IBN HALDUN UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF CLINICAL PSYCHOLOGY

MASTER THESIS

THE EFFECTS OF TRAIT NARCISSISM AND MOOD STATES ON FACIAL EMOTION RECOGNITION

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THESIS SUPERVISOR
PROF. TIMOTHY RICHARD JORDAN

ISTANBUL, 2022

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THE EFFECTS OF TRAIT NARCISSISM AND MOOD STATES ON FACIAL EMOTION RECOGNITION

by
NEFISE SHABAN

A thesis submitted to the School of Graduate Studies in partial fulfillment of the requirements for the degree of Master of Arts in Clinical Psychology

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APPROVAL PAGE

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts in Clinical Psychology.

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This is to confirm that this thesis set by the School of Graduate Studies of Ibn Haldun University.

Date of Submission Seal

ACADEMIC HONESTY ATTESTATION

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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ÖZ

NARSİSİSTİK ÖZELLİKLERİN VE DUYGUDURUMUN YÜZLERDEN DUYGU TANIMA ÜZERİNDEKİ ETKİLERİ

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Eylül 2022, 54 sayfa

Bu çalışmanın amacı, narsistik özelliklerin ve duygudurumun yüzlerden duygu tanıma üzerindeki etkisini incelemektir. Büyüklenmeci narsisizm Narsistik Kişilik Envanteri (NPI), kırılgan narsisizm Kırılgan Narsisizm Ölçeği (KNÖ) ve duygudurumu pozitif-negatif duygu ölçeği (PANAS-GEN) ile ölçülmüştür. Ölçeklerden alınan veriler sonucunda 45 üniversite öğrencisi çalışmaya katılmıştır. Büyüklenmeci narsisizm, kırılgan narsisizm ve kontrol grubu olarak toplamda üç grup randomize ve bireysel olarak çalışmaya katılmıştır. Psychopy programında psikoloji laboratuvarındaki bilgisayar üzerinden düz ve ters olmak üzere duygu içeren yüz ifadeleri gören katılımcı cevaplarının doğruluk ve hız payı ölçülmüştür. Büyüklenmeci narsistler öfke ve nötr duygusunu, kırılgan narsistler ise üzüntü, korku ve tiksinti duygularını daha hızlı tanımışlardır. Büyüklenmeci narsistler nötr duygusunu, kırılgan narsistler ise korku duygusunu anlamlı bir şekilde daha doğru tanımışlardır. Negatif duygudurumunun kırılgan narsistlerin olumsuz duyguları tanıma üzerinde aracılık etkisine sahip olduğu bulunmuştur.

Anahtar Kelimeler: Büyüklenmeci Narsisizm, Kırılgan Narsisizm, Yüzlerden Duygu Tanıma

ABSTRACT

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This research aims to investigate the effect of narcissistic characteristics and mood states on facial emotion recognition. Grandiose narcissism was measured with Narcissistic Personality Inventory (NPI), vulnerable narcissism was measured with Hypersensitive Narcissism Scale (HSNS) and mood states were measured with the Positive and Negative Affect Scale (PANAS-GEN). As a result of the data obtained from the scales, 45 university students participated in the study. A total of three groups, grandiose narcissism, vulnerable narcissism, and the control group, participated in the study randomly and individually. The accuracy and the reaction time of the participants who saw facial expressions of emotions on the computer in the psychology laboratory via Psychopy software, both in upright and upside-down orientations, were measured.

Grandiose narcissists recognized anger and neutrality faster, and vulnerable narcissists recognized sadness, fear, and disgust more quickly. Grandiose narcissists recognized the neutral emotion significantly more accurately, while vulnerable narcissists recognized the emotion of fear significantly. The negative mood state has been found to have a mediating effect on vulnerable narcissists' recognition of negative emotions.

Keywords: Facial Emotion Recognition, Grandiose Narcissism, Vulnerable Narcissism

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Nefise Shaban

İstanbul, 2022

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CHAPTER I

INTRODUCTION

The complex nature of narcissism has become a major focus of attention and is popular among early and recent researchers' interests. The reason for this may be because, especially in the last decade, people are becoming more and more self-focused (Twenge, Konrath, Foster, Campbell, & Bushman, 2008). The prevalence of narcissism, for which the statistical rate is increasing day by day in the world, varies between 0% to 6.2% in the general population according to a review study (Dhawan, Kunik, Oldham & Coverdale, 2010), and this number extends to 7.1% in Turkey (Dereboy, C., Güzel, Dereboy, F., Okyay & Eskin, 2014). Taking into account its frequency in the general population, understanding narcissism in Turkey as well as in society is becoming extremely important.

When we think of a narcissist, we usually think of a person with extroverted, talkative and grandiose-exhibitionist attitudes. This is a common misconception shared by many people, even by many psychologists. Many psychologists rely on DSM-5 diagnostic criteria when describing a narcissistic individual; however, recent studies show that the commonly shared idea of narcissism is too restricted and misses the covert, hypersensitive, and vulnerable aspects of narcissism (Miller et al.,2013; Cain, Pincus, & Ansell, 2008). With this in mind, researchers also suggest updating the DSM 5 narcissistic personality disorder diagnostic criteria to increase the validity of mental disorder diagnoses (Skodol, Bender & Morey, 2014).

In recent years, particular emphasis has been placed on these two types of narcissism. Vulnerable narcissism has been found to be associated with borderline personality disorder, avoidant personality disorder, high neuroticism, anxiety, depression and negative affect experience (Euler et al., 2018; Dickinson & Pincus, 2003; Miller et al., 2010). Vulnerable narcissists were also more open to seeking professional help than grandiose narcissists (Ellison, Levy, Cain, Ansell & Pincus, 2013). Whereas grandiose narcissism has been associated with anti-social personality and histrionic personality disorder, grandiosity, exhibitionism, low empathy, high extraversion, low neuroticism,

and positive affect experience (Wink, 1991). For psychotherapists, it is important to be aware of and consider different expressions of narcissistic disturbances in clinical settings to avoid misdiagnosis and misjudgment of the client.

The ability to be able to recognize one's emotions from faces is an important and fundamental element for adjusting to the environment. Until now, there has been a gap in the empirical record on facial emotion recognition, both in vulnerable and grandiose narcissistic traits. Investigating the differences between the two types of narcissism in terms of facial emotion recognition will contribute to the awareness of the different narcissistic expressions and will fill this gap in the literature.

Many factors influence our emotion recognition processes. Previous studies have focused either on the effect of general mood experience on emotion recognition or on the effect of personality traits on emotion recognition separately. However, these have resulted in inconsistent findings. Therefore, it is becoming extremely important to account for both the role of mood states and the effect of stable personality traits of an individual in emotion processing (Rusting,1998).

The present study aims to further distinguish the differences between the two types of narcissistic traits in terms of facial emotion recognition while taking into account the positive and negative mood states of the individuals.

1.1. Statement of the Problem

The main purpose of this study is to further distinguish the difference between the two types of narcissism in terms of different variables in a group of university students. Within this context, it is aimed to:

• Investigate the differences between two types of narcissism in terms of mood states,

• Investigate the differences between two types of narcissism in terms of facial emotion recognition,

• Examine the role of positive mood states on the relationship between grandiose narcissism and recognition of positive emotions,

• Examine the role of negative mood state on the relationship between vulnerable narcissism and recognition of negative emotions, thereby filling this gap in the existing

literature and empirical record and contributing to raising awareness of the covert dimension of narcissistic traits.

The question" Is there an effect of trait narcissism and mood states on facial emotion recognition?" constitutes the problem sentence of the research.

1.2. Significance of the Study

a. The high prevalence of narcissistic personality shows that it is important to further address the concept in society.
b. The ability to recognize emotions from faces is an important factor for the functionality and survival of human beings.
c. It is important to raise awareness of the different dimensions of narcissism, and psychologists should be able to distinguish the two types of narcissism in order to avoid misinterpretation and misjudgments of the client.
d. The current study will contribute to building empirical support for how differences between types of narcissism may be approached in clinical-sample and structure the treatment process accordingly.

1.3. Relevance of the Study

a. Limited studies have focused on the two types of narcissism, grandiose and vulnerable. Particularly in Turkey, a lack of research exists addressing these two types of narcissism.
b. In particular, differences in emotion recognition between two of these types of narcissism have not been investigated.
c. In the emotion recognition literature, in general, most studies have examined trait-congruency and mood-congruency separately. Similarly, no studies in Turkey have examined the role of individual traits and mood states in emotion recognition. The current study aims to examine both the role of mood and individual traits in processing emotional stimuli.
d. The findings of this research will help reveal how personality traits and mood states affect human cognitive processes such as perception and recognition and will fill an important gap in the empirical record.

1.4. Research Objectives and Questions

The current study sought answers to the following questions:

1- Is there a difference between vulnerable narcissism and grandiose narcissism in terms of mood states?
2- Will vulnerable narcissists score higher on experiencing negative mood states?
3- Will grandiose narcissists score higher on experiencing positive mood states?
4- Is there a difference between vulnerable narcissism and grandiose narcissism in terms of the accuracy of facial emotion recognition?
5- Will individuals with high grandiose narcissistic traits respond more accurately when identifying positive emotions than individuals with highly vulnerable narcissistic traits?
6- Will individuals with highly vulnerable narcissistic traits respond more accurately when identifying negative emotions than individuals with high grandiose narcissistic traits?
7- Is there a difference between vulnerable narcissism and grandiose narcissism in terms of reaction time on facial emotion recognition?
8- Will individuals with high grandiose narcissistic traits respond faster when identifying positive emotions than individuals with highly vulnerable narcissistic traits?
9- Will individuals with highly vulnerable narcissistic traits respond faster when identifying negative emotions than individuals with high grandiose narcissistic traits?
10- Do mood states mediate the effect of personality on facial emotion recognition?
11- Does a positive mood state mediate the effect of grandiose narcissism on the recognition of positive emotions?
12- Does a negative mood state mediate the effect of vulnerable narcissism on the recognition of negative emotions?

In line with the purpose of the study and based on the previous studies, the following hypotheses were formulated for the current study:

H1: There will be a difference between vulnerable narcissism and grandiose narcissism in terms of mood states.

H1a: Vulnerable narcissists will score higher on experiencing negative mood states.

H1b: Grandiose narcissists will score higher on experiencing positive mood states.

H2: There will be a difference between vulnerable narcissism and grandiose narcissism in terms of the accuracy of facial emotion recognition.

H2a: Compared to other groups, individuals with high grandiose narcissistic traits will be more accurate in recognizing positive emotions.

H2a1: Individuals with high grandiose narcissistic traits are more accurate in recognizing the emotion of happiness.

H2a2: Individuals with high grandiose narcissistic traits are more accurate in recognizing the emotion of neutral.

H2b: Compared to other groups, individuals with highly vulnerable narcissistic traits will be more accurate in recognizing negative emotions.

H2b1: Individuals with highly vulnerable narcissistic traits will be more accurate in recognizing the emotion of sadness compared to other groups.

H2b2: Individuals with highly vulnerable narcissistic traits will be more accurate in recognizing the emotion of anger compared to other groups.

H2b3: Individuals with highly vulnerable narcissistic traits will be more accurate in recognizing the emotion of fear compared to other groups.

H2b4: Individuals with highly vulnerable narcissistic traits will be more accurate in recognizing the emotion of disgust compared to other groups.

H3: There will be a difference between vulnerable narcissism and grandiose narcissism in terms of the reaction time of facial emotion recognition.

H3a: Compared to other groups, individuals with high grandiose narcissistic traits will be faster in recognizing positive emotions.

H3a1: Individuals with high grandiose narcissistic traits will be faster in recognizing the emotion of happiness compared to other groups.

H3a2: Individuals with high grandiose narcissistic traits will be faster in recognizing the emotion of neutrality compared to other groups.

H3b: Compared to other groups, individuals with highly vulnerable narcissistic traits will be faster in recognizing negative emotions.

H3b1: Individuals with highly vulnerable narcissistic traits will be faster in recognizing the emotion of sadness compared to other groups.

H3b2: Individuals with highly vulnerable narcissistic traits will be faster in recognizing the emotion of anger compared to other groups.

H4: Mood states of the individual will mediate the effect of personality on facial emotion recognition.

H4a: Positive mood state will mediate the effect of grandiose narcissism on positive facial emotion recognition.

H4b: Negative mood state will mediate the effect of vulnerable narcissism on negative facial emotion recognition.

1.5. The Definitions

Definitions of the variables are as in the following:

1. Grandiose narcissism, also called overt narcissism, is one of the expression types of narcissism characterized by grandiosity, exhibitionism, assertiveness, conceit, aggression, and low empathy (Wink, 1991).
2. Vulnerable narcissism, also called covert narcissism, is one of the types of narcissism mostly characterized by hypersensitivity, introversion, pessimism, anxiety and shyness (Wink, 1991).
3. Mood states are typically defined as long-lasting emotions; they constitute how we feel on average in everyday life, they are stable over time, but they are less intense than emotions. Emotions, on the other hand, are more intense, and they occur in response to an outside trigger (Ekkekasis, 2012).
4. Facial emotion recognition is the ability to recognize emotions from facial expressions, which is essential for communication and social interactions (Leppanen & Nelson, 2006).

CHAPTER II

LITERATURE REVIEW

2.1. Narcissism

The concept of narcissism goes back to Greek mythology. According to this myth, narcissus falls in love with his own reflection in the water. Inspired by this story, Havelock Ellis (1898) was one of the first to bring the concept of narcissism into the literature. Ellis (1898) used the term narcissus-like tendency, reflecting on autoeroticism, where a person is sexually attracted to himself. Furthermore, Kernberg (1967) put hysterical personality, infantile personality and narcissistic personality under the umbrella of what he called "character pathology." He saw character pathology as a continuum, ranging from low to high level, and he defined narcissistic personality as a lack of empathy, need for admiration from others, self-reference, enviousness, controlling attitudes, dependent personality and grandiosity (Kernberg, 1967). Freud (1914), on the other hand, suggested that parenting styles cause the development of narcissism: when a parent overvalues the child or is emotionally unavailable to the child, the child turns their libido back to themselves, and this prevents the child from loving others. Recently, among psychologists and psychiatrists, narcissism has been generally referred to personality disorder. Pathological narcissism was first mentioned as a personality disorder in the book named Diagnostic and Statistical Manual of Mental Disorders (DSM)-III. According to the newest updated version of DSM (DSM-5), narcissistic personality disorder includes the following diagnostic criteria: (1) a grandiose sense of self-importance, (2) preoccupation with fantasies of unlimited success, power, brilliance, beauty, or ideal love, (3) belief that he or she is "special" and unique and can only be understood by, or should associate with, other special or high-status people (4) requires excessive admiration (5) has a sense of entitlement, (6) is interpersonally exploitative, (7) lacks empathy (8) is often envious of others or believes that others are envious of him or her (9) shows arrogant, haughty behaviors or attitudes (APA,2013, p.669). Recent research, however, demonstrates that the DSM-5's diagnostic criteria of narcissism are restricted and do not capture multiple facets of narcissistic behavior (Miller, Gentile,

Wilson & Campbell, 2013; Cain, Pincus & Ansell, 2008). The DSM-5 explanation of narcissism focuses mostly on external behavior patterns (i.e., grandiosity, exploitativeness, arrogant behaviors, and disagreeableness) while ignoring internal difficulties (dysregulation in self-esteem, affect or mood, hypersensitiveness) (Ronningstam, 2010). The failure to identify vulnerable narcissism may lead professionals to focus on other personality traits or comorbid disorders and, consequently, misdiagnose it. It is, therefore, important that these two types of narcissism be distinguished and that narcissism can be in the dimension of a personality trait or a personality disorder.

2.1.1. Narcissism as a Personality Trait and Narcissism as a Personality Disorder

A personality trait is generally defined as a combination of emotional, cognitive, and behavioral characteristics of an individual (McCrae & Costa, 1987). While a group of researchers working on the subject of narcissism defines normal and pathological narcissism as a dimensional construct that varies in degrees in all individuals, other groups of researchers see narcissism more categorically as either adaptive or pathological. In other words, some researchers see narcissism as a personality trait, and others see it as a personality disorder. Previous researches show that pathological narcissism is not a structure with only one dimension; it has at least two dimensions, grandiose and fragile narcissism, and recent studies show that all dimensions of narcissism are combined under two main dimensions (e.g., Wink, 1991). According to DSM-5 (p.645)," A personality disorder is an enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual's culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment" (APA, 2013, p. 645). Narcissism as a trait, however, is viewed as a continuous construct that may not be dominated by distress or impairment.

While narcissistic personality disorder includes various complex measurement tools such as clinical interviews and self-report scales, trait narcissism is mostly measured by self-report scales (Miller & Campbell, 2010; Pincus & Lukowitsky, 2010). The concept of narcissism used in this research does not attribute to pathological narcissism

or personality disorder but to the grandiose and vulnerable parts of narcissism as a personality trait in a healthy population.

2.1.2. Prevalence of Narcissism

A recent systematic review and meta-analysis study investigating the prevalence rate of personality disorders in Western countries (USA, Sweden, Germany, Australia, U.K., Turkey, Netherlands) found a 1.23% prevalence rate of narcissistic personality disorder (Volkert, Gablonski & Rabung, 2018). In addition, a systematic review study examining prevalence rates of narcissistic personality disorder in community samples found NPD ranging from 0% to 6.2% in community samples (Dhawan, Kunik, Oldham & Coverdale, 2010). Limited studies can be found regarding the prevalence of NPD in Turkey. However, a retrospective study stated the prevalence to be 1.0% in a clinical sample (Senol, Dereboy & Yüksel, 1997), whereas a study done on a community sample found narcissistic personality to be present at 7.1% of the normal population (Dereboy, C., Güzel, Dereboy, F., Okyay, Eskin, 2014). In addition, a study investigating the morbidity ratios of personality disorders in crime convicts found that NPD was the third most common (3-4.3%) Axis II personality disorder (Kugu, Akyuz, & Dogan, 2008).

2.1.3. Two Types of Narcissism

Most researchers state that the definition of narcissism in DSM-5 covers only grandiose aspects of narcissism and that this definition is not sufficient to define narcissism (Ronningstam, 2009). For this reason, in recent years, researchers have particularly focused on different dimensions of the narcissistic personality. Previous research shows that the dimensions of all narcissism constructs converge under two main dimensions, grandiose and vulnerable narcissism (Levy, 2012; Wink, 1991). Studies show that the two main dimensions of narcissism have different personality characteristics. Grandiose narcissism is characterized by grandiosity, exhibitionism, low empathy, and high self-importance, whereas vulnerable narcissism is characterized by hypersensitivity, introversion, neuroticism, and shyness (Wink. 1991). Grandiose narcissists try to regulate their self-esteem by hiding their true selves and showing themselves as different from others, hiding their weaknesses, and waiting

for others to meet their expectations. They protect their ego from harm by devaluating those who cannot meet their demands (Dickinson & Pincus, 2003). Although vulnerable narcissists do not express their grandiosity in a behavioral way, in their inner world, they fantasize about grandiosity (Dickinson & Pincus, 2003).

The differences between vulnerable and grandiose narcissism have been addressed by various studies. A study found that grandiose narcissism was associated with low agreeableness, high extraversion, and low neuroticism, whereas vulnerable narcissists reported low agreeableness, low extraversion, and high neuroticism (Miller et al., 2017).

When compared to personality disorders, studies found that vulnerable narcissists showed comorbidity of borderline personality disorder and avoidant personality disorder, whereas grandiose narcissists showed comorbidity of anti-social personality disorder and histrionic personality disorder (Euler et al., 2018; Dickinson & Pincus, 2003).

Vulnerable narcissism has shown strong correlations with depression and anxiety, whereas grandiose narcissism has shown low or no correlations with any form of distress (Miller Dir et al., 2010).

Grandiose narcissism was positively associated with life satisfaction; in contrast, vulnerable narcissism was negatively associated with life satisfaction (Rohmann, Hanke & Bierkoff, 2019).

One of the important differences between the two types of narcissism is that they differ in terms of self-esteem. Many studies repeatedly have shown that grandiose narcissism is associated with high self-esteem, whereas vulnerable narcissism is associated with low self-esteem (Dickinson & Pincus, 2003; Miller & Campbell, 2008; Rohmann, Hanke & Bierkoff, 2019).

Differences between these two types were also observed in psychotherapy settings where vulnerable narcissists were more open to seeking professional help than grandiose narcissists (Ellison, Levy, Cain, Ansell & Pincus, 2013).

Despite the sharp differences in the expressions of grandiose and vulnerable narcissism, they both share some common characteristics. For example, both grandiose and vulnerable narcissists share characteristics like exploitativeness and a sense of entitlement in common (Wink, 1991), and both constantly trying to defend themselves against the underlying feelings of worthlessness (Akhtar & Thomson, 1982).

Surprisingly, no research to date has examined the differences between grandiose and vulnerable narcissism in terms of their emotion recognition abilities. The current study will be the first to check their differences in terms of facial emotion recognition and fill this gap in the literature.

2.1.4. Types of Narcissism and Mood States

There is a difference between mood states and affect. Affect experiences or emotional states are generally short and intense, and they occur in response to a trigger; however, mood states are our general or average state of feelings; they may not always occur in response to an eliciting event, but they are stable over time, and they are generally defined as long-lasting emotions (Ekkekasis, 2012). Although no studies have particularly checked the differentiation between the two types of narcissism and their general mood states alone, several studies have pointed out the emotional experiences of the two types separately. For instance, grandiose narcissism was associated with positive affect (Gentile et al., 2013; Miller et al.,2011; Rose, 2002), whereas vulnerable narcissism was linked to negative affect (Miller et al., 2011; Miller et al., 2017). Similarly, a study conducted in Turkey found vulnerable narcissism to be negatively associated with life satisfaction, whereas grandiose narcissism was positively associated with life satisfaction (Akıncı, 2015). This may bed related to the general mood states of vulnerable and grandiose narcissism as well. In addition to measuring the role of mood states between types of narcissism and emotion recognition, the proposed study will be the first to investigate the differentiation of narcissistic types and their general mood state experiences.

2.2. Emotional Facial Expressions

Expressions of emotion are the natural reactions to our emotional states. These are crucial for human social interactions and functionality. Emotional facial expressions are used in various fields of cognitive psychology, clinical psychology, and neuroscience to specifically study perception, recognition, attention, decision-making, memory, and learning. There are six basic emotions that are universally known and accepted: happiness, sadness, anger, disgust, surprise, and fear (Ekman, 1992). These emotions are considered universal because studies have shown that different cultural groups across the world recognize and respond to these emotions in the same way (Johnson, Ekman & Friesen, 1975). Emotions are categorized as positive and negative emotions. Some emotions are considered positive emotions, such as happiness. Whereas emotions such as anger, fear, disgust, and sadness are seen as negative emotions (Ekman, 1992).

According to Darwin (1998), emotional facial expressions are not a result of learning, they are part of our biological mechanisms, and they occur instinctively. Facial expressions of emotions provide adaptive properties to living beings. Similarly, the ability to recognize facial expressions is important for our survival in terms of perception of a possible threat and developing the necessary coping strategies (Darwin, 1998).

There are many theories on how our emotions and facial expressions arise. According to James-Lange's theory, emotions are the result of our physiological changes. In other words, our physiological changes come first, and then our emotions are aroused. For instance, according to James-Lange, we get afraid because we run, or we get sad because we cry (James, 1884). Walter B. Cannon criticized the James-Lange theory. According to Cannon, it's not the physiological response that causes emotions, but both emotions and physiological responses occur simultaneously and independently as a response to an external trigger (Cannon, 1987). Schachter-Singer's theory suggests that the experience of the emotion depends on how the situation is interpreted by the individual and what the condition means in the person's life (Schachter & Singer, 1962).

2.2.1. Recognition of Emotional Facial Expressions

Communication is essential for our survival, and to be able to communicate in a healthy way, it is crucial to recognize or read people's emotions from their faces. As infants, we start discriminating facial expressions by the age of 3 months (Barrera & Maurero, 1981).

The recognition of faces differs from the recognition of other objects outside the world. Our brain uses specific cognitive and neural mechanisms while recognizing facial expressions. Our brain recognizes objects as separate parts, but when it comes to faces, we perceive the faces as a whole rather than as separate parts. This phenomenon is also called "holistic processing." When we perceive, recognize or discriminate facial stimuli, we also use "configural processing." Configural processing includes holistic processing, first-order relational information, and second-order relational information. First-order relational information involves the spatial relationship of the features of the face (for example, two eyes above the nose), which is essential to detect a face. Second-order relational information involves spacial distances among features. During face processing, recognition of one's identity happens through the person's structural components; in this case, first-order relational information is essential. On the other hand, facial expression recognition happens through emotional expression with facial features (eyes, mouth, eyebrows) (Piepers & Robbins, 2012).

Although the amygdala plays a vital role in processing emotions of facial expressions, brain imaging studies have repeatedly shown that there is one part of the brain that is the most active when people look at faces: the fusiform gyrus in the right hemisphere of the brain (Kanwisher & Yovel, 2006).

2.2.2. Psychopathology and Recognition of Emotions from Facial Expressions

As humans, our ability to recognize emotions from facial expressions is essential for adjusting to the environment. It has been found that the social interactions and functionality of those who have difficulty recognizing facial emotions are negatively affected.

Psychopathology affects how we recognize, interpret and perceive the world. While healthy individuals are good at recognizing emotions from faces, psychopathology makes facial emotion recognition more difficult or biased (Marissen, Deen & Franken, 2012; Pan, 2009).

For example, over a hundred studies have concluded that schizophrenic individuals have deficits in emotion recognition abilities, including the recognition of emotions from faces (Tremeau, 2022). Similarly, in a review study, both children and adults with autism spectrum were found to be less accurate in recognizing emotions from faces when compared to control groups (Wieckowski, Flynn, Richey, Gracanin & White, 2020).

Studies measuring facial expression recognition in depressed individuals have found that individuals with depression recognize negative emotions -such as sadness, fear or anger- better and faster, and, on the contrary, they are less accurate when identifying positive emotions such as happiness (Bomfim, Ribeiro, Chagas, 2019; Liedtke, Kohl, Kret & Koelkebeck, 2018). Compared to the control group, individuals with depression were also slower and less accurate in facial expression recognition (Demenescu, Kortekaas, Boer & Aleman, 2010; Liedtke, Kohl, Kret & Koelkebeck, 2018). A recent meta-analytic review has also concluded that depressed individuals are less accurate in the recognition of emotions from faces, especially in the emotion of happiness (Krause, Linardatos, Fresco & Moore, 2021).

Meta-analysis results of recognition of emotions from faces in individuals with anxiety show that compared to the control groups, individuals with anxiety show significant impairment in facial emotion recognition (Demenescu, Kortekaas, Boer & Aleman, 2010). Healthy individuals high in trait anxiety and neuroticism showed greater sensitivity in recognition of fear than those low in trait anxiety and neuroticism (Doty, Japee, Ingvar & Ungerleider, 2013).

Impairments in facial emotion recognition were also observed in the individuals diagnosed with panic disorder. Compared to the control group, individuals with panic disorder were less accurate and slower in recognizing emotions from faces, especially

with the emotions of sadness and anger (Kessler, Roth, Wietershein, Deighton & Traue, 2007).

All personality disorders have one thing in common: they have difficulties in interpersonal relationships, affecting their functionality (APA,2013). Following this fact, researchers have hypothesized that personality disorders may also affect our ability to recognize emotions from faces.

A meta-analysis study has reviewed ten studies that have compared the ability to recognize emotion recognition from faces in patients with borderline personality disorder and healthy control groups. As a result, compared to the control groups, the study has concluded that individuals with borderline personality disorder struggle to recognize all emotions from faces, specifically anger, disgust and neutral faces (Daros, Zakzanis & Ruocco, 2012).

Minimal studies have specifically examined anti-social personality disorder's facial emotion recognition abilities. Bagcioglu et al. (2014) found that compared to the control group, individuals with anti-social personality disorder with a comorbid attention-hyperactivity disorder were slower at recognizing all six basic emotions. On the other hand, individuals with pure anti-social personality disorder were specifically slower at recognizing faces presenting the emotions of disgust and neutrality (Bagcioglu et al., 2014).

In a review analysis, the facial emotion recognition abilities of those with schizotypal traits have been examined. As a result, it has been found that compared to those with low schizotypal characteristics or control groups, individuals with high schizotypal features showed more significant difficulties in recognizing emotions from faces (Zouraraki, Karamaouna & Giakoumaki, 2022).

Although no studies have examined the differences between types of narcissism (grandiose and vulnerable narcissism) and their facial emotion recognition abilities, limited studies have found inconsistent findings regarding the emotion recognition abilities of individuals with narcissistic personality disorder, stating either narcissistic personality disorder is linked to disturbed emotion recognition, or, that they are good

at emotion recognition because of their manipulative nature (Konrath, Corneille, Bushman & Luminet, 2014; Marissen, Deen & Franken, 2012). This inconsistency may be because the vulnerable aspects of narcissism have been ignored or because both the role of individual traits and mood states have not been accounted for. Considering both the individual traits and mood states when investigating the recognition of emotion-congruent stimuli is important since previous studies examining trait-congruency and mood congruency alone have resulted in inconsistent findings (Rusting, 1998).

2.2.3. Face Inversion Effect

In emotion recognition from facial expressions research, face inversion is frequently used. Faces, in contrast to objects, are perceived as a whole rather than separate parts; thus, when they are inverted (upside-down), there is a disruption of the perceptual processes, making them harder to recognize. This is known as the inversion effect (Carey & Diamond, 1977).

Yin (1969) was one of the first who discovers the inversion effect. Yin (1969) presented participants with pictures of faces and other objects, such as airplanes, houses, etc., both upright and inverted and asked participants to recognize them. Results showed that when faces were inverted, there was a disruption in recognition. When inverted, faces were more difficult to recognize than other objects (Yin, 1969).

Another important study on the face inversion effect was conducted by Diamond and Carey (1986). Dog experts are influenced by the inversion effect of the body profiles of dogs in the same way they are influenced by the inversion effect of human faces. In contrast, those who were not dog experts were affected by the inversion of faces far more than the inversion of dog profiles (Diamond & Carey, 1986). This explains that the inversion effect is not limited to faces, but the role of expertise is also an important factor in encoding processes.

By using face inversion in the proposed study, we will have the opportunity to discover the extent to which the recognition is general to visual processing or specific to faces.

CHAPTER III

THEORETICAL FRAMEWORK

3.1. Mood-Congruency

Many theories have focused on what influences our cognitive aspects, such as information processing, attention, recall, perception, or recognition of emotional stimuli. One of them is the traditional approach to emotion processing. In the traditional approach, most of the studies have focused on the effect of mood states and personality traits separately. According to this approach, mood states and personality traits independently influence emotional processing (Rusting, 1998).

The concept of mood is different from emotion or affects the experience. State of mood is typically defined as long-lasting emotions; they constitute how we feel on average in everyday life, they are stable over time, but they are less intense than emotions. Emotions, on the other hand, are more intense, and they occur in response to an external trigger (Ekkekasis, 2012).

Our mood state influences our cognitive processes, and it affects how we perceive, recognize and interpret the world; this is also known as "the mood congruency hypothesis." When we are in a sad mood, we are more likely to focus on negative stimuli, whereas when we are in a happy mood, we are more likely to focus on positive stimuli; these are also known as positive bias and negative bias (Schmid & Schmid Mast, 2010). For example, primed participants with happy or sad moods, and they used pictures of happy and sad facial expressions to investigate the recognition accuracy of the participants. As a result, they found that participants in sad moods recognized sad facial expressions better than those in happy moods (Schmid & Schmid Mast, 2010). Similarly, previous studies looking at the effects of mood disorders on facial emotion recognition have found that depressed individuals recognized negative emotions such as sadness, fear, and anger faster and more accurately than positive emotions (Bomfim, Ribeiro, Chagas, 2019; Liedtke, Kohl, Kret & Koelkebeck, 2018).

As mentioned above, one of the cognitive processing of emotion-congruent information approaches is the mood-congruency theory. The mood-congruency theory suggests that, as humans, our positive mood state influences our cognitive processes, such as perception, attention, interpretation, recall, recognition, and judgment, for more positive emotional information. At the same time, our negative mood state will influence our tendency for more unpleasant cognitive processing of emotional information such as perception, attention, interpretation, recall, recognition and judgment. The theory of mood congruency has been mostly influenced by Bower's network theory of affect (Bower, 1981). Bower (1981) describes emotions as emotional nodes and suggests that after a situation or a trigger, particular emotion nodes (i.e., fear, happiness) get activated, and this results in mood-congruent in memory and judgment. In other words, our current mood influences what type of information is going to be recalled from our memory as well as other cognitive processes.

Similarly, the two-factor theory of emotion states that our physiological sensations affect our cognitive processes, such as interpretation and judgment (Schachter & Singer, 1962). In other words, if an individual's general mood is anxious, their physiological sensations may be increased heart rate, increased breathing rate, and other sensations related to the sympathetic nervous system. Thus, these physical sensations may also affect their perception of the world.

Consistent with these theories, various studies of mood-congruency theory have analyzed the components associated with the cognitive processing of emotional stimuli, and they have come to the conclusion that individuals tend to process emotional stimuli that are congruent with their current mood states (Bomfim, Ribeiro, Chagas, 2019; Liedtke, Kohl, Kret & Koelkebeck, 2018). In other words, positive mood states influence the cognitive processing of positive emotional stimuli, whereas negative mood states influence the perception, recall, and recognition of negative emotional content (Bower, 1991; Rusting, 1998; Krause, Linardatos, Fresco & Moore, 2021).

Studies that have investigated the effect of mood states and personality traits on emotion processing separately have resulted in inconsistent findings (Rusting, 1998).

3.2. Trait-Congruency

A personality trait is generally defined as a set of emotional, cognitive, and behavioral characteristics of an individual (McCrae & Costa, 1987).

Trait congruency theory suggests that one's stable personality trait affects the processing of emotion-congruent information (Rusting, 1998). The trait congruency hypothesis is mostly influenced by Beck's (1976) schema models of depression and anxiety. According to Beck's (1976) schema theory, individuals' cognitive processes, such as interpretation of themselves, others, and the world, are shaped by early experiences. Thus, a person develops a positive or negative view of themselves or the world. These are called "schemas. "Later in life, when a triggering event occurs, a schema becomes activated, and the person interprets the trigger (event) according to their most prominent schemas. For instance, because depressed individuals mostly have negative schemas, they also tend to respond to or interpret events negatively. Similarly, anxious individuals mostly focus on stimuli involving a threat or danger, or they interpret situations as dangerous or threatening (Beck, 1976; Beck, 1988).

Previous findings exploring trait-congruency on trait depression and trait anxiety, as well as introversion and extraversion, have found that these individuals process trait-congruent emotional stimuli faster and more accurately (as cited in Rusting, 1998). For instance, one study hypothesized that extroverts should be better at recognizing faces because of their social skills. Their results were consistent with their hypotheses. Extraverts performed better at recognizing faces than introverts (Tian et al., 2010). This could be one example of how our personality traits influence our cognitive abilities.

In fact, from a neurobiological perspective too, it has been found that different amygdala responses are observed among other individual traits (such as neuroticism and extroversion) during the emotion-processing tasks (Hamann & Canli, 2004).

3.3. The Mediation Approach to Emotion Processing

Research to date has mainly focused on trait congruency and mood congruency separately, which has led to inconsistent findings (Rusting, 1998). Rusting (1998) suggests that mood congruency and trait congruency should be considered when investigating the cognitive processing of emotional information. Based on this idea, Rusting (1998) developed the model of the mediation approach to emotion-congruent processing, shown in Figure 3.1.

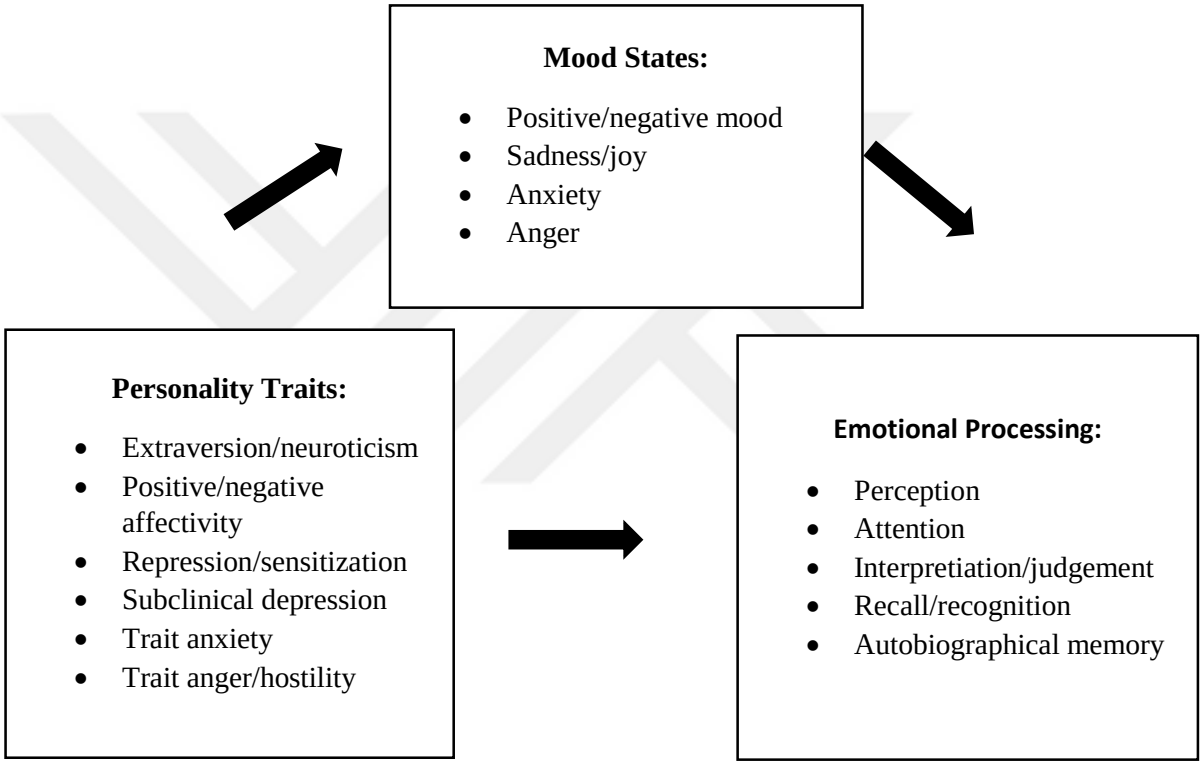

Figure 3.1. The Mediation Approach to Emotion-Congruent Processing (Rusting, 1998)

According to research on emotions, affect, mood and personality, personality characteristics are closely associated with mood experiences of the same valence. For instance, there is a relatively high correlation between extraversion and positive affect and a positive correlation between neuroticism and negative affect (Diener, Oishi & Lucas, 2003). Similarly, trait depression and trait anxiety are related to negative affect. Research on the two types of trait narcissism has also found that grandiose narcissism

is associated with positive affect, whereas vulnerable narcissism is associated with negative affect (Gentile et al., 2013; Millet et al., 2017; Miller et al.,2011; Rose, 2002).

Very limited studies on emotion processing have considered personality traits and mood states, and most of them have checked them separately (e.g., Bomfim, Ribeiro, Chagas, 2019; Liedtke, Kohl, Kret & Koelkebeck, 2018; Tian et al., 2010). In his study, Rusting (1999) explored the effect of personality traits and mood states on emotion-congruent memory and judgment. As a result, he found that because extraversion is related to positive mood, they also had the tendency to retrieve positive memories and make favorable judgments, on the contrary. Neuroticism and negative mood were associated with the retrieval of negative memories, and they were also more likely to make negative judgments (Rusting,1999). Another study done with a large group of more than six hundred university students investigated the effect of personality traits on emotion processing while also considering the moderating role of mood states (Rafiena, Azadfallah, Fathi-Ashtiani & Rasoulzadeh-Tabatanaiei, 2008). As a result, they found that extraverted individuals recalled more positive words from the free-recall task and wrote a story with more positive content; in contrast, individuals with neuroticism traits recalled more negative words from the recall task and wrote a story with more negative content. The results also showed a moderating effect on the mood state of the individuals. The findings of this study revealed that personality traits influence cognitive processes such as judgment and interpretation with a moderating role of positive and negative mood (Rafiena, Azadfallah, Fathi-Ashtiani & Rasoulzadeh-Tabatanaiei, 2008).

Another study has also investigated the effect of personality traits such as extraversion and neuroticism on judgment while taking into account the role of mood states (Zelenski & Larsen, 2002). In this study, the researchers were interested to see participants' judgments about the future. They included positive questions such as "What is the likelihood that you will have a gifted child?" or negative questions like "What is the possibility that you will be a victim of a crime?" and asked the participants to rate the likelihood on a 7-point Likert scale. As a result, similar to previous studies, they found that extraverted individuals had the tendency for positive judgment and individuals with neuroticism traits had the tendency for negative judgment; however,

they found no mediating role of the mood states on the effect of personality traits on judgment (Zelenski & Larsen, 2002).

Following the fact that our personality traits influence our mood states and both our personality and mood influence our view of the world, in emotion processing studies, both the role of the personality traits and mood states should be taken into account. The current research will be the first to examine the effect of narcissistic personality traits, namely grandiose narcissism and vulnerable narcissism, on facial emotion recognition while also taking into account the individuals' positive and negative mood states.

CHAPTER IV

METHOD

In this section, information regarding the research design, participant sample, instruments used to obtain the data, and the types of analysis made for these data have been included. Details about the procedure of the experiment are included in this section.

4.1. Research Design

The primary research design for this study is mixed design. As a way of data collection, it includes a facial emotion recognition experiment and self-report scales (NPI, HSNS, PANAS-GEN).

• Variables in the study are:

Grandiose Narcissism: Independent variable

Vulnerable Narcissism- Independent variable

Mood states (positive, negative)- Mediating variable

Emotion Recognition-Dependent variable

4.2. Sample

The sample of the study consisted of non-clinical, healthy participants recruited from Ibn Haldun University. A total number of 111 students completed the first stage of the study by filling out the measurement tools of grandiose narcissism, vulnerable narcissism, and positive and negative affect scale.

Of these data, a total number of 45 participants participated in the second stage of the study. Individuals with low scores on both grandiose and vulnerable narcissism were considered the control group. Individuals with higher scores on grandiose narcissism and lower scores on vulnerable narcissism were considered as the grandiose narcissism group. Individuals with higher scores on vulnerable narcissism and lower scores on grandiose narcissism were considered vulnerable narcissism groups. This method has

been previously used in other personality trait studies (Surcinelli et al., 2006). Each group had 15 individuals matched on age, gender, and years of education. All of the participants were university students. All participants had normal or corrected-to-normal visual acuity.

The inclusion criteria were:
1. Being 18-24 years old

The exclusion criteria were:
1. Having a vision impairment
2. Having received any prior or current psychiatric diagnosis

4.3. Procedure

Before starting the procedure, the ethics committee of Ibn Haldun University was consulted for the study. As a result, the current study was accepted and approved by the committee in terms of its purpose, way of data collection, and method.

During the collection of the data, participants went through two stages. First, they were given an informed consent form following the questionnaires (NPI, HSNS, PANAS), and then they were asked to participate in the facial emotion recognition experiment in the psychology laboratory. During the first stage of the study, participants filled out the questionnaires in classes while there were no environmental distractions. After the collection of the data, participants who met the inclusion criteria were invited to participate in the second stage of the study.

In the second stage of the study, before starting the experiment in the laboratory, the visual acuity of the participants was determined with a Bailey-Lovie chart. Then the participant was asked to sit in front of the computer. Desk dividers surrounding the computer were used to minimize distractions. General information about the experiment was given to each participant. Each participant ran the experiment individually, and all participants were instructed to respond as quickly and as accurately as possible.

During the experiment, six female and six male faces were used, each showing six different emotional expressions. Each of these 72 stimuli was shown both upright and

inverted, making the total number of stimuli 144. The stimuli were presented in the center of the screen.

For each group, all stimuli were presented in random order. All participants were presented with two experimental blocks, with each block showing one orientation (upright or inverted). Each block began with practice trials to ensure that the participants were familiar with the procedure. Practice trials consisted of 24 pictures of six male and six female models expressing six emotions, both upright and inverted. The order of each block (upright and inverted) was counterbalanced across participants to avoid the order effect. In front of the computer, participants had a button box with six alternative choices (happiness, sadness, disgust, neutral, anger, fear). Responses were also counterbalanced across participants. There was no time limit for selecting each response. The experiment lasted 15 to 25 minutes.

4.4. Measurement Tools

The instrument tools used in this study are the Socio-demographic form, Narcissistic Personality Inventory (NPI-16), Hypersensitive Narcissism Scale (HSNS), Positive and Negative Affect Scale (PANAS), and FACES database, respectively.

To check the differentiation between types of narcissism in terms of emotion recognition, self-report measures and a facial emotion recognition experiment were conducted. To check the level of grandiose narcissism among individuals Narcissistic Personality Inventory (NPI-16) was used. To check the level of vulnerable narcissism Hypersensitive Narcissism Scale (HSNS) was used. In order to measure the mood states of the participants, the Positive and Negative Affect Scale (PANAS) was used. Finally, for the facial emotion recognition experiment, pictures of six male and female actors expressing six different emotions were used from the FACES database

4.4.1. Information and Consent Form

Participants who wanted to participate in the research voluntarily and whose applications were approved by the researcher considering the inclusive and exclusionary factors of the study were informed about the importance, purpose, and procedure of the research. Participants were informed that they could withdraw from

the study if they wanted and that the information they provided would remain anonymous and confidential. Participants who agreed to participate in the study signed the information and consent form.

4.4.2. Socio-Demographic Form

The socio-demographic form is a questionnaire prepared by the researchers in order to determine some personal information of the people participating in the research. The form includes demographic information such as age, gender, education level, marital status, city of residence, and previous psychiatric history of the participants.

4.4.3. Narcissistic Personality Inventory

Developed by Raskin and Hall (1979), consisting of 40 items, NPI was developed for the measurement of trait narcissism in the non-clinical population. The scale is based on the Narcissistic Personality Disorder criteria in DSM-III and includes a single-factor structure. With the aim of being able to use it in various fields and populations, the short version of NPI was developed (Ames, Rose, & Anderson, 2006). The short version of NPI consists of 16 items (Appendix A). Reliability scores of NPI-16 ranged from .65 to .72, whereas evidence for predictive validity and test-retest reliability (.85) was also satisfactory (Ames, Rose, & Anderson, 2006). The Turkish version of NPI-16, named NKE-16, was adapted by Atay (2009), and it consists of 16 dichotomous items (Appendix B). Each item on the scale consists of two different expressions, one of which reflects the narcissistic tendency. In items 1, 2, 3, 7, 9, 12, 14, and 16, the second statement reflects the narcissistic tendency, whereas, in items 4, 5, 6, 8, 10, 11, 13, and 15, the first statement reflects the narcissistic tendency. Participants are asked to choose the one they think most reflects them from these two expressions. Higher scores indicate a higher tendency for grandiose narcissism. The lowest score that can be obtained from the scale is 0, and the highest score is 16.

4.4.4. Hypersensitive Narcissism Scale

Developed by Hendin & Cheek (1997), HSNS consists of 10 items and is the most commonly used measurement tool for vulnerable narcissism. HSNS is based on a 5-

point Likert Scale (i.e., 1=very uncharacteristic or untrue, strongly disagree, 5=very characteristic or true, strongly agree); (Appendix C). The reliability of HSNS was .76. Higher scores indicate a higher tendency for vulnerable narcissistic traits. Turkish adaptation of HSNS was developed by Şengül et al. (2015). Based on 300 data from university students, the Turkish version of HSNS had a Cronbach alpha value of .66, it had a near-zero correlation with the Turkish version of NPI (NKE), and it was negatively correlated with extraversion and agreeableness and positively correlated with neuroticism and negative valence (Şengül et al., 2015).

4.4.5. Positive and Negative Affect Scale

PANAS is known for its use to measure mood states. It measures two specific dimensions of mood, positive dispositional affect and negative dispositional affect (Watson, Clark, & Tellegen, 1988). Higher scores obtained from the scale refer to higher mood states (Appendix E). In the Turkish adaptation of the scale (Appendix D) factorial validity of the scale was checked, and the internal consistency coefficient for the positive affect factor was found to be .86; the negative affect factor was .83. Criterion validity was studied through Beck Anxiety Inventory and Beck Depression Inventory. As a result, positive affect items of the scale were negatively correlated with Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI), whereas negative items of the Turkish version of the scale were positively correlated with BDI and BAI (Gençöz, 2000).

4.4.6. FACES Database

Consisting of pictures with six basic emotional expressions, FACES is a stimulus set specifically used for emotion expression studies (Ebner, Riediger & Lindenberger, 2010). The dataset contains expressions of different age groups (young, middle-aged, and old).

Face models in the database were specifically chosen to have average appearances; they all wore the same shirt and had no makeup or accessories. Before moving on to the shooting process, models underwent several training phases. The first phase was the "emotion induction phase," where models were shown pictures of emotions and

were asked to spontaneously experience and show them in the face. The second phase was the "personal experience phase," where models were asked to image a relevant experienced event to elicit a specific emotion. The third phase was the "controlled expression phase," where models were shown a picture of emotion; at the same time, they were instructed by an assistant regarding the position of the muscles in the face. Participants were photographed through all of these stages then 171 trained raters selected two images for each person that represented each of the six emotions. Finally, there was a total number of 2,052 pictures of faces, and 154 raters rated the images based on perceived emotion and perceived age. The validity of the FACES database has been found to be relatively higher than other databases (e.g., Calvo & Lundqvist, 2008; Goeleven et al., 2008). The present proposed study will use young aged expressions of the database (average age of 24).

The self-report scales did include a manipulation check. In all of the questionnaires, there were statements like "If you are reading this, select 4". This is a good way to avoid Type II errors and ensure that all participants were reading the questions carefully (Goodman, Cryder & Cheema, 2012; Oppenheimer, Meyvis & Davidenko, 2009). Invalid responses (i.e., checking only one column of the questionnaire) were excluded from the study.

4.5. Data Collection and Analysis

For the collection of the experimental data, a software package named Psychopy (2022.2.4) was used. This program is widely used in designing experiments in psychology. For the analysis of the data collected, a software program, The Statistical Packet for The Social Sciences 20.0 (SPSS), was used. As a way of analysis of the data, a mixed method was used. In this analysis, emotions (stimuli) are considered as within-subject variables and personality traits (groups) as between-subject variables. Sobel Test was performed to check the mediating role of mood on the relationship between personality traits and facial emotion recognition.

CHAPTER V

RESULTS

In this section, the demographic of the participants, group effects on accuracy and reaction time of facial emotion recognition, orientation effects on accuracy and reaction time of facial emotion recognition, differences between types of narcissism and mood states and the mediating effect of mood on narcissism's facial emotion recognition are reported.

5.1. Demographic Information

A total number of 45 people, of whom 15 belonged to the grandiose, 15 to the vulnerable, and 15 to the control group, participated in the current study. In the control group, gender distribution was balanced, and the mean age was M=21.44 (SD=1.92). In the grandiose group, gender distribution was balanced, and the mean age was M=20.29 (SD=1.70). In the vulnerable group, gender distribution was balanced, and the mean age was M=20.28 (SD=1.71). These data are presented in Table 5.1. and Table 5.2.

Table 5.1. Gender Distribution by Groups

	Control		**Grandiose**		**Vulnerable**	
Gender	Female	Male	Female	Male	Female	Male
n	8	7	8	7	8	7

Table 5.2. Age Demographics by Groups

	Control	**Grandiose**	**Vulnerable**
	Age		
M	21.44	20.29	20.28
SD	1.92	1.7	1.71
min	18	18	18
max	24	24	24

The groups did not significantly differ in age t(28)=.-1.237, p=.085, gender t(28)=.000, p=1.000 and years of education t(28)=.473, p=.462

When the number of samples is less than 50, Shapiro-Wilk tests of normality are suggested to be used to check the normal distribution of the data. Shapiro-Wilk normality test suggested that the data is normally distributed in all groups (W=.92; p>.05). Similarly, Skewness and Kurtosis results were between -1.96 and 1.96, and results suggested that the data is normally distributed.

5.2. Accuracy of Facial Emotion Recognition

3 × 2 × 6 ANOVA with a group (grandiose versus vulnerable versus controls) as a between-subject factor, and orientation (upright versus upside down) and emotion (happiness versus anger versus disgust versus fear versus sadness versus neutrality) as within-subject factors were performed.

The main effect of the group was significant F (2,42)=23.53, p<.05. The main effect of orientation was also significant, F (2,42)=57.934, p<.05. There was a lower accuracy on recognition of upside-down emotions than upright emotions.

The interaction between orientation and group was not significant F (2,42)=1.44, p>.05, indicating that there was a similar orientation effect for all groups. Moreover, the interaction between orientation, group, and emotion was not significant F(2,42)=1.16, p>.05, which indicates that the orientation effect was similar for all groups, whatever the emotion. Orientation had a significant effect on all emotions F (2,42)=57.93, p<.05

The interaction between emotion and group was not significant F (2,42)=1.89,p>.05, indicating that the difference between groups was not the same for all emotions.

Whether the groups differ in response accuracy in positive emotions and negative emotions was also checked. The results were significant for positive emotions F (2,42)=3.24, p<.05, but not for negative emotions F (2,42)=.83, p>.05 for upright faces.

To check whether the groups differ in terms of response accuracy in emotions, a 3 x 6 ANOVA analysis (with a group as a between-subject factor and emotion as a within-subject factor) was performed for upright faces.

There was no significant difference in the overall accuracy of recognition of upright emotions from faces across groups $F(2,42)=1.238$, $p>.05$. Mean accuracy for the control group was $M=63.47$; $SD=3.68$. The mean accuracy for the grandiose group was $M=64.40$; $SD=3.20$, and the mean accuracy for the vulnerable narcissism group was $M=65.54$; $SD=3.89$.

There was a significant interaction between group and emotion $F(2,42)=2.36$, $p<.05$

Results show that there is a significant difference between groups in terms of recognition of emotions of neutral $F(2,42)=3.33$ $p<.05$ and fear $F(2,42)=3.42$, $p<.05$. Vulnerable narcissists were more accurate in recognition of fear and grandiose narcissists were more accurate in recognition of neutral expressions as shown in Graph 1.

No significant difference was found in the accuracy of recognition of happiness $F(2,42)=1.00$, $p>.05$; sadness $F(2,42)=.895$, $p>.05$ anger $F(2,42)=.539$, $p>.05$; and disgust $F(2,42)=.271$, $p>.05$.

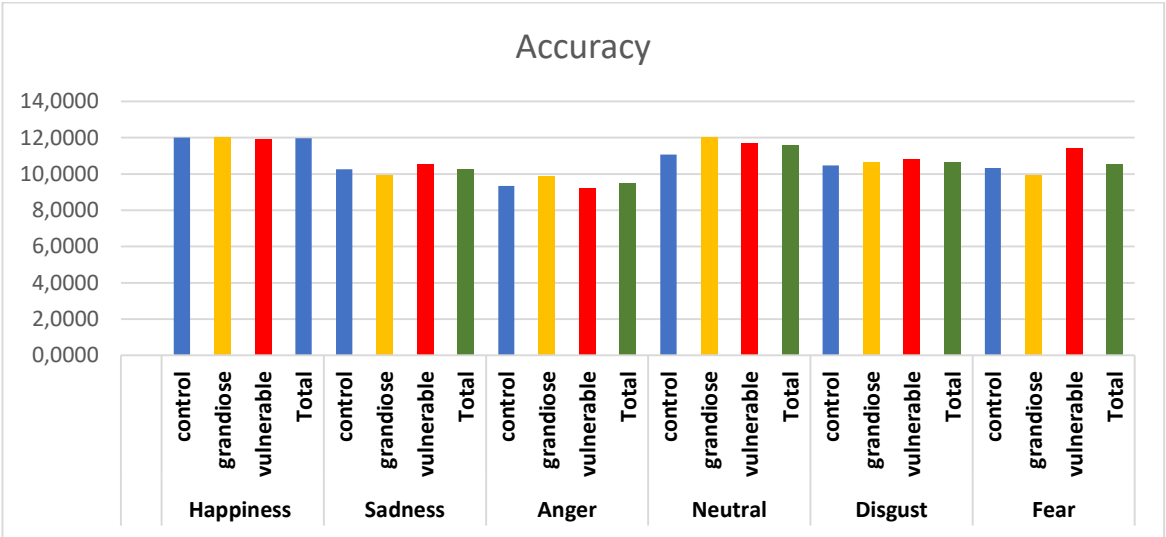

Figure 5.1. Mean Accuracy of Facial Emotion Recognition

Table 5.3. Mean Accuracy of Facial Emotion Recognition

Group		Response Accuracy (Mean)					
	Orientation	Happiness	Sadness	Anger	Neutral	Disgust	Fear
Control							
	upright	12	10.27	9.33	11.07	10.45	10.33
	upside-down	11.53	6.87	8.8	11.73	9.33	10.4
Grandiose							
	upright	12	9.33	9.87	12	10.67	9.93
	upside-down	11.93	7.13	8.93	11.93	8.27	9.27
Vulnerable							
	upright	11.93	10.53	9.2	11.67	10.8	11.4
	upside-down	11.73	7.8	8.71	11.2	8.33	9.6

5.3. Reaction Time

3 × 2 × 6 ANOVA with a group (grandiose versus vulnerable versus controls) as a between-subject factor, and orientation (upright versus upside down) and emotion (happiness versus anger versus disgust versus fear versus sadness versus neutrality) as within-subject factors were performed.

The main effect of the group was significant, $F(2,42)=41.45$, $p<.05$. The main effect of orientation was not significant, $F(2,42)=2.58$, $p>.05$.

The interaction between orientation and group was not significant $F(2,42)=1.16$, $p>.05$, indicating different orientation effects across groups.

Moreover, the interaction between orientation, group, and emotion was significant $F(2,42)=1.915$, $p<.05$, which indicates that the orientation effect was different for all groups, whatever the emotion.

Orientation did not had a significant effect $F(2,42)=2.58$, $p>.05$

The interaction between emotion and group was significant $F(2,42)=2.85$, $p>.05$

Whether the groups differ in response time in positive emotions and negative emotions was also checked. The results were not significant for positive emotions $F(2,42)=.60$, $p<.05$, neither for negative emotions $F(2,42)=1.75$, $p<.05$ for upright faces.

To check whether the groups differ in terms of reaction time, a 3 x 6 ANOVA analysis (with the group as a between-subject factor and emotion as a within-subject factor) was performed for upright faces.

No significant difference across all groups was found in overall reaction time on upright faces $F(2,42)=.634, p>.05$. The mean reaction time for the control group was $M=121.43$; $SD=21.73$, mean reaction time for the grandiose narcissism group was $M=127.68$; $SD=9.32$ and the mean reaction time for the vulnerable narcissism group were $M=120.93$; $SD=21.03$.

There was a significant interaction between group and emotion $F(2,42)=4.10$, $p<.05$

Results show that there is a significant difference among groups in terms of reaction time in the emotions of sadness $F(2,42)= 4.656$, $p<.05$, anger $F(2,42)= 3.432$, $p<.05$, neutral $F(2,42)= 4.928$, $p<.05$ and disgust $F(2,42)= 9.251$, $p<.05$. Vulnerable narcissists were faster in recognition of negative emotions such as fear, disgust, and sadness; whereas grandiose narcissists were faster in recognition of anger and neutral expressions as shown in Graph 2.

No significant difference was found in the reaction time on recognition of happiness $F(2,42)=1.12$, $p>.05$; and fear $F(2,42)=1.63$, $p>.05$.

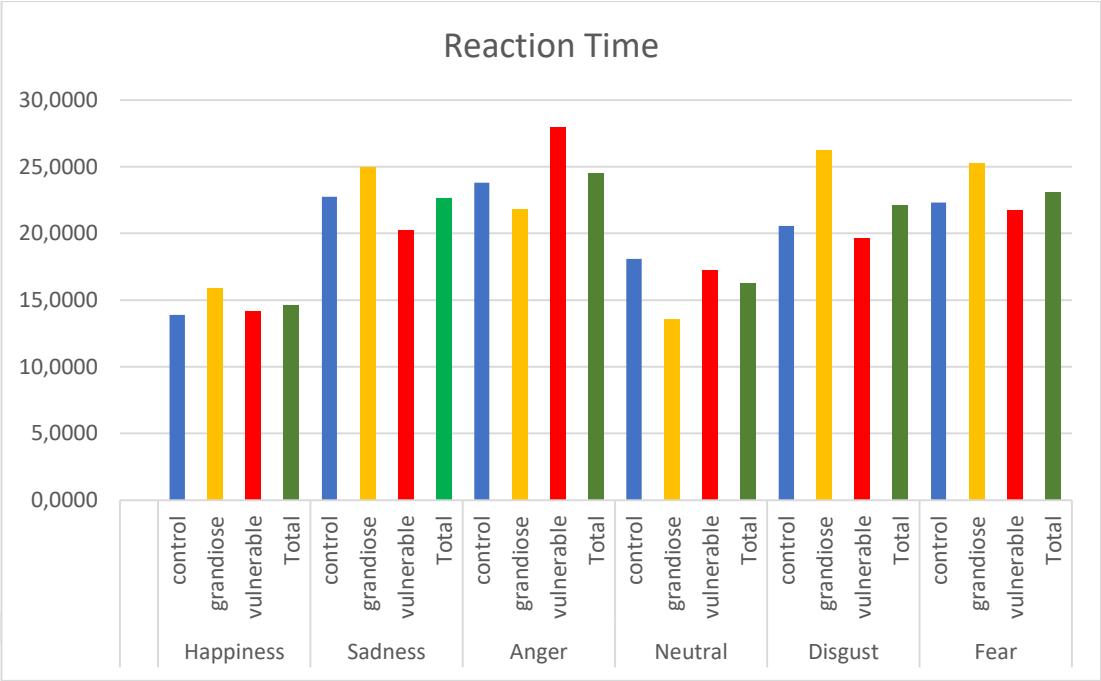

Figure 5.2. Reaction Time of Emotions

Table 5.4. Mean Reaction Time of Emotions

Group		Response Time (Mean)					
	Orientation	Happiness	Sadness	Anger	Neutral	Disgust	Fear
Control							
	upright	13.88	22.75	23.8	18.01	20.57	22.32
	upside-down	11.08	30.65	31.94	22.11	30.24	32.34
Grandiose							
	upright	15.85	24.97	21.83	13.53	26.21	25.28
	upside-down	16.72	34.57	32.14	16.86	32.15	29.97
Vulnerable							
	upright	14.17	20.2	27.97	17.22	19.64	21.73
	upside-down	16.61	29.78	29.27	18.15	28.52	32.06

5.4. Personality and Mood States

ANOVA results show that there is a significant difference between control, grandiose, and vulnerable narcissistic groups in terms of positive mood states $F(2,42)=9.561$, $p<.05$ and negative mood states $F(2,42)=10.642$, $p<.05$.

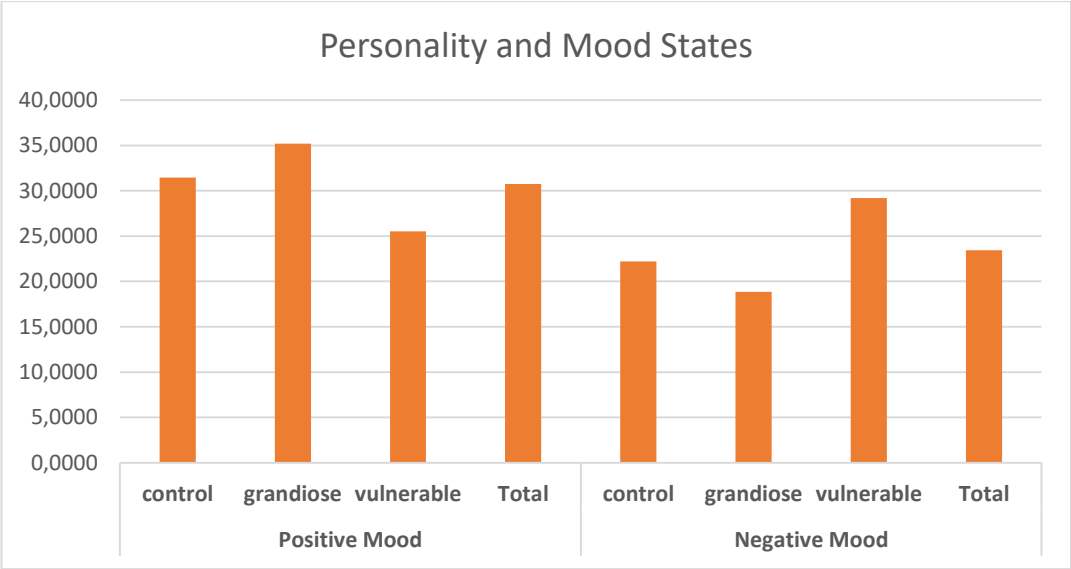

Figure 5.3. Personality and Mood States

5.5. Mood, Personality and Emotion Recognition

To determine the significance of the indirect and mediating effect of mood, Sobel Test was conducted. First of all, the mediating role of positive mood on the relationship between grandiose narcissism and recognition of positive emotions was measured. In order to be able to conduct the Sobel Test, several steps need to be taken.

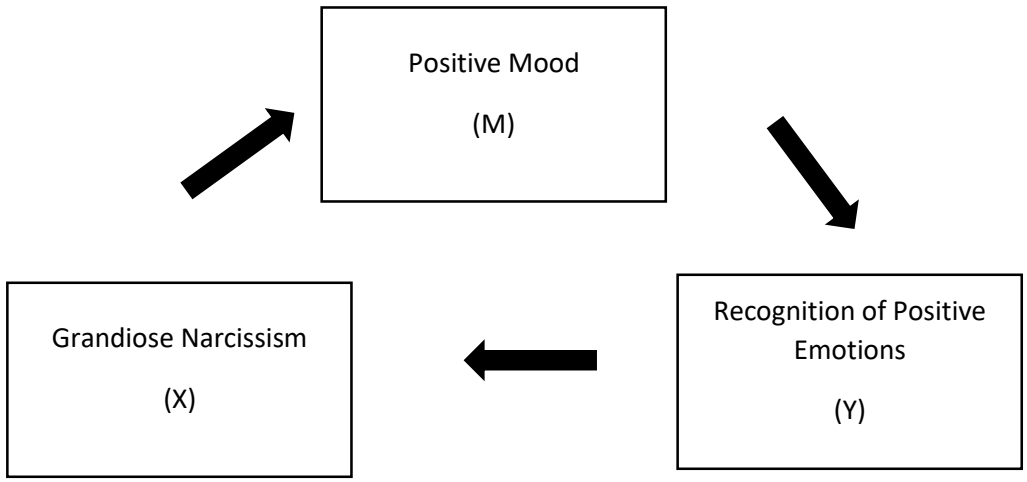

Figure 5.4. The Mediating Effect of Positive Mood on the Relationship Between Grandiose Narcissism and Recognition of Positive Emotions

As a first step, the effect of grandiose narcissism on the recognition of positive emotions was measured with regression analysis. As a result, a significant regression equation was found as $F(1,43)=4.27$, $p < .05$ with an R^2 of .09

In the second step, the effect of grandiose narcissism on positive mood states was measured. As a result, a significant regression equation was found as $F(1,43)=10.55$, $p < .05$ with an R^2 of .20

In the third step, both the effect of grandiose narcissism and positive mood on facial emotion recognition was measured. The results were not significant $F(1,43)=2.38$, $p>.05$ with a R^2 of .10

Finally, the Sobel test analysis was conducted. Results showed that the indirect effect of grandiose narcissism on the recognition of positive emotions via the mediating variable of positive mood was not statistically significant $z=0.69$ ($p>.05$).

In this part, the mediating role of negative mood on the relationship between vulnerable narcissism and recognition of negative emotions was measured. The required steps to conduct a Sobel Test have been taken.

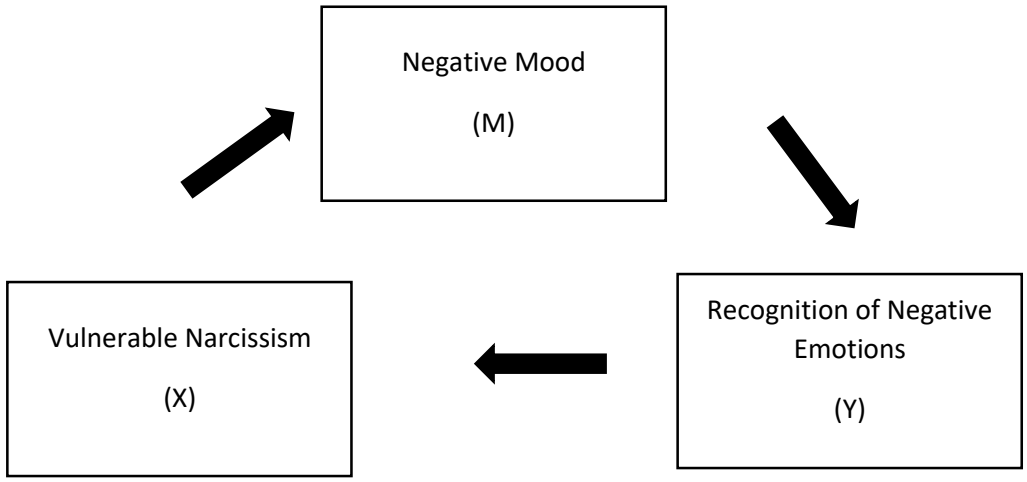

Figure 5.5. The Mediating Effect of Negative Mood on the Relationship Between Vulnerable Narcissism and Recognition of Negative Emotions

As a first step, the effect of vulnerable narcissism on the recognition of negative emotions was measured with regression analysis. The results were not significant $F(1,43)=1.70$, $p > .05$ with a R^2 of .04

In the second step, the effect of vulnerable narcissism on negative mood states was measured. As a result, a significant regression equation was found as $F(1,43)=18.67$, $p < .05$ with an R^2 of .30

In the third step, both the effect of vulnerable narcissism and negative mood experience on the recognition of negative emotions was measured. The results were significant $F(1,43)=3.72$, $p<.05$ with a R^2 of .15

The final calculation of the Sobel Test shows that the indirect effect of vulnerable narcissism on the recognition of negative emotions via the mediating variable of negative mood was statistically significant $z=-2.20$, $p<.05$.

CHAPTER VI

DISCUSSION

The aim of this study was to investigate the effects of types of narcissism on facial emotion recognition. Following the hypotheses of the research, the current results have been found:

H1: There is a difference between vulnerable narcissism and grandiose narcissism in terms of mood states.

H1a: Vulnerable narcissists scored higher on experiencing negative mood states compared to other groups.

H1b: Grandiose narcissists scored higher on experiencing positive mood states compared to other groups.

H2: There is a difference between vulnerable narcissism and grandiose narcissism in terms of the accuracy of facial emotion recognition.

H2a: Compared to other groups, individuals with high grandiose narcissistic traits are significantly more accurate in recognizing positive emotions.

H2a1: Individuals with high grandiose narcissistic traits are not significantly more accurate in recognizing the emotion of happiness.

H2a2: Individuals with high grandiose narcissistic traits are significantly more accurate in recognizing the emotion of neutral.

H2b: Compared to other groups, individuals with highly vulnerable narcissistic traits are not significantly more accurate in recognizing negative emotions.

H2b1: Individuals with highly vulnerable narcissistic traits are not more accurate in recognizing the emotion of sadness compared to other groups.

H2b2: Individuals with highly vulnerable narcissistic traits are not more accurate in recognizing the emotion of anger compared to other groups.

H2b3: Individuals with highly vulnerable narcissism are more accurate in recognizing the emotion of fear compared to other groups.

H2b4: Individuals with highly vulnerable narcissistic traits are not more accurate in recognizing the emotion of disgust compared to other groups.

H3: There is a difference between vulnerable narcissism and grandiose narcissism in terms of the reaction time of facial emotion recognition.

H3a: Compared to other groups, individuals with high grandiose narcissistic traits are not faster in recognizing positive emotions.

H3a1: Individuals with high grandiose narcissistic traits are not significantly faster in recognizing the emotion of happiness compared to other groups.

H3a2: Individuals with high grandiose narcissistic traits are significantly faster in recognizing the emotion of neutrality compared to other groups.

H3b: Compared to other groups, individuals with highly vulnerable narcissistic traits were not faster in recognizing negative emotions.

H3b1: Individuals with highly vulnerable narcissistic traits are faster in recognizing the emotion of sadness compared to other groups.

H3b2: Individuals with highly vulnerable narcissistic traits are not faster in recognizing the emotion of anger compared to other groups.

H3b3: Individuals with highly vulnerable narcissistic traits are faster in recognizing the emotion of fear compared to other groups.

H3b4: Individuals with highly vulnerable narcissistic traits are faster in recognizing the emotion of disgust compared to other groups.

H4: Mood states of the individual will mediate the effect of personality on facial emotion recognition.

H4a: Positive mood states do not mediate the effect of grandiose narcissism on positive facial emotion recognition.

H4b: Negative mood states do mediate the effect of vulnerable narcissism on negative facial emotion recognition.

In line with the previous research, which has found a link between negative affect and vulnerable narcissism and positive affect with grandiose narcissism (Euler et al., 2018; Dickinson & Pincus, 2003; Miller et al., 2010), the current study has also found that vulnerable narcissists generally have a negative state of mood and grandiose narcissists generally have a positive state of mood.

Personality traits affect our cognitive processes, such as perception, recall, judgment, and recognition (Rusting, 1998; Tian et al., 2010). In line with previous findings, the current study has also concluded that different dimensions of personality have a significant effect on facial emotion recognition.

One of the possible reasons why there was not a significant effect on the difference between recognition of positive emotions across groups might be due to a limited number of positive emotions used in the research and because happiness is one of the most recognized emotions.

The significant effect of vulnerable narcissism on the reaction time of sadness, fear, and disgust is in line with the trait-congruency hypothesis (Rusting, 1998).

Negative mood states did mediate the effect of vulnerable narcissism on negative facial emotion recognition, which further supports the theory of mediation approach to emotion processing (Rusting, 1998). One of the possible reasons why this was not the case with grandiose narcissism, the positive mood and recognition of positive emotions might be due to the limited number of positive emotions used in the research.

6.1. Limitations and Future Directions

This study had several limitations:
The first limitation of the study is that the current study was done on a non-clinical, healthy population. More extreme and significant results may appear in a clinical sample. Further studies may consider including clinical samples when investigating the effect of personality on facial emotion recognition.

The second limitation of the study, which is connected to the first limitation, is that the selection criteria were based on self-report measures due to a healthy population being targeted. Although the participants were informed that their data would be anonymous and will be kept confidential and although they were told that it is important to be as honest as possible, when answering the questions, some of them might not fill out the instrument in an honest way because different defense mechanisms can be evoked while reading and answering the questions about oneself. Future studies may consider including structural, face-to-face interviews and different selection tools while selecting participants.

The third limitation of the study was that the sample included a young aged group. Because personality traits become more dominant with age, further studies may consider investigating older-aged groups.

The fourth limitation of the study is that it included only six basic emotions, and these were static expressions of emotions. Future studies may consider including different types of emotions and dynamic expressions.

6.2. The Strengths of the Study

1) Many studies on personality research rely only on correlational results. One of the strengths of the current study is that it has an experimental design.
2) In recent years, research on personality has relied mostly on online data collection. In the current study, all of the data was obtained face-to-face, with no-to-minimum environmental distractions.
3) Up to date, research on different personality traits and emotion recognition has mostly reported the accuracy of recognition only. Our study is one of the rare studies that have taken into account both the accuracy and reaction time of the participants.
4) The current study can contribute to the debate that narcissism has different types and that they differ across different variables.

6.3. Clinical Implications

The findings of the study may offer several clinical implications:

First of all, clinicians must be aware that there are different types of narcissism, and different narcissistic types differ in their cognitive processes and mood states.
Vulnerable narcissists may be more prone to seek help because of their negative mood states and higher recognition of negative stimuli around the world. On the other hand, grandiose narcissists may be more defensive in seeking professional help because of their positive mood states and higher recognition of positive stimuli around the world.

Since vulnerable narcissists are especially sensitive to the recognition of negative emotions and are more prone to be in a negative mood state, the rationale that some

personality traits may have an effect on our mood states and these may affect our perception of the world may be explained to the clients while working with cognitive interventions.

The fact that vulnerable narcissists recognize the emotion of fear more quickly may be an indication that they are prone to perceive signals of danger more quickly. This information can be useful to better understand vulnerable narcissism and the problems they experience in their daily lives, such as anxiety.

The fact that grandiose narcissists recognize positive emotions more quickly and negative emotions slower may be an indication that they may ignore or suppress negative stimuli around the world. This information can be useful to understand better grandiose narcissism and the problems they experience in their daily lives, such as having low empathy and ignoring the negative feelings of others.

6.4. Conclusion

The current study is the first to examine the effects of types of narcissism and mood states on facial emotion recognition. Findings reveal that grandiose narcissists generally experience positive mood states, and vulnerable narcissists generally experience negative mood states. Grandiose narcissists are more accurate in the recognition of neutral expressions, whereas vulnerable narcissists are more accurate in the recognition of fear expressions. In terms of reaction time, grandiose narcissists were faster in recognition of neutral and angry expressions; vulnerable narcissists were faster in recognition of sadness, fear, and disgust expressions. A negative state of mood did mediate the effect of vulnerable narcissism on the recognition of negative emotions.

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APPENDIXES

APPENDIX A

Narsistik Kişilik Envanteri (NKE-16)

Yönerge: Aşağıdaki her bir tutum çifti içinden, lütfen size en uygun olanı belirtiniz.

1		İnsanlar bana iltifat ettiklerinde bazen utanırım.
		İyi biri olduğumu biliyorum, çünkü herkes böyle söyler.
2		Kalabalık içinde herkesten biri olmayı tercih ederim.
		İlgi merkezi olmayı severim.
3		Pek çok insandan ne daha iyi ne de daha kötüyüm.
		Özel biri olduğumu düşünüyorum.
4		İnsanlar üzerinde otorite kurmaktan hoşlanırım.
		Emirlere uymaktan rahatsız olmam.
5		İnsanları kolayca manipüle ederim.
		İsanları manipüle ettiğimi fark ettiğimde rahatsız olurum.
6		Layık olduğum saygıyı elde etme konusunda ısrarcıyımdır.
		Hak ettiğim saygıyı genellikle görürüm.
7		Gösterişten kaçınırım.
		Genellikle fırsatını bulduğumda şov yaparım.
8		Her zaman ne yaptığımı bilirim.
		Bazen yaptığım şeyden emin değilimdir.
9		Bazen iyi hikaye anlatırım.
		Herkes hikayelerimi dinlemekten hoşlanır.
10		İnsanlardan çok şey beklerim.
		Başkaları için bir şeyler yapmaktan hoşlanırım.
11		İlgi merkezi olmaktan hoşlanırım.
		İlgi merkezi olmak beni rahatsız eder.
12		Otorite olmanın benim için pek bir anlamı yoktur.
		İnsanlar daima otoritemi kabul ediyor görünürler.

13		Önemli bir insan olacağım.
		Başarılı olmayı umuyorum.
14		İnsanlar söylediklerimin bazılarına inanır.
		İnsanları istediğim her şeye inandırabilirim.
15		Kendi kendime yeterim.
		Başkalarından öğrenebileceğim çok şey var.
16		Herkes gibi biriyim.
		Sıra dışı biriyim.

APPENDIX B

Kırılgan Narsisizm Ölçeği (KNÖ)

Lütfen aşağıdaki soruları, her bir maddenin sizin duygu ve davranışlarınızı ne dereceye kadar tanımladığına karar vererek cevaplandırınız. Altta yazılı derecelendirme ölçeğinden bir rakam seçerek her bir maddenin yanındaki boşluğu doldurunuz.

1 = Hiç tanımlamıyor / Doğru değil / Kesinlikle katılmıyorum

2 = Yansıtmıyor

3 = Ne tanımlıyor ne tanımlamıyor / Kararsızım

4 = Yansıtıyor

5 = Oldukça tanımlıyor /Doğru/ Kesinlikle katılıyorum

1. Duygularım, başkalarının alayları veya aşağılayıcı sözleriyle kolayca incinir.
2. Bir mekâna girdiğimde sıklıkla kendimin farkında olur ve başkalarının gözlerinin benim üzerimde olduğunu hissederim.
3. Diğer insanların sorunları hakkında endişelenmeksizin kendimde yeterince sorun olduğunu hissederim.
4. Mizaç olarak çoğu insandan farklı olduğumu hissederim.
5. Sıklıkla başkalarının görüşlerini kişisel olarak yorumlarım.
6. Kendimi kolayca kendi uğraşlarıma kaptırır ve başkalarının varlığını unuturum.
7. Bir gruptaki kişilerin en az biri tarafından takdir edildiğimi bilmezsem, o grupla beraber olmaktan hoşlanmam.
8. Diğer insanlar sorunları için zamanımı ve acılarını paylaşmamı isteyerek bana geldiklerinde içten içe kızgın ya da rahatsız olurum.

APPENDIX C

PANAS-GEN

Bu ölçek farklı duyguları tanımlayan bir takım sözcükler içermektedir. GENEL OLARAK, GENELLİKLE nasıl hissettiğinizi düşünüp her maddeyi okuyun. Uygun cevabı her maddenin yanında ayrılan yere (puanları daire içine alarak) 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 (dikkati açık)	1	2	3	4	5

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

CURRICULUM VITAE

Name-Surname: Nefise Shaban

Education:

2015-2019: BA in Psychology International Balkan University, North Macedonia

BA exchange programme in Psychology Istanbul Aydın University, Turkey

2019-Present: MA in Clinical Psychology, Ibn Haldun University, Turkey

Experience:

2018-2019: Assistant psychologist, Dua Ylberi, North Macedonia

2020-2021: Clinical Psychology Internship, Psychotherapy and Research Center of Ibn Haldun University

2019-2021: Teaching and Research assistant, Ibn Haldun University

2021-Present: Private psychological counseling, Turkey

Licences & Certifications:

2021: Cognitive Behavioural Therapy and Supervision, Bilişsel Davranışçı Psikoterapiler Derneği, Turkey

2022: Dialectical Behavioral Therapy Skills Training, Diyalektik Terapi, Turkey

2023: EMDR therapy and supervision, Davranış Bilimleri Enstitüsü, Turkey

2023: Schema Therapy and supervision, Dr. Alp Karaosmanoğlu, Turkey

2023: Gottman Couples Therapy, Psikoloji İstanbul, Turkey

Honors & Awards:

2019: Top student of the generation 2015-2019, International Balkan University, North Macedonia

2019: Best student of Faculty of Humanities and Social Sciences, International Balkan University, North Macedonia