation check a 2 (Group: High & Low difference) x 2 (Time: pre/post) mixed design MANOVA with repeated measures on the last factor, where dependent measures were 2 mood measures (Unpleasant & General) was conducted. The results revealed main effects for the group difference [Multivariate F (2, 147) = 4.53, p <.05; Wilks' Lambda = .94; partial η^2 = .06]; and for time [Multivariate F (2, 147) = 88.68, p <.001; Wilks' Lambda = .45; partial η^2 = .55]. Moreover, an interaction effect was also significant for group difference and time [Multivariate F

(2, 147) = 17.15, $p <.001$; Wilks' Lambda = .81; partial η^2 = .19]. Univariate analysis

with the application of the Bonferroni correction (.05/2=.03) revealed that there was

a significant difference in participants' Unpleasant mood [F (1, 148) = 5.99, p =.02,

partial η^2 = .39] in terms of group difference. Accordingly, participants who had a

high difference in their pleasant scores also had higher scores on their unpleasant

mood (M= 2.76); whereas, participants who had a low difference in their pleasant

mood, also had lower unpleasant mood scores (M= 2.57). However, no significant

difference was observed in participants' overall mood F (1, 148) = 0.14, n.s, partial

η^2 = .00] between the groups. Moreover in terms of time, no significant difference

was found for unpleasant mood [F (1, 148) = 4.53, n.s, partial η^2 = .30]. That is,

participants' unpleasant mood did not differ after the mood induction. A significant

difference; however, was observed for overall mood [F (2, 148) = 174.65, $p <.001$, η^2

= .54]. Accordingly, participants' overall mood was significantly lower ($M = 1.60$)

after the mood induction, compared to their mood before the mood induction ($M =$

4.91).

Table 7.5-3 Mood differences based on pre-assesment and post-assesment

Variables	Wilks' Lambda	Multivariate F	Multi. df	Multi. η2	Univariate F	Uni. df	Uni. η2
Pleasant Mood Dif.	.94	4.53*	2, 147	0.6	-	-	-
Unleasant	-	-	-	-	5.99*	1, 148	.39
Overall	-	-	-	-	0.14	1, 148	.01
Time	.45	88.68***	2, 147	.55			
Unpleasant	-	-	-	-	4.53	1, 148	.30
Overall	-	-	-	-	174.65***	1, 148	.54
Interaction between Pleasant Mood difference groups and time							
Group*time	.81	7.15***	2, 147	.19			
Unpleasant	-	-	-	-	7.13**	1, 148	.05
Overall	-	-	-	-	33.63***	1, 148	.19

*$p <.05$; **$p <.01$;***$p <.001$

The univariate analysis of the interaction effect between time and group difference revealed significant results for Unpleasant Mood [F (1, 148) = 7.13, p <.01, η^2 = .05]. For the Post-hoc analysis mean scores of Unpleasant Mood for the Low difference and High Pleasant Mood difference groups were compared. Accordingly, participants of the Low difference mood group did not differ in terms of unpleasant mood scores (M = 2.56) assessed before the mood induction compared to the assessment after mood induction (M = 2.58). In other words, participants of Low Pleasant Mood difference group did not display a significant increase in their Unpleasant Mood scores between these times. However, participants who were in the second group (high mood difference) displayed a significant decrease in Unpleasant Mood after the mood induction procedure (Pre-test M = 2.87; Post-test M = 2.66). In other words, participants who had a high Pleasant Mood difference after the mood induction procedure, interestingly, displayed a significant decrease in their Unpleasant Mood scores; while the opposite was expected. Moreover, the Low Mood difference group had significantly lower Unpleasant Mood scores (M = 2.56) compared to High Mood difference group (M = 2.87) at pre-test assessment; whereas no significant difference was observed between Low and High Mood difference groups at post-test assessment.

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Table 7.5-4 Mean scores of Unpleasant Mood for Mood difference Group*Time interaction effect

	Low Difference	High Difference
Time 1	2.56_a	2.87_b
Time 2	2.58_a	2.66_a

Note: The mean scores that do not share the same subscript horizontally and/or vertically are significantly different from each other.

In addition, the univariate analysis of the interaction effect between time and group difference also revealed a significant result for Overall Mood [F (1, 148) = 33.63, p <.001, η^2 = .19]. For the Post-hoc analysis mean scores of Overall Mood for the Low difference and High Pleasant Mood difference groups were compared. Accordingly, both Low and High difference groups displayed a significant drop in overall mood from pre-test (Low, M = 4.28; High, M = 5.54) to pos-test (Low, M = 2.42; High, M = 0.78). That is, both groups had higher Overall Mood scores before mood induction, compared to the assessment after mood induction. Moreover, the High difference group had significant Higher Overall Mood scores (M = 5.54) than the Low Difference Mood group (M = 4.28) at time 1; but had significant lower Overall Mood score (M = 0.78) at time 2 (Low, M = 2.42)

Table 7.5-5 Mean scores of Overall Mood for Mood difference Group*Time interaction effect

	Low Difference	High Difference
Time 1	4.28_a	5.54_b
Time 2	2.42_b	0.78_a

Note: The mean scores that do not share the same subscript horizontally and/or vertically are significantly different from each other.

7.6 Factors Associated with Mood Difference

Three multiple regression analyses were performed separately with different measures of mood difference after mood induction. Thus, Pleasant Mood, Unpleasant Mood were dependent variables of these regression analyses. For these analyses the independent factors that were entered into the equations were Demographic Variables, Psychological symptoms, Basic Personality Traits, Trait Meta-Mood domains, State Meta-Mood Evaluative domains, and State Meta-Mood Regulation domains. The first step consisted of Demographic Variables (i.e. sex and age) which were hierarchically entered into the equation. The second step consisted of Psychological symptoms (Anxiety, Depression, Negative Self, Somatization, and Hostility. For the third step Basic Personality Traits (i.e. Extraversion, Conscientiousness, Agreeableness, Neuroticism, Openness to Experience, and Negative Valance) were entered hierarchically into the equation. Next, for the fourth step, Trait Meta-Mood domains (Attention, Clarity, and Repair) were entered hierarchically. The fifth step consisted of State Meta-Mood Evaluative domains (i.e. Influence, Acceptance, Typicality, and Clarity), which were also entered hierarchically into the equation. Lastly, for the sixth step, the SMMS Regulation domains (Repair, Maintenance, and Dampening) were entered hierarchically to the equation.

The dependent variables were calculated by subtracting mean scores of pre-test and post-test assessments. (i.e. Pre_Pleasant − Post_Pleasant; Post_Unpleasant − Pre_Unpleasant; and Pre_Overall − Post_Overall).

7.6.1 Factors Associated with Pleasant Mood Decrement

To identify the associates of Pleasant Mood Decrement a multiple regression equation was examined by using the steps mentioned above. The results revealed that none of the demographic variables entered into the equation. Among psychological symptoms only Anxiety [t (136) = -3.19, β = -.26, pr = -.26] entered into the equation, explaining 7% of the variance [F_{change} (1, 136) = 10.20, p <.01]. Among the Basic Personality Traits, only Agreeableness [t (141) = 2.06, β = .18, pr = .17] entered into the equation, explaining 3% of the variance [F_{change} (1, 135) = 4.24, p <.05]. As for the State Meta-Mood Evaluative domains, initially Influence entered into the equation [t (134) = 2.73, β = - .23, pr = -.22) and explained 5% of the variance [F_{change} (1, 134) = 7.44, p <.01). Afterwards, Typicality [t (133) = -2.95, β = -.24, pr = -.23) entered into the equation explaining a variance of 5% [F_{change} (1, 133) = 8.69, p <.01). Lastly, Acceptance entered into the equation [t (132) = 2.82, β = .23, pr = .21) and explained 5% of the variance [F_{change} (1, 132) = 7.93, p <.01). Therefore, State Meta-Mood domains totally explained 15% of variance. These results indicated that high higher levels of Anxiety ere associated with lower levels of Pleasant Mood decrement after a sad mood induction. Moreover, higher levels of Agreeableness were related to higher levels of Pleasant Mood decrement after sad mood induction. In terms of State meta-mood experience higher levels of mood influence on thinking processes was associated with higher levels of Pleasant mood decrement; whereas, perceptions in evaluating a current pleasant mood as typical was negatively associated with Pleasant Mood decrement after a sad mood induction procedure. Lastly, higher levels of mood Acceptance were associated with higher

levels of Pleasant Mood decrement. To sum up, Anxiety, Agreeableness, Emotional Influence, Emotional Typicality, and Emotional Acceptance totally explained 21% of the variance for Pleasant Mood decrement after a sad mood induction procedure.

Table 7.6-1 Factors associated with Pleasant Mood Decrement

Variables in Set	F Change	df	t	β	pr	R^2 change
1.Psychological Symptoms						
Anxiety	10.20**	1, 136	-3.19**	-.26	-.26	.07
2.Basic Personality Traits						
Agreeableness	4.24*	1, 135	2.06*	.18	.17	.03
3.State Meta-Mood						
Influence	7.44**	1, 134	2.73**	.23	.22	.05
Typicality	8.69**	1, 133	-3.55**	-.24	-.23	.05
Acceptance	7.92**	1, 132	2.82**	.23	.21	.05

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

7.6.2 Factors Associated with Unpleasant Mood Increment

To identify the associates of Unpleasant Mood Increment a multiple regression equation was examined by using the steps mentioned above. Among psychological symptoms only Depression [t (136) = 4.79, β = .38, pr = .38] entered into the equation, explaining 14% of the variance [F_{change} (1, 136) = 22.96, p <.001]. Among the Basic Personality Traits, first Neuroticism [t (135) = 2.48, β = .22, pr = .19] entered into the equation, explaining 4% of the variance [F_{change} (1, 135) = 6.17, p <.05]. Secondly among personality traits, Conscientiousness [t (134) = 2.45, β = .20, pr = .19] entered into the equation, explaining 4% of the variance [F_{change} (1, 134) = 6.00, p <.05]. As for the Trait Meta-Mood domains, only Repair entered into

the equation [t (133) = -2.61, β = -.24, pr = -.20) and explained 4% of the variance [F_{change} (1, 133) = 6.83, p = .01). Lastly, among State Meta-Mood Evaluation domains only Typicality [t (132) = 3.32, β = .28, pr = .24] entered into the equation, explaining 6% of the variance [F_{change} (1, 132) = 11.08, p =.001]. These results indicated that higher levels of high depression, Neuroticism, Conscientiousness, and Emotional Typicality were related to higher levels of Unpleasant Mood increment; whereas, higher levels of Repair were related to lower levels of Unpleasant mood increment after a sad mood induction. Moreover, Depression, Neuroticism, Conscientiousness, Emotional Repair, and Emotional Typicality explained 32% of the variance for Overall Mood Decrement after a sad mood induction procedure.

Table 7.6-2 Factors associated with Unpleasant Mood Increment

Variables in Set	F Change	df	t	β	pr	R^2 change
1.Psychological Symptoms						
Depression	22.96***	1, 136	4.79***	.38	.38	.14
2.Basic Personality Traits						
Neuroticism	6.17*	1, 135	2.48*	.22	.19	.04
Conscientiousness	6.00*	1, 134	2.45*	.20	.19	.04
3.Trait Meta-Mood						
Repair	6.38**	1, 133	-2.61**	-.24	-.20	.04
4.State Meta-Mood						
Typicality	11.08***	1, 132	3.32***	.28	.24	.06

*p <.05; **p <.01; ***p <.001

7.6.3   Factors Associated with Overall Mood Decrement

To identify the associates of Overall Mood Decrement Increment a multiple regression equation was examined by using the steps mentioned above. The results

revealed that none of the demographic variables entered into the equation. Among psychological symptoms only Depression [t (135) = -2.00, β = -.17, pr = -.17] entered into the equation, explaining 3% of the variance [F_{change} (1, 135) = 4.00, p <.05]. None of the Basic Personality Traits, and Trait Meta Mood components entered into the equation. Lastly, among State Meta-Mood Evaluation domains only Typicality [t (134) = -3.60, β = -.32, pr = -.29] entered into the equation, explaining 9% of the variance [F_{change} (1, 134) = 12.93, p <.001]. These results indicated that higher levels of high depression, and Emotional Typicality were related to Lower levels of Overall Mood decrement, and explained totally 12% of the variance for Overall Mood Decrement after a sad mood induction procedure.

Table 7.6-3 Factors associated with Overall Mood Increment

Variables in Set	F Change	df	t	β	pr	R^2 change
1.Psychological Symptoms						
Depression	4.00	1, 135	-2.00*	-.17	-.17	.03
2.State Meta-Mood						
Typicality	12.93	1, 134	-3.60**	-.32	-.29	.09

**p < .001; *p <.05

7.7 Factors Associated with Emotion Recognition

For emotion recognition of facial expressions two sets of faces with the same stimuli were used as mentioned before. The only difference between these sets was the time of display. The first set was of facial expressions were displayed for 50 ms; whereas, the second set was of expressions were displayed for 2000 ms. In order to examine the difference between the two sets a paired sample t-test was conducted. The results revealed a significant difference in correct number between Fast displayed facial expressions (M = 41.63) and slow displayed facial expressions (M = 48.23) [t (150) = -15.82, p < .001]. Thus, individual were better in recognizing facial expression that were shown for 2000ms compared to facial expression which were displayed for 50ms.

In order to examine the associates of Emotion Recognition, two multiple regression analyses were performed separately with different measures of Emotion Recognition. Thus, correct labeling to Fast displayed facial expressions (50 ms) and correct labeling to Slow displayed facial expressions (2000 ms) were dependent variables of these regression analyses. For these analyses the independent factors that were entered into the equations were Demographic Variables, Psychological symptoms, Basic Personality Traits, Trait Meta-Mood domains, Pre-test BMIS mood assessments, Post-Test BMIS mood assessments, State Meta-Mood Evaluative domains, and State Meta-Mood Regulation domains. The first step consisted of Demographic Variables (i.e. sex and age) which were hierarchically entered into the equation. The second step consisted of Psychological symptoms (Anxiety, Depression, Negative Self,

Somatization, and Hostility. For the third step Basic Personality Traits (i.e. Extraversion, Conscientiousness, Agreeableness, Neuroticism, Openness to Experience, and Negative Valance) were entered hierarchically into the equation. Next, for the fourth step, Trait Meta-Mood domains (Attention, Clarity, and Repair) were entered hierarchically. The fifth step consisted of Pre-test BMIS mood states (Pre-Pleasant Mood, Pre-Unpleasant mood, and Pre-Overall mood). Next, the sixth step was entered into the equation, which consisted of Post-BMIS assessment (Post-Pleasant Mood, Post-Unpleasant mood, and Post-Overall mood). The seventh step consisted of State Meta-Mood Evaluative domains (i.e. Influence, Acceptance, Typicality, and Clarity), which were also entered hierarchically into the equation. Lastly, the SMMS Regulation domains (Repair, Maintenance, and Dampening) were entered hierarchically to the equation.

7.7.1 Factors Associated with Emotion Recognition of Fast Displayed (50ms) Expressions

In order to examine the associates of Emotion Recognition a hierarchical regression analysis was conducted following steps mentioned above. The results revealed that, only Hostility, which belonged to the Psychological symptoms, [t (136) = -2.01, β = -.17, pr = -.17] entered into the equation, explaining 3% of the variance [F_{change} (1, 136) = 4.36, p <.05]. This indicated that, Hostility was negatively associated with Facial Emotion Recognition of Fast displayed expression. In other words, high

levels of Hostility were associated with lower levels of facial emotion recognition, when expressions were displayed for 50ms.

Table 7.7-1 Factors associated with Accurately Recognizing Fast Displayed Facial Expressions

Variables in Set	F Change	df	t	β	pr	R^2 change
1.Psychological Symptom						
Hostiliy	4.36*	1, 136	-2.01*	-.17	-.17	0.03

*p <.05

7.7.2 Factors Associated with Emotion Recognition of Slow Displayed (2000ms) Expressions

In order to examine the associates of Emotion Recognition a hierarchical regression analysis was conducted following steps mentioned above. The results revealed that, first Anxiety [t (136) = -2.49, β = -.21, pr = -.21] entered into the equation and explained 4% of the variance [F_{change} (1, 135) = 6.19, p <.05]. This indicated that Anxiety was negatively related to accurate recognition of facial expressions when displayed for 2000ms. Among the mood assessment prior to the mood induction only Pleasant Mood [t (134) = 2.49, β = .24, pr = -.21] entered into the equation, and explained 4% of the variance [F_{change} (1, 134) = 6.19, p <.05]. This indicated that Individuals pleasant mood before the mood induction procedure was related to higher levels of Facial Emotion Recognition of Slow displayed faces. Lastly, among the mood assessment following mood induction, Pleasant Mood entered to the equation [t (133) = 2.13, β = .21, pr = .17] entered into the equation, and explained 3% of the variance

[F_{change} (1, 133) = 4.53, p <.05. This indicated that, higher levels of Pleasant Mood after the mood induction were positively associated with Facial Emotion Recognition of Slow displayed expression. In other words, high levels of Pleasant mood, even after mood induction was associated with higher levels of facial emotion recognition, when expressions were displayed for 2000ms. To sum up, Anxiety, Pre-Pleasant Mood, Post-Pleasant Mood totally explained 11% of the variance for Facial emotion recognition for faces displayed for 2000ms.

Table 7.7-2 Factors associated with Accurately Recognizing Slow Displayed Facial Expressions

Variables in Set	F Change	df	t	β	pr	R^2 change
1.Psychological Symptoms						
Anxiety	6.19*	1, 135	-2.49*	-.21	-.21	.04
2.Pre-BMIS						
Pleasant	6.19*	1, 134	2.49*	.22	-.18	.04
3.Post-BMIS						
Pleasant	4.53*	1, 133	2.13*	.21	-.18	.03

*p <.05

7.8 Factors Associated with Mood Congruent Bias in Recognizing Facial Expressions

In order to examine whether participants would exhibit impairment in emotion recognition due to sad mood, the possibility that they would display a bias was explored.

Therefore, each participant's mislabeling neutral and calm facial expressions as sad or happy were tallied. Accordingly four types of biases were constructed; "Fast displayed neutral faces as sad", "Slow displayed neutral faces as sad", "Fast displayed neutral faces as happy and "Slow displayed neutral faces as happy", namely. In order to examine the difference in mislabeling neutral and calm faces as sad in the Fast and Slow displayed faces condition, a paired sample t-test was conducted and a significant difference was found [t (151)= 2.97, p < .01]. Accordingly, participants made significantly more mislabelling in the Fast condition (M = 1.10) compared to the Slow condition (M = 0.68). Moreover, a second paired sample t-test was conducted to examine the difference in mislabelling neutral and calm facial expressions as happy in the Fast and Slow condition. This test, however, did not confirm a significant difference between the two conditions [t (151) = 0.47, p = n.s.].

Moreover, four multiple regression analyses were performed separately with different measures of Mood Congruent Bias in Recognizing Facial Expressions. Thus, "Fast displayed neutral faces as sad", "Slow displayed neutral faces as sad", "Fast displayed neutral faces as happy and "Slow displayed neutral faces as happy" were dependent variables of these regression analyses. For these analyses the independent factors that were entered into the equations were Demographic Variables, Psychological symptoms, Basic Personality Traits, Trait Meta-Mood domains, Pre-test BMIS mood assessments, Post-Test BMIS mood assessments, State Meta-Mood Evaluative domains, and State Meta-Mood Regulation domains. The first step consisted of Demographic Variables (i.e. sex and age) which were hierarchically entered into the equation. The

second step consisted of Psychological symptoms (Anxiety, Depression, Negative Self, Somatization, and Hostility. For the third step Basic Personality Traits (i.e. Extraversion, Conscientiousness, Agreeableness, Neuroticism, Openness to Experience, and Negative Valance) were entered hierarchically into the equation. Next, for the fourth step, Trait Meta-Mood domains (Attention, Clarity, and Repair) were entered hierarchically. The fifth step consisted of Pre-test BMIS mood states (Pre-Pleasant Mood, Pre-Unpleasant mood, and Pre-Overall mood). Next, the sixth step was entered into the equation, which consisted of Post-BMIS assessment (Post-Pleasant Mood, Post-Unpleasant mood, and Post-Overall mood). The seventh step consisted of State Meta-Mood Evaluative domains (i.e. Influence, Acceptance, Typicality, and Clarity), which were also entered hierarchically into the equation. Lastly, the SMMS Regulation domains (Repair, Maintenance, and Dampening) were entered hierarchically to the equation.

7.8.1 Factors Associated with Perceiving Fast Displayed Neutral Faces as Sad

In order to examine factors associated with perceiving fast displayed neutral faces as sad, a hierarchical regression was conducted following steps mentioned above. The results revealed that none of the demographic variables, psychological symptoms, trait and state meta-mood domains, did not explained such a bias. However, as for Basic Personality Traits, only Agreeableness entered into the equation [t (135) = -3.07, β = -.25, pr = -.25] entered into the equation, explaining 6% of the variance [F_{change} (1, 135) = 9.23, p <.01]. This, result indicated that higher scores of Agreeableness were associated

in lower levels of mislabeling neutral facial expression as sad. Second, Unleasant mood prior to mood induction entered into the equation [t (134) = 2.36, β = .20, pr = .19] entered into the equation, explaining 4% of the variance [F_{change} (1, 134) = 5.55, p <.05]. Thus, the result indicated that, Unpleasant Mood before the sad mood induction was related to higher levels of perceiving fast displayed neutral faces as sad.

To sum up, Agreeableness and Post-Induction Unpleasant mood explained a total of 10% of the variance. Moreover, higher levels of Agreeableness was associated with lower levels of mood congruent bias; whereas, higher levels of Unpleasant Mood after sad mood induction was related to higher mood congruent bias in facial expressions when displayed for 50ms.

Table 7.8-1 Factors associated with Perceiving Fast Displayed Neutral Faces as Sad

Variables in Set	F Change	df	t	β	pr	R^2 change
1.Basic Personality Traits						
Agreeableness	9.23**	1, 135	-3.07**	-.25	-25	.06
2. Pre-BMIS						
Unpleasant	5.55*	1, 134	2.36*	.20	.19	.04

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

7.8.2 Factors Associated with Perceiving Slow Displayed Neutral Faces as Sad

In order to examine factors associated with perceiving slow displayed neutral faces as Sad, a hierarchical regression was conducted following steps mentioned above. The results revealed that none of the demographic variables, psychological symptoms, Trait and State Meta-Mood domains, Pre-Induction and post-Induction mood states, Basic Personality Traits, were associated with such a bias.

7.8.3 Factors Associated with Perceiving Fast Displayed Neutral Faces as Happy

In order to examine factors associated with perceiving Fast displayed neutral faces as Happy, a hierarchical regression was conducted following steps mentioned above. The results revealed that only gender of the demographic variables entered into the equation [t (135) = -2.35, β = .20, pr = .20] explaining 4% of the variance [F_{change} (1, 135) = 5.43, p <.05]. This indicated that being male was positively associated with making a bias of labeling fast displayed neutral faces as happy.

Table 7.8-2 Factors associated with Perceiving Fast Displayed Neutral Faces as Happy

Variables in Set	F Change	df	t	β	pr	R^2 change
1.Demographic Variables						
Gender	5.54*	1, 135	2.33*	.19	.19	0.04

*p <.05

7.8.4 Factors Associated with Perceiving Slow Displayed Neutral Faces as Happy

In order to examine factors associated with perceiving Slow displayed neutral faces as Happy, a hierarchical regression was conducted following steps mentioned above. The results revealed that none of the demographic variables entered into the equation. Among psychological symptoms only Anxiety $[t (135) = 2.18, \beta = .19, pr = .19]$ entered into the equation, explaining 3% of the variance $[F_{change} (1, 135) = 4.77, p <.05]$. Among the Basic Personality Traits, first Extraversion $[t (134) = -2.37, \beta = -.21, pr = -.20]$ entered into the equation, explaining 4% of the variance $[F_{change} (1, 134) = 5.64, p <.05]$. The second variable among personality traits that entered into the equation was Conscientiousness $[t (133) = -2.29, \beta = -.21, pr = -.19]$, explaining 4% of the variance $[F_{change} (1, 133) = 5.24, p <.05]$. Thus, personality traits explained a total of 8% of the variance. Among the Sate Meta-Mood evaluative domains, only Typicality entered into the equation $[t (132) = -2.30, \beta = -.20, pr = -.19]$ explaining 3% of the variance $[F_{change} (1, 132) = 5.31, p <.05]$. Lastly, among the Sate Meta-Mood Regulation domains Repair entered into the equation $[t (132) = -2.36, \beta = -.19, pr = -.19]$ explaining 4% of the variance $[F_{change} (1, 132) = 6.26, p <.05]$. These results indicated that higher scores on Anxiety were related to higher mislabeling of Neutral faces as Happy, when the expressions were displayed for 2000ms. Moreover, higher levels of Extraversion, Conscientiousness, Emotional Typicality, and Emotional Repair were associated with lower number of mislabeling Neutral faces as Happy for the 2000ms condition.

Table 7.8-3 Factors associated with Perceiving Slow Displayed Neutral Faces as Happy

Variables in Set	F Change	df	t	β	pr	R^2 change
1.Psychological Symptom						
Anxiety	4.77*	1, 135	2.18*	.19	.19	.04
2.Basic Personality Traits						
Extraversion	5.64*	1, 134	-2.37*	-.21	-.20	.04
Conscientiousness	5.23*	1, 133	-2.29*	-.21	-.19	.04
3.State Meta-Mood Evaluation						
Typicality	5.31*	1, 132	-2.30*	-.20	-.19	.03
4.State Meta-Mood Regulation						
Repair	6.26*	1, 131	-2.50*	-.21	-.20	.04

*p <.05

CHAPTER VIII

DISCUSSION

The main purpose of the main study was to investigate the role of meta-mood experience on the mood-congruency effect in recognizing emotion from facial expressions. In accordance with this aim, firstly, it was examined whether demographic variables (age, gender, department, mother's and father's education, number of siblings, residence, whether there is a family history of psychological problems whether the participants had a history of psychological problems, and whether the participants have a current psychological problem) differed in the measures of the study (Facial Emotion Recognition, Mood Congruent Bias, Symptomatology, State Meta-Mood, and Trait Meta-Mood). For this aim, several Multivariate Analyses of Variance were conducted. Later on, factors associated with symptomatology were analyzed for a more comprehensive analysis of the Trait Meta-Mood Scale. This analyses was not conducted in the first study, but was left to the main study due to data collection limitations during the first study. Next, after examining whether the mood induction procedure was effective, factors associated with Pleasant Mood decrement, Unpleasant Mood Increment, and Overall Mood decrement due to sad mood induction was examined. In other words, the aim of this analysis was to investigate the underlying factors that

yielded mood change after a mood induction procedure. Lastly, the factors associated with mood congruency in recognizing emotions from facial expressions were examined.

8.1.1 Findings Related to Differences of Demographic Variables on the Measures of the Study

Several MANOVAS were conducted in order to analyze demographic differences on the measures of the study. The results revealed that age groups did not differ in terms of the above mentioned measures. Gender differences were found only for the Trait Meta-Mood Scale. Univariate analyses revealed that females had higher Emotional Attention scores than males; however, there was no gender difference in terms of Emotional Clarity and Repair. This finding was consistent with previous studies that had found more complex emotional structures in women, with higher abilities of interpreting emotional information, and higher emotional awareness (Thayer et al, 2003; Barret, Lane, Sechrest & Schwartz, 2000).

The departments of individuals who attended to the study were divided in two groups; psychology and other. The department variable showed significant difference only in symptomatology, in which it was found that students from other departments than psychology had higher negative perceptions of self.

The education levels of participants' both parents, and participants' residence revealed no differences in the measures of the study.

8.1.2   Findings Related to Symptomatology

8.1.2.1 Findings Related to Anxiety and Depression Symptoms

In order to examine the associations of Anxiety and Depression two seperate hierarchical regression analyses were conducted. The results revealed that neither age, nor gender was related to Anxiety and Depression in the current sample. When the relations of personality traits were examined, it was found that Neuroticism was positively related to Anxiety and Depression symptoms, indicating that, individuals who were high on Neuroticism traits, were more prone to experience Anxiety and Depression symptoms. Extraversion and conscientiousness, on the other hand, were negatively associated with Anxiety and Depression. Moreover, in terms of meta-mood, the relation of TMMS was examined. Accordingly, it was found that lower levels of Clarity were associated with higher levels of Anxiety. This finding supported a previous study that compared Australian and Singaporean samples (Wong et al., 2007). Moreover, high levels of Emotional Repair were found to be related to lower levels of Depression. Although the literature suggests that Emotional Clarity and Repair go hand in hand with depression and anxiety (Extremera, & Fernandez-Berrocal, 2006), the findings of the current study suggests that, in the current sample, Anxiety was related to lower levels of emotional clarity; whereas, depression was related to lower levels of Emotional Repair. Thus, inabilities of specific emotional experiences influence different symptomatologies.

8.1.2.2 Findings Related to Negative Self Perception

The regression analysis that examined the associations of Personality traits and Meta-Mood on Negative Self perception revealed that age was a contributor. Accordingly increasing age was associated with lower levels of Negative Self perception. Moreover, Neuroticism was positively associated with this domain; whereas higher levels of Extraversion and Conscientiousness were related to lower levels of perceiving self negatively. Among meta-mood domains, both Emotional Clarity and Repair were negatively related. Accordingly, individuals who had higher abilities in discriminating among emotions and rebounding from negative emotions perceived themselves as less negative. Interestingly, Neuroticism, Extraversion, and Conscientiousness were found to predict Anxiety, Depression, and Negative self. However, each symptomatology differed in terms meta-mood experience. Higher levels of Anxiety was found to be related to lower levels of Emotional Clarity, whereas, depression was related to lower levels of Emotional Repair. Moreover, negative self was found to be related to lower levels of both Clarity and Repair. Cognitive therapy emphasizes that dysfunctional thought about the self contribute to negative emotions (Beck, 1976). Therefore the aim of cognitive therapy is to identify and restructure irrational negative thoughts and challenge the accuracy of these thoughts (Deacon, Fawzy, Lickel, and Wolitzky-Taylor, 2011). The findings of the current study, therefore, provides information that negative perceptions about the self are related to a decreased ability of clarifying among emotions, and related to clarity, a decreased level of repair negative emotions. Such lack of emotional clarity and repair are found to be important

contributors to negative self perception. Thereby, it can be suggested that it is important not only to restructure negative thoughts, but also restructure the outcome of negative thoughts, that is negative emotions. As Mayer and Gaschke (1988) claim Meta-mood experience is the cognitive aspect of emotions. Due to this, different from emotion itself, it is under the control of the individual (Mayer & Gaschke, 1988). Therefore, changes in the cognitive content about emotions, may also lead to changes in thoughts related to that emotion.

Semple, Grant, and Patterson (2005) found that high levels of negative self perception were related to high levels of sexual risk behavior, such as unprotected sex, and larger numbers of sexual partners. Moreover, it was also found that negative perceptions of the self were predictors of the intensity of methamphetamine use and depressive symptoms in a sample of methamphetamine users. In relation to the current study, it can be suggested that inabilities of differentiating emotions (or emotional confusion) and inabilities to regulate emotions may lead to self-destructive behaviors.

8.1.2.3 Findings related to Somatization

In terms of Somatization, the current study found that higher levels of Neuroticism and lower levels of Extraversion were associated with higher levels of Somatization. Besides, personality traits, the literature also suggests that Emotional Repair to be related with Somatization, in that, individuals who had higher abilities of Emotional Repair, reported less Somatization. (Thompson et al., 2007). This indicates that in the current sample, lower levels of emotional repair were related to higher

attention to bodily sensations, thus somatization. Although the literature also suggests that higher levels of emotional attention were related to more physical symptoms; and lower ability of emotional repair was related to more illness report (Goldman, Kraemer, & Salovey, 1996) such a finding was not supported in the current research.

8.1.2.4 Findings Related to Hostility

In terms of Hostility only Neuroticism and Emotional Repair came out to be significantly related. The results of the hierarchical regression analysis revealed that, high levels of Neuroticism and low levels of Repair were associated with higher levels of Hostility. Although Neuroticism alone explained high variance, with the addition of Emotional Repair, the variance raised to 41%. This suggests that emotional instability and decreased abilities of emotional repair explain a great amount of hostility. The literature also suggests that trait anger was primarily associated with neuroticism (Sanz, Garcia-Vera, & Magan, 2010). However, no literature on the relation between meta-mood experience and hostility was found.

8.1.3   Finding Related to Mood Induction

In order to examine the effect of sad mood on recognizing emotions from facial expression a mood induction procedure was administered to all participants. The procedure consisted of watching the final 10 minute scene from the movie The Champ (Zeffirelli, 1979). To investigate the effectiveness of the mood induction procedure MANOVA was conducted. The results revealed a significant difference in participants' moods, between time 1 and time 2. Accordingly, Pleasant and Overall Mood was

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significant lower before mood induction compared to after mood induction. However, participants' Unpleasant Mood score did not show an increment. For a manipulation check, the sample was divided into two groups based on their Pleasant Mood decrement, and another MANOVA was conducted in which the Independent Variable was Pleasant Mood Difference (High/Low) and dependent variables were Unpleasant and Overall Mood. The results revealed that participants, whose Pleasant Mood did not decreased from time 1 to time 2, also displayed no increase in their Unpleasant Mood scores between these times. However, participants who were in high mood difference group displayed a significant decrease in Unpleasant Mood after the mood induction procedure. In other words, participants who had a high Pleasant Mood difference after the mood induction procedure, interestingly, displayed a significant decrease in their Unpleasant Mood scores; while the opposite was expected. Moreover, the Low Mood difference group had significantly lower Unpleasant Mood scores compared to High Mood difference group at pre-test assessment; whereas no significant difference was observed between Low and High Mood difference groups at post-test assessment. Moreover, both groups had higher Overall Mood scores before mood induction, compared to the assessment after mood induction. In addition, the High mood difference group had significant Higher Overall Mood scores than the Low Difference Mood group at time 1; but had significant lower Overall Mood score at time 2.

After having examined how moods of the participants changed after the mood induction procedure, multiple regression analyses were conducted in order to investigate the association of mood change.

8.1.3.1 Findings related to Pleasant Mood Decrement

Regression analyses on Pleasant Mood decrement revealed that low levels of Anxiety was a predictor of Pleasant Mood decrement after a mood induction procedure. This finding indicated that individuals with high levels of anxiety displayed less decrement in Pleasant mood after a sad mood induction. Gençöz (2002) suggested that positive affect was not related to anxiety, but depression. The findings of the current study, therefore, may suggest complementary information to Gençöz's (2002) findings, whereby it reveals the negative association between Pleasant Mood decrement and Anxiety. Moreover, in terms of personality, higher levels of Agreeableness were related with higher levels of Pleasant Mood decrement. The mood induction procedure involved a scene from the Movie *The Champ* (Zeffirelli, 1979), in which a little boy cries after the death of his father. The literature suggests that Agreeableness was related to higher levels of empathic concern (Nettle & Liddle, 2008). Individuals high in Agreeableness may have, therefore, shown more empathy for the little boy. Moreover, in terms of State-Meta mood, it was found that higher levels of Emotional Influence and Acceptance were related with higher drops in participants' Pleasant Mood. In addition, higher levels of Emotional Typicality were related with lower levels of Pleasant Mood decrement. To clarify, individuals who reported that their thoughts were affected by the mood they were experiencing (Influence), and who were acceptable towards their mood states (Acceptance) experienced higher levels of Pleasant Mood decrement; whereas, individuals who perceived their mood to be typical (Typicality), experienced lower

decrement in their Pleasant Mood. These findings indicated that Accepting a mood state was related to letting oneself experience changes in mood, whereas, knowing that an ongoing mood state is typical, led individuals to block decrements of their Pleasant Mood after experiencing a sad moment. In other words, they were less affected. Moreover, perceiving moods to be influential in thinking processes also led to be influenced from a sad moment, leading to decrements in Pleasant mood.

8.1.3.2 Findings related to Unpleasant Mood Increment

Although the initial analyses revealed no significant change in participants' Unpleasant Mood scores, regression analyses were still conducted in order to examine whether the associations in Unpleasant Mood change differed from Pleasant Mood change. The findings indicated that high scores of Depression, Neuroticism, Conscientiousness, and Typicality were positively associated with higher increases in Unpleasant Mood; however, higher levels of Emotional Repair were negatively associated with increments in Unpleasant Mood. When compared to the Pleasant Mood changes, it can be seen that personality traits have different influences of the type of mood that changes. Accordingly, Pleasant Mood changes were influenced of Agreeableness traits; whereas, Unpleasant Mood was influenced by Neuroticism and Conscientiousness traits. Moreover, depression was found to be related to Unpleasant mood increment after a sad mood induction; whereas, anxiety was found to be related to Pleasant Mood decrement. Although Gençöz (2002) reported evidence that negative affect was related to both anxiety and depression, the current study found that

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increments in unpleasant mood after sad mood induction was related to depression. However, these results must be evaluated with regard to two cautions. First, unpleasant mood, although found to be correlated with Negative Affect (PANAS) in the first study, measures less intensive emotional states, compared to Negative Affect. Secondly, the relation found between unpleasant mood and depression does not indicate direct associations between these two variables, but suggests a relation between unpleasant mood "increment" after a sad mood induction and depression. That is, depressive symptoms were positively related to increases in Unpleasant Mood after sad mood induction. Besides from depression, high levels of Emotional Repair, was found to be related to lower levels of Unpleasant Mood increment after sad mood induction. This was an expected result based on Mayer and Stevens' (1994) findings that, Emotional Repair was related to regulate a negative mood. In other words, repair was not related to Pleasant Mood decrement, but was associated with changes in Unpleasant Mood. This result also provides support for the validity of Emotional Repair, which could not be obtained during the pilot study.

8.1.3.3 Findings related to Overall Mood Increment

When associates of Overall Mood decrement were examined, it was found that Depression and Typicality were negatively associated in participants Overall Mood change. Accordingly, high levels of Depression and Emotional Typicality, resulted in less reporting of Overall Mood decrement. Interestingly, although higher levels of Typicality was found to be related to higher levels of Unpleasant Mood increment, it was found that Overall mood of individuals were negatively effected from this variable.

Moreover, although depression was related with higher levels of Unpleasant mood increment after a sad mood induction, it was found that higher levels of depression did not effect individual's Overall mood the same it does Unpleasant mood. However, these results should be interpreted with caution, as the Overall Mood was measured with one question.

8.1.4   Findings related to Facial Emotion Recognition

Analyses regarding the associates of Facial Emotion Recognition indicated that Hostility was negatively related in recognizing emotions from facial expressions when the expressions were displayed for 50ms. For the 2000ms condition, it was found in the current study that Anxiety was negatively related with accuracy in Facial Emotion Recognition, whereas Pleasant mood both before and after sad mood induction was positively related in higher accuracy levels of Facial Emotion Recognition. Based on the studies of Sonnby-Börgström, Jönsson and Svensson (2003), responses to facial expressions which were displayed for 50ms should indicate automatic levels in which participants' recognition would be more subjective. That is, individuals' cognitions would interfere in identifying the stimuli. At such a short exposure time, the authors claim, individuals identify the expression with difficulty and respond according to their cognitive states. The 2000ms exposure time, on the other hand, is a good contrast in which individuals recognize the facial expression objectively, rather than subjectively. With such an exposure time, participants would have enough time to recognize and identify the facial expression correctly (Sonnby-Börgström, Jönsson & Svensson, 2003).

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Based on this notion, it can be suggested that, hostility may have interfered with the recognition of facial expression. Further analyses of specific responses to facial expressions are needed to identify whether this was the case. For example, analyzing whether individuals with high hostility symptoms responded to facial expressions as angry would support this hypothesis. However, for the purpose of the main study, only specific responses to neutral faces were analyzed.

Previous studies on emotion recognition reflect contradictory results in associates of facial emotion recognition accuracy, mostly due to the material that is used, which differs in each study (Matsumoto et al. 2000). Different materials of facial expressions; therefore, do not yield similar results (Bruner & Tagiuri, 1954), and are not representative in displaying the spectrum of facial expressions (LeRoux, 1987). The NimStim set of facial expressions (Tottenham, 2009) used in this study is a relatively new facial expression set which may need more validation. Although, the procedure and material used for the facial emotion recognition task differs from most studies, the finding that psychological symptoms yielded lower accuracy rates in recognizing emotions from facial expressions was supported. In terms of anxiety disorders, studies have shown that children with social phobia had lower accuracy rates in recognizing facial expressions, compared to healthy children (Simonian, et al., 2001). Moreover, a study with depressed patients has shown that comorbid anxiety was correlated with less accuracy in re cognizing emotions from facial expressions (Bouhuys et al., 1997). Kessler et al. (2007) found that individuals with Panic disorders also had deficits in recognizing facial expression. The findings of the current study supported the above

mentioned studies, in that it displayed that higher levels of anxiety symptoms was related with lower accuracy in facial emotion recognition for expressions displayed for 2000ms. Moreover, despite studies indicating that sad mood has a negative effect on accuracy rates in identifying facial expressions (Bouhuys et al. 1995), the current study found that when anxiety was controlled, both Pleasant mood scores that were assessed before and after the sad mood induction revealed to be positively related with accuracy rates in identifying facial expressions of basic emotions.

8.1.5   Findings related to Mood Congruent Bias in Facial Emotion Recognition

The mood congruency effect in emotion recognition was calculated by tallying incorrect responses of Sad and Happy on neutral faces. In other words, the number of mislabeling neutral faces as happy or sad was accounted for a cognitive bias. The facial expression task was given in two sets, same facial expressions differing in the time displayed. Each participant was shown facial expressions for 50ms of at the first set, and for 2000ms at the second set. Thereby, it was aimed to assess individuals mood congruencies with their responses to neutral faces in the 50ms condition; whereas, the 2000ms condition would serve as a control condition, in which, objective responses were expected. However, due to some systematic errors mentioned below, information about associates of mood congruency was mostly gathered in the 2000ms condition.

8.1.5.1 Findings Related to Perceiving Neutral Faces as Sad

Regression analyses revealed that, for the fast displayed faces, Agreeableness was related to recognizing neutral faces as sad. Accordingly, high levels of Agreeableness were associated with less mislabeling neutral faces as Sad when they were shown for 50ms. Research on personality traits proposes that Agreeableness is related to friendliness, empathy, warmth (Gençöz, & Öncül, in progress; Graziano, & Eisenberg, 1997). Moreover, Nettle and Liddle (2008) posited that Agreeableness may be highly related to the social cognitive aspect of Theory of Mind, based on empathy quotient that was found to be highly correlated to Agreeableness (Baron-Cohen, & Wheelwright, 2004). Nettle and Liddle (2007) found support for their hypothesis, and revealed that Agreeableness was highly related the social-cognitive Theory of Mind task that involved reasoning about mental states of characters in several stories. Therefore, from a cognitive perspective, it can be concluded that high levels of Agreeableness were related in more accurate perceptions of a non-verbal social communication source, facial expressions, even after a sad mood induction.

Moreover, after controlling for Agreeableness, the results revealed that Unpleasant Mood, which was assessed before the mood induction, was positively related with recognizing neutral faces as sad, indicating a mood congruent bias. This result supported Sonnby-Börgström, Jönsson & Svensson (2003), which states that responses to facial expression would be mood congruent when they are displayed for 50ms. However, none of the meta-mood experience domains were found to be related with this bias. This may due to the fact that, facial expressions were displayed so fast that the meta-evaluation

and regulation domains of the participants could not interfere with the task. That is, individuals had to rely on their sensory memory. Therefore, the stimulus could not be processed at the cognitive level.

The regression analyses of perceiving neutral faces as sad in the 2000ms condition revealed no significant associations among the measures of the study. Although the maximum number of mislabeling neutral faces as sad was found on this factor, insignificant results may reveal that these mislabeling was random among participants.

8.1.5.2 Findings Related to Perceiving Neutral Faces as Happy

In order to examine factors associated with perceiving slow displayed neutral faces as Happy, a hierarchical regression was conducted which revealed that gender was associated with such a bias. This indicated that being male was positively associated with making a bias of labeling fast displayed neutral faces as happy. Consistent with the literature that posits that women are better in emotion recognition, this finding showed that females, even after a sad mood induction, were not exposed to such a bias.

However, for facial expressions that were displayed for 2000ms, interesting result was found. Accordingly, the analyses revealed that higher levels of Anxiety were related to higher levels of mislabeling neutral faces as Happy. Moreover, Extraversion, Conscientiousness traits, Emotional Typicality and Repair were negatively related in perceiving neutral faces as Happy. These results indicated that, individuals with higher levels of Extraversion and Conscientiousness traits, and Emotional Typicality and

Repair, showed significant lower false perceptions of neutral faces. Individuals, who were low on these variables, would show higher misinterpretations of neutral facial expressions. Studies on personality traits have shown that Extraversion and Conscientiousness were positively related to well-being. These two personality traits were also regarded as positive and adaptive personality traits in terms of interpersonal functioning (DeNeve & Cooper, 1998).

With regard to the State Meta-Mood levels it can be implied that individuals who perceived their current mood as Typical, and better in regulating their negative mood state showed lesser misperceptions in identifying neutral facial expressions. Therefore, individuals who were low on these meta-mood domains were prone to misinterpret neutral faces as happy during sad mood. It can be claimed that, perceiving a current mood state as Typical may indicate awareness of, or insight about one's current mood states which in turn does not influence one's cognitions. Lastly, the finding that higher levels of emotional repair was related to lower mislabeling neutral faces as happy, indicated that individuals who rebounded easier from a negative mood state were less prone to making mood congruent judgments. In other words, emotional repair resulted in less cognitive contaminations. Although the literature supports evidence that emotion regulation is related with better accuracy rates in emotion recognition (Yoo, Matsumoto, & LeRoux, 2006), associations of mood congruent bias and emotion regulation are yet unclear.

8.2 Limitations of the Study

The current study investigated the role of meta-mood experience on cognitive bias in facial emotion recognition. For the current study an experimental design was constructed in which a mood induction procedure was applied, followed by a facial emotion recognition task. The most important limitation to the study was the laboratory conditions. For the study two identical desktop computers were used; however, one of the two was problematic in that it froze the screen during the mood induction procedure. Therefore, the experimenter had to enter the room and restart the movie. This problem occurred several times, until the problem was fixed.

Another limitation to the study is the lack of a control group, which would not receive the mood induction procedure. This was due to the experimental design, in which, based on the literature two facial emotion recognition sets were administered, one displaying the expressions for 50ms and the second displaying the expressions for 2000ms. Therefore, the 2000ms expressions were regarded as the control task, in that a mood based cognitive contamination would not occur; however, this was not the case. Martin, 1988) has shown that the induced mood lasted as long as the experimenter told the experiment was over. For one group he told the experiment was over, whereas it was not. The other group was told the experiment would continue. Both groups were compared in terms of mood congruency, and the results revealed that, the former group did not show the mood congruency effect after being told the experiment was over. The latter group, on the other hand, maintained mood congruency. A similar effect might have occurred in the current study; in that, participants were told that the experiment was

over at the end of the experiment. Therefore, their affected cognitions may have pertained existence still in the 2000ms condition.

Another limitation to consider was that, mood congruency could not be attained as predicted for 50ms displayed facial expression. As mentioned before, this may be due to inactivation of cognitions as participants had to rely on their sensory memory after a 50ms displayed stimulus.

Moreover, although perceiving neutral faces as happy would not be a mood congruency in that individuals were induced sad mood, the results showed a cognitive negative bias. However, perceiving neutral faces as happy after sad mood induction was also counted based on the study of Leppanen et al. (2004), which found that depressed patients in remission perceived neutral facial expressions as sad, and even happy, indicating that depression prone individuals had a misperception of neutral faces attributing not only negative but also positive valance to neutral stimulus.

8.3   Clinical Implications of the Study

The current study showed evidence of how meta-mood levels may interfere with individuals' cognitions in perceiving facial expressions. The results indicate importance in that meta-mood experiences are under the control of the individual. One technique widely used in cognitive therapy is the normalization of a current feeling. The result show how perceiving a mood state as typical and how repairing a negative mood state, can influence misperceptions or cognitions of an individual. Mood regulation strategies are important abilities that help an individual to overcome various stressful life

situations. In addition to emotion regulation; however, the importance of mood evaluation, or meta-mood experience, is shown to co-occur. One has to attend and be able to clarify certain emotional states, in order to be able to regulate them. Evaluative processes of emotions have been shown to affect false cognitions in this study. In a therapeutic environment, in addition to modifying thoughts, modifying thoughts about moods can also be posited to be an important aspect.

The current study has an importance in that it investigated the underlying factors of mood congruent judgments. Past research mostly has investigated how depression or anxiety has an effect in judgments; but the underlying reasons for such a judgment in a non-clinical sample were not investigated. The results indicated that depression prone individuals may have a contaminated perception in social situations.

Besides facial expressions, in order to examine how mood influences cognition, other mood congruent measures should also be investigated, such as sentence completion tasks, or emotional stroop tasks, with regard to the effects of meta-mood. Such findings may represent important information of how the changing thoughts about a mood may also change perception to events.

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APPENDIX A (Pilot Study)

Gönüllü Katılım Formu (Pilot Çalışma)

Bu çalışma, ODTÜ Klinik Psikoloji yüksek lisans öğrencisi Psk. Fatih Cemil Kavcıoğlu tarafından, Prof. Tülin Gençöz'ün danışmanlığında yürütülen bir araştırmanın parçasıdır. Çalışmanın amacı Türkçe'ye çevirisi yapılmış 3 adet anketin güvenirliğinin hesaplanmasıdır. Çalışmaya katılım tamamiyle gönüllülük temelinde olmalıdır. Ankette, sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız tamamiyle gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir; elde edilecek bilgiler bilimsel yayımlarda kullanılacaktır.

Çalışmada doldurmanız istenen anket genel olarak rahatsızlık verecek soruları veya durumları içermemektedir. Katılım sırasında sorulardan, rahatsızlık duyarsanız, katılımdan geri çekilme hakkına sahipsiniz. Böyle bir durumda uygulamayı yapan kişiye, uygulamayı tamamlamadığınızı söylemek yeterli olacaktır. Bu anketler internet ortamında doldurulacağından anketleri tek bir oturuşta doldurmanız çalışmanın güvenirliği açısından büyük önem taşımaktadır. Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Çalışma hakkında daha fazla bilgi almak için Psikoloji Bölümü öğretim üyelerinden Prof. Tülin Gençöz (Oda: B239; Tel: 210 3131; E-posta: tgencoz@metu.edu.tr) ya da psikoloji bölümü Araştırma Görevlisi Fatih Cemil Kavcıoğlı (Oda:203B; Tel: 210 5962; E-posta: kafatih@metu.edu.tr) ile iletişim kurabilirsiniz.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum.

Demografik Bilgi Ölçeği

Lütfen her soruyu dikkatlice okuyup size en uygun olan seçenegi işaretleyiniz.

1. **Cinsiyetiniz**

   ○ Kadın   ○ Erkek

2. **Yaşınız:**

3. **Öğrenim Durumunuz**

○ Ortaöğretim

○ Lise

○ Üniversite Lisans

○ Üniversite Yüksek Lisans

○ Üniversite Doktora

4. **Şu an okumakta olduğunuz ya da mezun olduğunuz okul ve bölümünüz.**

KISA DUYGUDURUMA İÇEBAKIŞ ÖLÇEĞİ (BMIS)

YÖNERGE: Her bir sıfat veya ifadenin sizin ruh halinizi ne kadar tanımladığını, aşağıdaki ölçekte

belirtildiği şekilde değerlendirerek yuvarlak içine alınız.

(Kesinlikle Hissetmiyorum)	(Hissetmiyorum)	(Kısmen Hissediyorum)	(Kesinlikle Hissediyorum)
1	2	3	4

_____

Neşeli	1 2 3 4	Uyuşuk	1 2 3 4
Mutlu	1 2 3 4	Huysuz	1 2 3 4
Hüzünlü	1 2 3 4	Enerjik	1 2 3 4
Yorgun	1 2 3 4	Asabi	1 2 3 4
Şefkatli	1 2 3 4	Sakin (***Dingin**) 1 2 3 4	
Hoşnut	1 2 3 4	Sevgi dolu	1 2 3 4
Kasvetli	1 2 3 4	Bıkkın	1 2 3 4
Gergin	1 2 3 4	Aktif	1 2 3 4

_____

Genel olarak ruh halim: Aşağıdaki -10 ile +10 arasında değişen uygun dereceyi daire içine alarak değerlendirmenizi yapınız.

Çok   Çok

Keyifsiz   Keyifli
-10 –9 –8 –7 –6 –5 –4 –3 –2 –1 0 1 2 3 4 5 6 7 8 9 10

*Suggested translation

Pozitif ve Negatif Duygudurum Ölçeği

Bu ölçek farklı duyguları tanımlayan bir takım sözcükler içermektedir. <u>Son iki hafta</u> nasıl hissettiğinizi düşünüp her maddeyi okuyun. Uygun cevabı her maddenin yanında ayrılan yere (<u>puanları daire içine alarak</u>) işaretleyin. Cevaplarınızı verirken aşağıdaki puanları kullanın.

1. Çok az veya hiç
2. Biraz
3. Ortalama
4. Oldukça
5. Çok fazla

1. İlgili   1   2   3   4   5

2. Sıkıntılı   1   2   3   4   5

3. Heyecanlı   1   2   3   4   5

4. Mutsuz   1   2   3   4   5

5. Güçlü   1   2   3   4   5

6. Suçlu   1   2   3   4   5

7. Ürkmüş   1   2   3   4   5

8. Düşmanca   1   2   3   4   5

9. Hevesli   1   2   3   4   5

10. Gururlu   1   2   3   4   5

11. Asabi   1   2   3   4   5

12. Uyanık   1   2   3   4   5

(dikkati açık)

13. Utanmış   1   2   3   4   5

14. İlhamlı   1   2   3   4   5

(yaratıcı düşüncelerle dolu)

15. Sinirli   1   2   3   4   5

16. Kararlı   1   2   3   4   5

17. Dikkatli   1   2   3   4   5

18. Tedirgin   1   2   3   4   5

19. Aktif   1   2   3   4   5

20. Korkmuş   1   2   3   4   5

DURUMLULUK META-DUYGU ÖLÇEĞİ

BÖLÜM I: Yönergeler: Lütfen şu an içinde bulunduğunuz ruh halinizi gözden geçiriniz. Bu ruh hali ile ilgili düşünce ve duygularınızı ayrıca bu düşünce ve duyguların şu andaki üzerinizdeki etkisini değerlendiriniz. Bu amaçla her bir maddeyi değerlendirirken lütfen aşağıdaki ölçeği kullanınız.

1	2	3	4	5
Kesinlikle ruh halimi anlatmıyor	Ruh halimi pek anlatmıyor	Ruh halimi anlatıyor ne anlatmıyor	Ruh halimi biraz anlatıyor	Ruh halimi kesinlikle anlatıyor

1- İçinde bulunduğum ruh halim bakış açımı değiştirdi. 1 2 3 4 5

2- Neredeyse hiç böyle hissetmem. 1 2 3 4 5

3- İçinde bulunduğum ruh halinden utanmıyorum. 1 2 3 4 5

4- İçinde bulunduğum ruh halimi değiştirmeye gerek yok. 1 2 3 4 5

5- Bu benim icin çok alışılmış bir ruh halidir. 1 2 3 4 5

6- Ruh halim düşünce şeklimi değiştirdi. 1 2 3 4 5

7- Bu ruh hali bakış açımı değiştirmedi 1 2 3 4 5

8- Bu hissin yanlış olduğunu biliyorum 1 2 3 4 5

9- Bu ruh halimi tarif etmesi zor. **(*Bu ruh halimi tanımlamak zor)** 1 2 3 4 5

10- Bu şekilde hissediyor olmamda yanlış bir şey yok. 1 2 3 4 5

11- Bu şekilde hissediyor olmamalıydım. 1 2 3 4 5

12- Bu ruh halini sıklıkla hissederim. 1 2 3 4 5

13- Bu ruh halimden utanıyorum. 1 2 3 4 5

14- Bu ruh halim yakın zamanda değişecek. 1 2 3 4 5

15- Bu ruh hali çok net. 1 2 3 4 5

16- Neden böyle hissettiğimi bilmiyorum. 1 2 3 4 5

20- Bu ruh hali de geçecek. 1 2 3 4 5

21- Bu ruh halinin ne olduğunu söylemek zor. 1 2 3 4 5

17- Bu ruh hali benim kanı (inandıklarımı) ve 1 2 3 4 5 fikirlerimi değiştirdi.

22- Kanı ve fikirlerim bu ruh hali nedeniyle 1 2 3 4 5 değişime uğramadı.

18- Bu ruh hali hiç değişmeyecek.　　　　　1 2 3 4 5

23- Düşüncelerim değişmedi.　　　　　1 2 3 4 5

19- Neden bu ruh halinde olduğumu 1 2 3 4 5 biliyorum.

24- Tam olarak nasıl hissettiğimi 1 2 3 4 5 biliyorum.

Yönergeler: İnsanlar bazen ruh hallerini değiştirmeye çalışırlar, bazen de akışına bırakırlar. Lütfen şu anki yaklaşımınızı değerlendiriniz. Bu amaçla her bir maddeyi değerlendirirken lütfen aşağıdaki ölçeği kullanınız.

1	2	3	4	5
Kesinlikle yaklaşımımı anlatmıyor	Yaklaşımımı anlatmıyor	pekYaklaşımımı anlatıyor anlatmıyor	neYaklaşımımı neanlatıyor.	birazYaklaşımımı kesinlikle anlatıyor

25- Bu ruh halimin olumluluğuna güvenmiyorum ve ayaklarımı yere bastırmaya 1 2 3 4 5 çalışıyorum.

26- Ruh halimin devam etmesi için olumlu şeyler planlıyorum　　　　　1 2 3 4 5

(*Olumlu şeyler planlıyorum ki, bu ruh halim iyiye gitsin)

27- Bu ruh halimi yaşamak için kendime izin veriyorum.　　　　　1 2 3 4 5

28- O kadar coşkun bir his ki, daha iyi konsantre olabilmek için ayaklarimi yere bastirmam 1 2 3 4 5 gerekiyor.
29- Bu ruh halimi değiştirmeye çalışmıyorum çünkü bunu yaşamanın önemli olduğuna 1 2 3 4 5 inanıyorum.

30- Bu hissimi geliştirmek için kendime hayattaki güzel şeyleri hatırlatıyorum.　　　1 2 3 4 5
31- Bu ruh halini değiştirmeye calışmıyorum.　　　　　1 2 3 4 5

32- Kendimi neşelendirmek için aklıma iyi düşünceler getiriyorum.　　　　　1 2 3 4 5

33- Ruh halimi daha iyi hale getirmek için daha güzel şeyler hayal ediyorum   1 2 3 4 5

34- Bu ruh halimi biraz dizginlemek icin kendime gerçekleri hatırlatıyorum.   1 2 3 4 5

35- Şu anki ruh halim o kadar olumlu ki, kendimi sakinleştirmeye çalışıyorum   1 2 3 4 5

36- Ruh halimi değiştirmek istemezdim.   1 2 3 4 5

37-Bu ruh halim o kadar coşkun ki, kendimi aptal durumuna düşürmeden önce onu biraz 1 2 3 4 5
bastırmam gerekiyor.

38-Ruh halimi daha iyi yapabilmek için gelecek güzel seyleri düşünüyorum.   1 2 3 4 5

39-Bu ruh halimin devam etmesine izin veriyorum çünkü bu yaklaşımım ruh halimin 1 2 3 4 5
devamlılığını ve olumluluğunu koruyacak.

*Suggested translations.

META-DUYGU ÖZELLİKLERİ ÖLÇEĞİ

Lütfen her bir ifadeyi okuyarak bu ifadelere katılıp katılmadığınıza karar veriniz. Aşağıdaki ölçeği kullanarak, her ifadenin yanında boş bırakılan yere uygun bir sayıyı yazınız.

5= Tamamen katılıyorum

4= Biraz katılıyorum

3= Ne katılıyorum, ne katılmıyorum

2= Pek katılmıyorum

1= Kesinlikle katılmıyorum

1. Ne kadar kötü hissedersem hissedeyim, iyi şeyler düşünmeye çalışırım. _____

2. Eğer insanlar daha az hissedip, daha çok düşünseler daha iyi durumda olurlar. _____

3. Duygularınıza veya ruh halinize dikkat etmenin değerli olduğuna inanmıyorum. _____

4. Ne hissettiğime genellikle pek aldırmam. _____

5. Bazen duygularımın ne olduğunu söyleyemem. _____

6. Nasıl hissettiğim konusunda nadiren kafam karışır. _____

7. Hisler, yaşama yön verir. _____

8. Her ne kadar zaman zaman üzgün olsam da, çoğunlukla iyimser bir bakış açım vardır. _____

9. Üzüntülü olduğum zamanlarda "yaşamdaki güzel şeylerin" birer aldatmaca olduğunu fark ederim. _____

10. İçten geldiği gibi hareket etmeye inanırım. _____

11. Nasıl hissettiğimi hiçbir zaman söyleyemem. _____

12. Benim için hislerimle baş etmenin en iyi yolu, bu hisleri tam olarak yaşamaktır. _____

13. Keyfimin kaçtığı zamanlarda, kendime yaşamdaki tüm zevkleri hatırlatıyorum. _____

14. Nasıl hissettiğime bağlı olarak inandıklarım ve fikirlerim sürekli değişiyor gibime geliyor. _____

15. Bir konu hakkındaki hislerimin çoğunlukla farkındayımdır. _____

16. Genellikle nasıl hissettiğim konusunda kafam karışıktır. _____

17. Kişi asla duyguları tarafından yönlendirilmemelidir. _____

18. Asla duygularıma teslim olmam. _____

19. Her ne kadar zaman zaman mutlu olsam da, genellikle karamsar bir bakış açım vardır. _____

20. Duygularım konusunda kendimi rahat hissederim (müsterihimdir). _____

21. Nasıl hissettiğime oldukça dikkat ederim. _____

22. Hislerimi anlamlandıramıyorum. _____

23. Hislerime çok dikkat yöneltmem. _____

24. Sıklıkla hislerim hakkında düşünürüm. _____

25. Çoğunlukla hislerim konusunda çok netimdir. _____

26. Ne kadar kötü hissedersem hissedeyim, keyifli şeyler düşünmeye çalışırım.
_____

27. Hisler, insanların sahip olduğu zayıflıklardır. _____

28. Çoğunlukla bir konu hakkındaki hislerimin ne olduğunu bilirim. _____

29. Duygularınız hakkında düşünmek genellikle boşa zaman harcamaktır. _____

30. Tam olarak nasıl hissettiğimi, neredeyse her zaman bilirim. _____

Duygu Düzenlemede Güçlükler Ölçeği

Aşağıda insanların duygularını kontrol etmekte kullandıkları bazı yöntemler verilmiştir. Lütfen her durumu dikkatlice okuyunuz ve her birinin sizin için ne kadar doğru olduğunu içtenlikle değerlendiriniz. Değerlendirmenizi uygun cevap önündeki yuvarlak üzerine çarpı (X) koyarak işaretleyiniz.

1. Ne hissettiğim konusunda netimdir.				
O Neredeyse Hiçbir zaman	O Bazen	O Yaklaşık Yarı yarıya	O Çoğu zaman	O Neredeyse Her zaman

2. Ne hissettiğimi dikkate alırım.				
O Neredeyse Hiçbir zaman	O Bazen	O Yaklaşık Yarı yarıya	O Çoğu zaman	O Neredeyse Her zaman

3. Duygularım bana dayanılmaz ve kontrolsüz gelir.				
O Neredeyse Hiçbir zaman	O Bazen	O Yaklaşık Yarı yarıya	O Çoğu zaman	O Neredeyse Her zaman

4. Ne hissettiğim konusunda net bir fikrim vardır.				
O Neredeyse Hiçbir zaman	O Bazen	O Yaklaşık Yarı yarıya	O Çoğu zaman	O Neredeyse Her zaman

5. Duygularıma bir anlam vermekte zorlanırım.				
O Neredeyse Hiçbir zaman	O Bazen	O Yaklaşık Yarı yarıya	O Çoğu zaman	O Neredeyse Her zaman

6. Ne hissettiğime dikkat ederim.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

7. Ne hissettiğimi tam olarak bilirim.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

8. Ne hissettiğimi önemserim.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

9. Ne hissettiğim konusunda karmaşa yaşarım.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

10. Kendimi kötü hissettiğimde, bu duygularımı kabul ederim.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

11. Kendimi kötü hissettiğimde, böyle hissettiğim için kendime kızarım.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

12. Kendimi kötü hissettiğimde, böyle hissettiğim için utanırım.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

13. Kendimi kötü hissettiğimde, işlerimi yapmakta zorlanırım.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

14. Kendimi kötü hissettiğimde, kontrolümü kaybederim.
○ Neredeyse ○ Bazen ○ Yaklaşık ○ Çoğu zaman ○ Neredeyse
Hiçbir zaman Yarı yarıya Her zaman

15. Kendimi kötü hissettiğimde, uzun süre böyle kalacağıma inanırım.
○ Neredeyse ○ Bazen ○ Yaklaşık ○ Çoğu zaman ○ Neredeyse
Hiçbir zaman Yarı yarıya Her zaman

16. Kendimi kötü hissettiğimde, sonuç olarak yoğun depresif duygular içinde olacağıma inanırım.
○ Neredeyse ○ Bazen ○ Yaklaşık ○ Çoğu zaman ○ Neredeyse
Hiçbir zaman Yarı yarıya Her zaman

17. Kendimi kötü hissettiğimde, duygularımın yerinde ve önemli olduğuna inanırım.
○ Neredeyse ○ Bazen ○ Yaklaşık ○ Çoğu zaman ○ Neredeyse
Hiçbir zaman Yarı yarıya Her zaman

18. Kendimi kötü hissettiğimde, başka şeylere odaklanmakta zorlanırım.
○ Neredeyse ○ Bazen ○ Yaklaşık ○ Çoğu zaman ○ Neredeyse
Hiçbir zaman Yarı yarıya Her zaman

19. Kendimi kötü hissettiğimde, kendimi kontrolden çıkmış hissederim.
○ Neredeyse ○ Bazen ○ Yaklaşık ○ Çoğu zaman ○ Neredeyse
Hiçbir zaman Yarı yarıya Her zaman

20. Kendimi kötü hissettiğimde, halen işlerimi sürdürebilirim.
○ Neredeyse ○ Bazen ○ Yaklaşık ○ Çoğu zaman ○ Neredeyse
Hiçbir zaman Yarı yarıya Her zaman

21. Kendimi kötü hissettiğimde, bu duygumdan dolayı kendimden utanırım.
○ Neredeyse ○ Bazen ○ Yaklaşık ○ Çoğu zaman ○ Neredeyse
Hiçbir zaman Yarı yarıya Her zaman

22. Kendimi kötü hissettiğimde, eninde sonunda kendimi daha iyi hissetmenin bir yolunu bulacağımı bilirim.

○ Neredeyse Hiçbir zaman   ○ Bazen   ○ Yaklaşık Yarı yarıya   ○ Çoğu zaman   ○ Neredeyse Her zaman

---

23. Kendimi kötü hissettiğimde, zayıf biri olduğum duygusuna kapılırım.

○ Neredeyse Hiçbir zaman   ○ Bazen   ○ Yaklaşık Yarı yarıya   ○ Çoğu zaman   ○ Neredeyse Her zaman

---

24. Kendimi kötü hissettiğimde, davranışlarımı kontrol altında tutabileceğimi hissederim.

○ Neredeyse Hiçbir zaman   ○ Bazen   ○ Yaklaşık Yarı yarıya   ○ Çoğu zaman   ○ Neredeyse Her zaman

---

25. Kendimi kötü hissettiğimde, böyle hissettiğim için suçluluk duyarım.

○ Neredeyse Hiçbir zaman   ○ Bazen   ○ Yaklaşık Yarı yarıya   ○ Çoğu zaman   ○ Neredeyse Her zaman

---

26. Kendimi kötü hissettiğimde, konsantre olmakta zorlanırım.

○ Neredeyse Hiçbir zaman   ○ Bazen   ○ Yaklaşık Yarı yarıya   ○ Çoğu zaman   ○ Neredeyse Her zaman

---

27. Kendimi kötü hissettiğimde, davranışlarımı kontrol etmekte zorlanırım.

○ Neredeyse Hiçbir zaman   ○ Bazen   ○ Yaklaşık Yarı yarıya   ○ Çoğu zaman   ○ Neredeyse Her zaman

---

28. Kendimi kötü hissettiğimde, daha iyi hissetmem için yapacağım hiç bir şey olmadığına inanırım.

○ Neredeyse Hiçbir zaman   ○ Bazen   ○ Yaklaşık Yarı yarıya   ○ Çoğu zaman   ○ Neredeyse Her zaman

29. Kendimi kötü hissettiğimde, böyle hissettiğim için kendimden rahatsız olurum.
○ Neredeyse   ○Bazen   ○ Yaklaşık   ○ Çoğu zaman   ○ Neredeyse
   Hiçbir zaman   Yarı yarıya   Her zaman

30. Kendimi kötü hissettiğimde, kendim için çok fazla endişelenmeye başlarım.
○ Neredeyse   ○Bazen   ○ Yaklaşık   ○ Çoğu zaman   ○ Neredeyse
   Hiçbir zaman   Yarı yarıya   Her zaman

31. Kendimi kötü hissettiğimde, kendimi bu duyguya bırakmaktan başka yapabileceğim birşey olmadığına inanırım.
○ Neredeyse   ○Bazen   ○ Yaklaşık   ○ Çoğu zaman   ○ Neredeyse
   Hiçbir zaman   Yarı yarıya   Her zaman

32. Kendimi kötü hissettiğimde, davranışlarım üzerindeki kontrolümü kaybederim.
○ Neredeyse   ○Bazen   ○ Yaklaşık   ○ Çoğu zaman   ○ Neredeyse
   Hiçbir zaman   Yarı yarıya   Her zaman

33. Kendimi kötü hissettiğimde, başka bir şey düşünmekte zorlanırım.
○ Neredeyse   ○Bazen   ○ Yaklaşık   ○ Çoğu zaman   ○ Neredeyse
   Hiçbir zaman   Yarı yarıya   Her zaman

34. Kendimi kötü hissettiğimde, duygumun gerçekte ne olduğunu anlamak için zaman ayırırım.
○ Neredeyse   ○Bazen   ○ Yaklaşık   ○ Çoğu zaman   ○ Neredeyse
   Hiçbir zaman   Yarı yarıya   Her zaman

35. Kendimi kötü hissettiğimde, kendimi daha iyi hissetmem uzun zaman alır.
○ Neredeyse   ○Bazen   ○ Yaklaşık   ○ Çoğu zaman   ○ Neredeyse
   Hiçbir zaman   Yarı yarıya   Her zaman

36. Kendimi kötü hissettiğimde, duygularım dayanılmaz olur.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

Toronto Aleksitimi Ölçeği

Lütfen aşağıdaki maddelerin sizi ne ölçüde tanımladığını işaretleyiniz.

1	2	3	4	5
Kesinlikle katılmıyorum	Katılmıyorum	Ne katılıyorum ne katılmıyorum	Biraz katılıyorum	Kesinlikle katılıyorum

1.Ağladığımda, beni ağlatan şeyin ne olduğunu bilirim.	1 2 3 4 5
2.Hayal kurmak boşa zaman harcamaktır.	1 2 3 4 5
3.Keşke bu kadar utangaç olmasaydım.	1 2 3 4 5
4.Çoğu zaman duygularımın ne olduğunu tam olarak bilemem.	1 2 3 4 5
5.Gelecek hakkında sıkça hayal kurarım.	1 2 3 4 5
6.Birçokları kadar kolay arkadaş edinebildiğimi sanıyorum.	1 2 3 4 5
7.Bir sorunun çözümünü bilmek, o çözüme nasıl ulaşıldığını bilmekten daha önemlidir.	1 2 3 4 5
8.Duygularımı tam olarak anlatacak sözleri bulmak benim için zordur.	1 2 3 4 5

9.Herhangi bir olay hakkındaki görüşümü başkalarına açıkça belirtmekten hoşlanırım.	1 2 3 4 5
10.Bedenimde öyle şeyler hissediyorum ki; doktorlar bile ne olduğunu anlamıyorlar.	1 2 3 4 5
11.Benim için,yalnızca bir işin yapılmış olması yetmez;nasıl ve neden yapıldığını bilmek isterim.	1 2 3 4 5
12.Duygularımı kolayca anlatabilirim.	1 2 3 4 5
13.Sorunların ne olduğu üzerine değil;onların nereden kaynaklandığı üzerine düşünmeyi tercih ederim.	1 2 3 4 5
14.Sinirim bozuk olduğunda;üzüntülü mü, korkulu mu yoksa öfkeli mi olduğumu bilmem.	1 2 3 4 5
15.Hayal gücümü bolca kullanırım.	1 2 3 4 5
16.Yapacak başka bir işim olmadığında, zamanımın çoğunu hayal kurarak geçiririm.	1 2 3 4 5
17.Bedenimde şaşırtıcı hisler duyduğum olur.	1 2 3 4 5
18.Pek hayal kurmam.	1 2 3 4 5
19.Olayların nedenine kafa yormaktan çok işleri oluruna bırakmayı tercih ederim.	1 2 3 4 5
20.Tam olarak tanımlayamadığım duygularım var.	1 2 3 4 5
21.İnsanın duygularına yakın olması önemlidir.	1 2 3 4 5
22.İnsanlar hakkında neler hissettiğimi anlatmak benim için zordur.	1 2 3 4 5
23.Tanıdıklarım, duygularımdan daha çok söz etmemi isterler.	1 2 3 4 5

24.İnsan, olayların derinine inmelidir.	1 2 3 4 5
25.İçimde neler olup bittiğini bilmiyorum.	1 2 3 4 5
26.Çoğu zaman kızgınlığımın farkına varmam.	1 2 3 4 5

Temel Kişilik Özellikleri Ölçeği

YÖNERGE:

Aşağıda size uyan ya da uymayan pek çok kişilik özelliği bulunmaktadır. <u>Bu özelliklerden her birinin sizin için ne kadar uygun olduğunu ilgili rakamı daire içine alarak belirtiniz.</u>

Örneğin;

Kendimi .... biri olarak görüyorum.

<u>Hiç uygun değil</u>	<u>Uygun değil</u>	<u>Kararsızım</u>	<u>Uygun</u>	<u>Çok uygun</u>
1	2	③	4	5

		Hiç uygun değil	Uygun değil	Kararsızım			Hiç uygun değil	Uygun değil	Kararsızım
1	Aceleci	1	2	3 4 5	24	Pasif	1	2	3 4 5
2	Yapmacık	1	2	3 4 5	25	Disiplinli	1	2	3 4 5
3	Duyarlı	1	2	3 4 5	26	Açgözlü	1	2	3 4 5
4	Konuşkan	1	2	3 4 5	27	Sinirli	1	2	3 4 5

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5	Kendine güvenen	1	2	3	4	5	28	Cana yakın	1	2	3	4	5
6	Soğuk	1	2	3	4	5	29	Kızgın	1	2	3	4	5
7	Utangaç	1	2	3	4	5	30	Sabit fikirli	1	2	3	4	5
8	Paylaşımcı	1	2	3	4	5	31	Görgüsüz	1	2	3	4	5
9	Geniş / rahat	1	2	3	4	5	32	Durgun	1	2	3	4	5
10	Cesur	1	2	3	4	5	33	Kaygılı	1	2	3	4	5
11	Agresif(Saldırgan)	1	2	3	4	5	34	Terbiyesiz	1	2	3	4	5
12	Çalışkan	1	2	3	4	5	35	Sabırsız	1	2	3	4	5
13	İçten pazarlıklı	1	2	3	4	5	36	Yaratıcı (Üretken)	1	2	3	4	5
14	Girişken	1	2	3	4	5	37	Kaprisli	1	2	3	4	5
15	İyi niyetli	1	2	3	4	5	38	İçine kapanık	1	2	3	4	5
16	İçten	1	2	3	4	5	39	Çekingen	1	2	3	4	5
17	Kendinden emin	1	2	3	4	5	40	Alıngan	1	2	3	4	5
18	Huysuz	1	2	3	4	5	41	Hoşgörülü	1	2	3	4	5
19	Yardımsever	1	2	3	4	5	42	Düzenli	1	2	3	4	5
20	Kabiliyetli	1	2	3	4	5	43	Titiz	1	2	3	4	5
21	Üşengeç	1	2	3	4	5	44	Tedbirli	1	2	3	4	5
22	Sorumsuz	1	2	3	4	5	45	Azimli	1	2	3	4	5
23	Sevecen	1	2	3	4	5							

APPENDIX B (MAIN STUDY)

Gönüllü Katılım Formu

Bu çalışma, ODTÜ Klinik Psikoloji yüksek lisans öğrencisi Psk. Fatih Cemil Kavcıoğlu tarafından, Prof. Tülin Gençöz'ün danışmanlığında yürütülen bir çalışmadır. Çalışmanın amacı, üst-duygu seviyeleri ile yüz ifadelerinden duyguları tanıma arasındaki ilişkinin üzgün duygudurumu tarafından nasıl etkilendiğini araştırmaktır. Çalışmaya katılım tamimiyle gönüllülük temelinde olmalıdır. Ankette, sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir; elde edilecek bilgiler bilimsel yayımlarda kullanılacaktır.

Çalışma 3 farklı uygulamadan oluşmaktadır. İlk uygulama anket doldurmak, ikinci uygulama 10 dakikalık bir film seyretmek, üçüncü uygulama ise iki ölçek ve bilgisayar başında yüz ifadesi tanıma testinden oluşmaktadır. Anket ve diğer testler genel olarak kişisel rahatsızlık verecek soruları veya durumları içermemektedir. Ancak katılım sırasında sorulardan, izleyeceğiniz filmden rahatsızlık duyarsanız katılımdan geri çekilme hakkına sahipsiniz. Böyle bir durumda uygulamayı yapan kişiye, uygulamayı tamamlamadığınızı söylemek yeterli olacaktır. Çalışmanın son uygulamasının ardından, bu çalışmayla ilgili detaylı açıklama yapılacak ve sorularınız cevaplanacaktır.

Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Çalışma hakkında daha fazla bilgi almak için Psikoloji Bölümü öğretim üyelerinden Prof. Tülin Gençöz (Oda: B239; Tel: 210 3131; E-posta: tgencoz@metu.edu.tr) ya da psikoloji bölümü Araştırma Görevlisi Fatih Cemil Kavcıoğlu (Oda:203B; Tel: 210 5962; E-posta: kafatih@metu.edu.tr) ile iletişim kurabilirsiniz.

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

İsim Soyisim   Tarih   İmza

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Demografik Bilgi Formu

1) Cinsiyet: □ K   □ E

2) Doğum tarihi:_____

3) Bölüm / Sınıf:_____ / _____

4) Nerede yaşıyorsunuz?
□ □ Aile yanı   □ □ Akraba yanı   □ □ Arkadaşlarla evde
□ □ Tek başına evde   □ □Yurt   □ Diğer(belirtiniz)_____

5) Annenizin en son mezun olduğu okul:
□ Okur-yazar değil   □ Sadece okur-yazar   □□ İlkokul   □
□ Ortaokul   □ Lise   □ Üniversite
□ Lisansüstü   □ □ Diğer belirtiniz_____

6) Babanızın en son mezun olduğu okul:
□ Okur-yazar değil   □ Sadece okur-yazar   □□ İlkokul   □
□ Ortaokul   □ Lise   □ Üniversite
□ Lisansüstü   □ □ Diğer belirtiniz_____

7) Toplam kaç kardeşsiniz?............   Siz kaçıncı kardeşsiniz?...........

8) Ailenizde psikiyatrik hastalığı olan kimse var mı?
Yok □   Var □ ……… (Varsa kimde oldugunu belirtiniz.)

9) Geçmişte herhangi bir psikolojik sorununuz oldu mu?   Evet □   Hayır □
Belirtiniz...

10) Olduysa, sorununuz için psikolojik yardım/ tedavi gördünüz mü? Evet □   Hayır □
Cevabınız evet ise belirtiniz...

11) Şu anda herhangi bir psikolojik sorununuz var mı? Evet □   Hayır □
Cevabınız evet ise belirtiniz...

12) Varsa, sorununuz için psikolojik yardım/ tedavi alıyor musunuz?   Evet □   Hayır □
Cevabınız evet ise belirtiniz...

Kısa Semptom Envanteri

Aşağıda, insanların bazen yaşadıkları belirtilerin ve yakınmaların bir listesi verilmiştir. Listedeki her maddeyi lütfen dikkatle okuyun. Daha sonra o belirtinin **BUGÜN DAHİL SİZDE SON BİR HAFTADIR NE KADAR VAROLDUĞUNU** yandaki bölmeden uygun olan yerde işaretleyin. Her belirti için sadece bir yeri işaretlemeye ve hiçbir maddeyi atlamamaya özen gösterin.

Yanıtlarınızı aşağıdaki ölçeğe göre değerlendirin: Bu belirtiler son bir haftadır sizde ne kadar var?

0. Hiç yok
1. Biraz var
2. Orta derecede var
3. Epey var
4. Çok fazla var

Bu belirtiler son bir haftadır sizde ne kadar var?

1. İçinizdeki sinirlilik ve titreme hali	⓪ ① ② ③ ④
2. Baygınlık, baş dönmesi	⓪ ① ② ③ ④
3. Bir başka kişinin sizin düşüncelerinizi kontrol edeceği fikri	⓪ ① ② ③ ④
4. Başınıza gelen sıkıntılardan dolayı başkalarının suçlu olduğu duygusu	⓪ ① ② ③ ④

5. Olayları hatırlamada güçlük	⓪	①	②	③	④
6. Çok kolayca kızıp öfkelenme	⓪	①	②	③	④
7. Göğüs (kalp) bölgesinde ağrılar	⓪	①	②	③	④
8. Meydanlık (açık) yerlerden korkma duygusu	⓪	①	②	③	④
9. Yaşamınıza son verme düşünceleri	⓪	①	②	③	④
10. İnsanların çoğuna güvenilemeyeceği hissi	⓪	①	②	③	④
11. İştahta bozukluklar	⓪	①	②	③	④
12. Hiçbir nedeni olmayan ani korkular	⓪	①	②	③	④
13. Kontrol edemediğiniz duygu patlamaları	⓪	①	②	③	④
14. Başka insanlarla beraberken bile yalnızlık hissetmek	⓪	①	②	③	④
15. İşleri bitirme konusunda kendini engellenmiş hissetmek	⓪	①	②	③	④
16. Yalnız hissetmek	⓪	①	②	③	④
17. Hüzünlü, kederli hissetmek	⓪	①	②	③	④
18. Hiçbir şeye ilgi duymamak	⓪	①	②	③	④
19. Ağlamaklı hissetmek	⓪	①	②	③	④
20. Kolayca incinebilme, kırılma	⓪	①	②	③	④
21. İnsanların sizi sevmediğine, kötü davrandığına inanmak	⓪	①	②	③	④
22. Kendini diğerlerinden aşağı görme	⓪	①	②	③	④
23. Mide bozukluğu, bulantı	⓪	①	②	③	④
24. Diğerlerinin sizi gözlediği ya da hakkınızda konuştuğu duygusu	⓪	①	②	③	④
25. Uykuya dalmada güçlük	⓪	①	②	③	④

26. Yaptığınız şeyleri tekrar tekrar doğru mu diye kontrol etmek	⓪	①	②	③	④
27. Karar vermede güçlükler	⓪	①	②	③	④
28. Otobüs, tren, metro gibi umumi vasıtalarla seyahatlerden korkmak	⓪	①	②	③	④
29. Nefes darlığı, nefessiz kalmak	⓪	①	②	③	④
30. Sıcak-soğuk basmaları	⓪	①	②	③	④
31. Sizi korkuttuğu için bazı eşya, yer ya da etkinliklerden uzak kalmaya çalışmak	⓪	①	②	③	④
32. Kafanızın "bomboş" kalması	⓪	①	②	③	④
33. Bedeninizin bazı bölgelerinde uyuşmalar, karıncalanmalar	⓪	①	②	③	④
34. Günahlarınız için cezalandırılmanız gerektiği düşüncesi	⓪	①	②	③	④
35. Gelecekle ilgili umutsuzluk duyguları	⓪	①	②	③	④
36. Konsantrasyonda (dikkati bir şey üzerinde toplama) güçlük/zorlanmak	⓪	①	②	③	④
37. Bedenin bazı bölgelerinde zayıflık, güçsüzlük hissi	⓪	①	②	③	④
38. Kendini gergin ve tedirgin hissetmek	⓪	①	②	③	④
39. Ölme ve ölüm üzerine düşünceler	⓪	①	②	③	④
40. Birini dövme, ona zarar verme, yaralama isteği	⓪	①	②	③	④
41. Bir şeyleri kırma, dökme isteği	⓪	①	②	③	④
42. Diğerlerinin yanındayken yanlış bir şeyleri yapmamaya çalışmak	⓪	①	②	③	④
43. Kalabalıklarda rahatsızlık duymak	⓪	①	②	③	④

44. Bir başka insana hiç yakınlık duymamak	⓪	①	②	③	④
45. Dehşet ve panik nöbetleri	⓪	①	②	③	④
46. Sık sık tartışmaya girmek	⓪	①	②	③	④
47. Yalnız bırakıldığında / kalındığında sinirlilik hissetmek	⓪	①	②	③	④
48. Başarılarınız için diğerlerinden yeterince takdir görmemek	⓪	①	②	③	④
49. Yerinde duramayacak kadar tedirgin hissetmek	⓪	①	②	③	④
50. Kendini değersiz görmek / değersizlik duyguları	⓪	①	②	③	④
51. Eğer izin verirseniz insanların sizi sömüreceği duygusu	⓪	①	②	③	④
52. Suçluluk duyguları	⓪	①	②	③	④
53. Aklınızda bir bozukluk olduğu fikri	⓪	①	②	③	④