

**RELATIONSHIP BETWEEN PSYCHOTIC-LIKE  
EXPERIENCES, AUTOMATIC THOUGHTS,  
COPING STYLES AND PERCEIVED SOCIAL  
SUPPORT**



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RELATIONSHIP BETWEEN PSYCHOTIC-LIKE EXPERIENCES, AUTOMATIC  
THOUGHTS, COPING STYLES AND PERCEIVED SOCIAL SUPPORT

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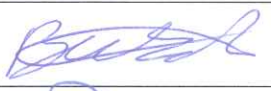

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## **ABSTRACT**

### **RELATIONSHIP BETWEEN PSYCHOTIC-LIKE EXPERIENCES, AUTOMATIC THOUGHTS, COPING STYLES AND PERCEIVED SOCIAL SUPPORT**

Gülen, Müge

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There is growing evidence that psychotic-like experience (PLEs) including delusional ideation, magical thinking or hallucinatory experiences can be also observed in the general population. These psychotic-like experiences can differ in terms of persistence, severity, intensity, degree of distress they cause and the extent of medical help they require. Although recent researches emphasize that even psychotic-like experiences may occur independently from a psychotic disorder; it may also help to determine predispositions to a psychotic disorder. Thus, in the present study, it is thought to be important to determine the possible predictors of psychotic-like experiences and the outcomes can be used for developing prevention programs. Possible factors that might predict PLEs are determined based on several cognitive models that explain how psychotic disorders develop. Negative automatic thoughts, coping styles and perceived social support are considered to be the possible

predictors of PLEs. In order to measure these factors, Community Assessment of Psychic Experiences Scale (CAPE-42), Automatic Thoughts Questionnaire (ATQ), Ways of Coping Inventory (WOCI) and Multi- Dimensional Perceived Social

Support Scale (MSPSS) were used as measurement tools. It is hypothesized that automatic thoughts, coping styles and perceived social support would predict psychotic-like experiences. Data was collected from 472 participants ( $M_{age}= 29$  years old,  $SD= 9.52$ , range=17-65 years old). According to results, automatic thoughts and passive coping styles were the most powerful and significant predictors of PLEs.

Automatic thoughts, passive coping styles and perceived social support from friends are the significant predictor of both positive and depressive dimensions.

Additionally, automatic thoughts, active coping styles, perceived family and friend support are the significant predictors of negative dimension of PLE's. Despite no hypothesis was made related to age, it was found that younger participants have higher psychotic-like experiences scores than the older participants. Results of the study are discussed according to the literature findings. The strengths and limitations of the study and suggestions for further researches and possible prevention strategies were also discussed.

*Keywords:* Psychotic-like experiences, psychosis, automatic thoughts, cognitive biases, coping styles, perceived social support

## ÖZ

### PSİKOTİK BENZERİ YAŞANTILAR, OTOMATİK DÜŞÜNCELER, BAŞ ETME STİLLERİ VE ALGILANAN SOSYAL DESTEK ARASINDAKİ İLİŞKİ

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Sanrısız düşünce, büyü düşünme veya halüsinasyon gibi deneyimleri içeren psikotik benzeri yaşantıların genel popülasyonda da görülebildiğine dair kanıtlar artmaktadır. Bu psikotik benzeri yaşantılar, süreklilik, ciddiyet, yoğunluk, neden oldukları rahatsızlık derecesi, ihtiyaç duydukları tıbbi yardımın kapsamında farklılık gösterebilir. Yapılan son araştırmalar, psikotik benzeri yaşantıların psikotik bozukluktan bağımsız olabileceğini vurgulasa da; psikotik bozukluğa yatkınlığın belirlenmesine de yardımcı olabileceğini göstermektedir. Bu nedenle, bu çalışmada, psikotik benzeri yaşantıların olası yordayıcılarının belirlenmesinin önemli olduğu ve sonuçların önleme programlarının geliştirilmesinde kullanılabileceği düşünülmektedir. Psikotik benzeri yaşantıları yordayabilecek olası faktörler, psikotik

bozuklukların nasıl geliştiğini açıklayan bilişsel modellere dayanarak belirlenmiştir. Otomatik düşünceler, başa çıkma stilleri ve algılanan sosyal destek, psikotik benzeri yaşantıların olası yordayıcıları olarak ele alınmıştır. Bu faktörleri ölçmek için, Toplumda Psikik Yaşantılar Ölçeği (CAPE-42), Otomatik Düşünceler Ölçeği (ATQ), Başa Çıkma Stilleri Envanteri (WOCI) ve Çok Boyutlu Algılanan Sosyal Destek Ölçeği (MSPSS) kullanılmıştır. Otomatik düşüncelerin, başa çıkma stillerinin ve algılanan sosyal desteğin psikotik benzeri yaşantıları yordayacağı varsayılmaktadır. 472 katılımcıdan veri toplanmıştır ( $\bar{X} = 21.19, S = 2.25$ , yaş aralığı = 17-65). Elde edilen sonuçlara göre, otomatik düşünceler ve pasif başa çıkma stilleri, psikotik benzeri yaşantılar toplam puanının anlamlı ve önemli yordayıcılarıydı. Otomatik düşünceler, pasif baş etme stilleri, aileden ve arkadaşlardan algılanan sosyal destek pozitif ve depresif belirtilerin önemli yordayıcıları olarak bulunmuştur. Ek olarak, otomatik düşünceler, aktif başa çıkma tarzları ve aileden ve arkadaşlardan algılanan sosyal destek, psikotik benzeri yaşantıların negatif belirtiler boyutunun önemli yordayıcıları olarak bulunmuştur. Yaşla ilgili hipotez kurulmamasına rağmen, genç katılımcıların yaşlı katılımcılardan daha yüksek psikotik benzeri yaşantı puanlarına sahip oldukları bulunmuştur. Çalışmanın sonuçları literatür bulgularına göre tartışılmıştır. Çalışmanın güçlü yönleri ve kısıtlamaları ile gelecekteki araştırmalar ve olası önleme stratejileri için öneriler tartışılmıştır.

Anahtar Kelimeler: Psikotik benzeri yaşantılar, psikoz, otomatik düşünceler, bilişsel çarpıtmalar, baş etme stilleri, algılanan sosyal deste



*To my mother, father,  
and brother*

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## CHAPTER 1

### INTRODUCTION

#### **1.1 Psychotic Continuum: Link Between Psychosis and Psychotic-Like Experiences**

When the term psychosis was first introduced, the key characteristics of psychotic disorders have been thought as hallucinations and delusions (van Os & Murray, 2013). In the past, general idea was that psychotic experiences are only seen in psychiatric disorders. The diagnostic process depends on the dichotomization of psychotic symptoms as either present or absent (Rose, 1992). Accordingly, medical research has been strongly influenced by the categorical approach and focused on subjects according to these medical criteria (van Os et al., 1999). Several decades ago, a challenging approach initiated and by studying subjects presenting psychotic-like symptoms postulates that light may be shed on the etiology of psychosis (Venables, 1995, Venables et al., 1990). It becomes apparent that, contrary to situation in clinical practice, psychotic symptoms exists as a continuum rather than as an all-or-none phenomenon. There are substantial evidences that individuals who are not readily diagnosable according to DSM/ICD criteria have shown high rates of psychotic experiences suggesting an “extended psychosis phenotype”. It suggests

that sub-clinical individuals experiencing psychotic-like experiences (PLE's) shares environmental, demographic, psychopathological and familial features which is both temporally and phenomenologically continuous with clinical psychotic disorders (van Os & Linscott, 2012). For instance, several studies have examined genetic factors associated with extended psychosis phenotype. According to the findings of these studies, twins (Jim, 2015, Kendler & Hewitt, 1992) and relatives of patients with psychosis are influenced by genetic factors (Vollema et al., 2002). Additionally, psychotic-like experiences are associated with socio-environmental factors such as stressful life events (Johns, Cannon & Singleton, 2004; Morgan, Reininghaus & Fearon, 2014), urbanity (van Os et al., 1969) and ethnicity (Linscott & van Os, 2013).

In clinical samples, psychotic experiences are considered to be varying along dimensions (Strauss, 1989). Similarly, the expressions of psychotic experiences in the general population can be considered as a continuum as well with different levels of persistence, severity, and degree of distress they cause, intensity and the extent of medical help they require (Rössler et al. 2015). The first researchers to define the possible risk criteria for psychosis were McGorry and Yung, which reflect an ultra-high risk state including brief intermittent psychotic states, genetic risk for psychotic illness, attenuated positive symptoms and dramatic decline in functioning (Yung & McGorry, 1996). Psychotic-like experiences can be considered as an intermediate phenotype that is qualitatively similar to patients with psychosis and ultra-high risk states, but quantitatively less severe and present with less persistence, frequency, severity and associated impairment (Van Os et al., 2009). Psychotic disorders can be described with several psychopathological dimensions that are correlated which in particular dimensions of positive, negative and affective symptoms (McGorry et al.,

1998). Interestingly, there are evidences that psychotic-like experiences show a similar pattern. Hence, within the psychosis phenotype positive psychotic-like experiences are strongly correlated with the negative symptoms (van Os et al., 2000).

There are studies, which have assessed hallucinatory experiences in samples of healthy college students. According to findings, at some point in their lives a considerable proportion of people experiences hallucinations (Posey & Losch, 1983; Barrett & Etheridge, 1992). Additionally, normal individuals can hold delusional ideas. For instance, in Cox and Cowling's (1989) study half of the sample reported a belief in thought transference, 25% believed in reincarnation and 25% believed in ghosts. Also, individuals with intense religious beliefs can have experiences like positive symptoms of psychosis (Jackson, 1997). Healthy individuals may experience visual or auditory hallucinations or delusions as a result of trauma sleep deprivation or stress (Alptekin, Ulas, Kıvrıkcık-Akdede, Tümüklü & Akvardar, 2009). Symptoms experiences by non-clinical population commonly referred as psychotic-like experiences, psychotic proneness, at-risk mental states or schizotypy (Fach et al. 2013). Schizotypy is a personality trait of psychotic symptoms, and identification of non-clinical schizotypal traits provides evidence for a continuum model for psychosis (Claridge, 1997).

For sub-clinical psychosis, the median prevalence rate is 5%. Additionally, psychotic-like experiences are present approximately 17% of children, 7,5 % of adolescents and 5% of adults in the general population (Kelleher et al., 2012; van Os et al. 2009). Experiencing symptoms of psychosis do not necessarily associated with the presence of a disorder. However, there are also studies showing that individuals with PLE's have a tendency to psychosis. These findings suggest that while psychotic experiences occur independently from psychotic disorder, they also may

endure over time and as a result, may followed by a psychotic disorder (van Os & Linscott, 2012).

Although, not every patient with psychosis reports a prodrome, majority of them describe several sub-acute symptoms in the years preceding psychosis such as changes in perception, attention, beliefs, drive, affect and behavior (Yung & McGorry, 1996). According to a meta-analysis, this conversion in exposed individuals (0.56 %) was 3.5 times higher than the normal (without psychotic experiences) individuals (0.16%) (Kaymaz et al., 2012). In this meta-analysis, there is a psychometric risk for developing psychotic disorder in non-help seeking samples depending on severity and persistence of psychotic experiences as well as social dysfunction, level of active coping, effective dysregulation and motivational impairment. Thus, besides genetic influences, there are also environmental risk factors for the risk group to develop a psychotic disorder. Depending on the point along the continuum individuals belong to, subsequent transition rates might be lower or higher (van Os & Linscott, 2012). Additionally, individuals who are more preoccupied with and anxious about their experiences are more likely to develop psychosis in the end (Freeman et al., 2004).

Previous findings showed that it is dependent on factors such as psychopathological comorbidities, intrusiveness as well as cultural and personal factors such as illness behavior, coping styles and societal tolerance (Johns & van Os, 2001). In the hope that clinical work may produce better clinical outcomes, research in psychotic disorders has explored the possible intervention strategies before the onset of the full disorder. Therefore, in the current study it is considered to be important to determine the other possible predictors of psychotic-like experiences (PLEs) that might contribute to the possible intervention programs.

## **1.2.Cognitive-Behavioral Explanations for Psychotic Continuum**

### *Stress-Vulnerability Model*

The stress-vulnerability model (Zubin et al., 1977) applies to many disorders in order for identifying and treating. It is known that both genetic and other predispositions have a role in the etiology of mental illnesses. The model integrates biological, social and psychological factors. The important question here is, how stress impacts individuals to develop a mental illness. Similar to other disorders such as anxiety, depression or post-traumatic stress, the development of psychosis is also stress-related. When individual's vulnerability level is reduced by stress, it triggers psychotic features (Gispen-de Wied & Jansen, 2002). Thus, it is important to determine individual's threshold of vulnerability. When studying psychosis and at-risk populations, twin and family studies are valuable. According to them, cognitive functions (Staal et al., 2000) abnormalities in brain morphology (Staal, Hulshoof Pol & Schnack, 2000) and information processing (Dawson, Nuechterlein & Schell, 1994) have been found to be the important components that cause the individual more vulnerable to develop a mental illness. According to a detailed review of Nuechterlein (1987), four types of variable can be considered as important markers of vulnerability to psychosis. These are schizotypal personality characteristics, social skills deficit, non-specific physical signs of neurological impairment and cognitive-neuropsychological deficits. These four factors have been found both patients with psychosis and also amongst populations at risk for developing a psychotic disorder. Even there are different theories about the vulnerability; all models assume that the degree of vulnerability is not the only factor that influence the likelihood of vulnerability becoming manifest as an episode of psychosis, but experiencing a range of additional stresses are also necessary (Fowler, Garety & Kuipers, 1995).

Precipitating factors for the development of psychotic episode may be either psychological or biological. Psychological stress factors that have been found important in psychosis are expressions of positive and negative emotions in the environment, major life events and daily hassles (Gispen-de Wied, 2000). However, recent studies show that not only observations can give information about stressful events, but also it is important to understand individual's own perceptions about the events that affect one's emotional state (Myin-Germeys et al., 2001). As a result, it is important to determine what is stressful for the patient. What is stressful for the psychiatrist can be different from one that the patient thinks (Lysaker et al., 2001). When the person is more vulnerable, the less stress is required to develop a psychotic illness.

Lastly, in order an individual to develop a chronic syndrome, same stresses may converge to influence the outcome of the disorder. Additional stresses in this phase are more likely to be associated with an individual's self-worth and maintaining social relationships and social roles. Additionally, characteristic of the social environment, the degree of support from others is important for individual to recover from the schizophrenic syndrome (Strauss, 1989).

Hence, vulnerability-stress models are important frameworks that might be used to understand the important factors that influence the etiology and the maintenance of any psychotic disorder. Because it gives importance to individual differences, the particular factors that are important in a specific case are specified which allows making an individualized formulation and makes psychological interventions possible (Fowler, Garety & Kuipers, 1995).

### *Beck's Theory*

According to Beck's Theory for Delusions, psychotic patients in order to recognize the potential danger, concentrate on monitoring external sources. As a result, they misinterpret threats when there is none because of being alert all the time which is called externalizing bias. Additionally, he mentioned internal bias, which is the belief that what causes the events happen are feelings and attitudes of others. Hence, individuals evaluate the neutral states incorrectly, although there is no external danger (Beck & Rector, 2000). This model suggests that cognitive distortions, including categorical thinking, catastrophizing, overgeneralization, jumping into conclusion and inadequate cognitive processing cause depression, sadness and anxiety (Beck & Rector, 2000). Accordingly, heightened level of anxiety and emotional states also affect the development and maintenance of psychosis (Freeman, Garety, Kuipers & Bebbington, 2002).

Additionally, according to Beck's cognitive model, cognitive and physical vulnerability to psychosis increases when genetic and experiential factors impact with internal representations, which are patient's negative appraisals. These negative internal representations start to influence the information process system under acute and prolonged stress and as a result, inhibit the patient's ability of reality testing (Rector, Stolar & Grant, 2011).

### *The Neurocognitive Explanations*

The most characteristic features of psychosis are hallucinations and delusions. Hallucinations are characterized as false perceptions and delusions as bizarre and irrational beliefs. Both hallucinations and delusions are examples of positive symptoms (Fletcher & Frith, 2009). According to Frith's model abnormal

perceptions is one of the possible explanations for positive symptoms, which is inability to distinguish relevant and irrelevant stimuli (Frith, 1979; Kapur, 2003). Patients attend to stimuli that should be ignored and the failure to ignore irrelevant stimuli caused by a failure to tag these stimuli as self-generated. Thus, there is a deprivation in self-monitoring processes and as a result, they attribute internal situations to the external ones and experienced as alien (Kingdon & Turkington, 1994). According to the brain scans of people experiencing auditory hallucinations, the active areas were found to be similar during both inner speeches and auditory hallucinations (Köroğlu, 2009; Mortan & Tekisanv-Sütçü, 2011). It is accepted that the reason for auditory hallucinations are inner speeches. It is also observed that they tend to think that their own voice is coming from the outside, like someone speaking while they are speaking (Blakemore & Frith, 2003).

Despite self-monitoring explanation captures many positive symptoms, for delusions it is more likely that the underlying problem is the formation of beliefs (Fienberg, 2006). Within this framework, the proposition is true based on the subjective probabilities, which is continually updated by new evidence (Hemsley & Garety, 1986). However, abnormal belief formation observed in deluded patients that their beliefs are not updated appropriately leading to false prediction errors such as jumping into conclusion bias (Garety, Hemsley & Wessely, 1991).

#### *Other Cognitive Models*

According to the *Morrison's explanations for psychosis*, auditory hallucinations are accepted as intrusive thoughts. However, these intrusive thoughts are externally attributed and the person focuses on these intrusions and misinterprets them as dangerous. When a person interprets intrusions as body sensations or voices

it causes distress and shapes behaviors accordingly. Thus, the factor that influences psychotic experiences is interpretations rather than intrusions themselves (Morrison, 2001).

Based on the *heuristic model* of positive psychotic symptoms, individuals may have certain characteristics that serve as vulnerability factors and that when vulnerable individuals encounter environmental stressors, it may precipitate psychotic periods (Nuechterlein & Dawson, 1984). Vulnerability factors include inherent biological (heritability) and psychological (cognitive deficits) as well as acquired biological (birth trauma) and psychological factors (cognitive biases) (Tarrier & Turpin, 1992). Stressors include social environmental stress as well as discrete life events. When preexisting vulnerability characteristics interact with stressors, positive psychotic symptoms or psychotic-like experience may occur (Nuechterlein, Dawson, 1984). Experiencing positive symptoms have short-term and long-term consequences. Short-term results include behavioral (testing the interpretations), emotional (fear, anxiety), cognitive (attention to perceived threat, misinterpretation) or coping basis. Long-term consequences include isolation, loneliness, and social withdrawal (Haddock & Tarrier, 1998).

*The model of Garety and colleagues* is also based on the vulnerability model that involves biological, psychological, social, cognitive and emotional factors. When these vulnerability factors triggered by a stress or trauma an individual experience psychotic or psychotic like experiences. One of the most important thing in this model for positive symptoms to occur is the cognitive disturbances because they lead to anomalous conscious experiences such as actions experienced as unintended or thoughts experienced as voices. Many patients report that cognitive changes that they are experiencing are not ordinary self-generated cognitions. They

are experienced as unfamiliar, potentially threatening and external. However, these experiences transformed to psychotic experiences when emotional changes occur such as anxiety and depression, which influence the processing of anomalous experiences and change their content. Additionally, attribution and reasoning biases, dysfunctional schemas and adverse environments influence the appraisal of these experiences as external. After symptoms occur, they are maintained by cognitive and emotional processes and appraisals of psychosis (Garety et al., 2001).

### **1.3. Psychotic-Like Experiences and the Potential Relevant Factors**

#### **1.3.1. Automatic Thoughts**

Cognitive model is based on the assumption that individuals' perception of events influences their emotions, behaviors and physiology. "It is not a situation that determines what people feel but how they *construe* a situation (Beck, 1964)". Hence, their perception of the situation influences their emotional response and indirectly determines what they do or how they feel. Cognitive behavior therapy is based on identifying surface level and more obvious level of thinking (Beck, 2011).

Cognition is the verbal or imaginary parts that form the flow of consciousness. We have thoughts, images, and descriptions in the surface-level called automatic thoughts. Automatic thoughts are often unnoticed because they have a short and flying nature and only the accompanying emotion is noticeable. However with training one can bring them into consciousness and do a reality check in order to understand if one is suffering from psychological dysfunction. However engaging this kind of critical examination might sometimes become difficult for individuals who are in distress. They generally accept them as true without evaluating (Beck, 2011).

From childhood, certain ideas start to develop about ourselves, other people and the world which are called “core beliefs”. Core beliefs are accepted as absolute truths by the individual himself (Beck & Weishaar, 1989; Beck, 2011). They are overgeneralized, global and rigid beliefs and reflect the content of relatively stable schemas. These core beliefs in turn influence intermediate beliefs, which includes attitudes, rules and assumptions. Intermediate beliefs influence the way people view a situation and accordingly how one thinks, feels and behaves. Core beliefs and intermediate beliefs started to arise in early developmental stages when people started to make sense of their environment. In order to function adaptively in their environment, people need to organize their experiences in a consistent way. Thus, together with the influence of genetic predispositions, the interaction with other people and the world lead to certain beliefs that can vary in their functionality and accuracy (Beck, 2011). When people suffer from a psychiatric disorder, there might be a systematic negative bias in their cognitive processing what causes them to make consistent errors in their thinking (Beck, 1976).

In general, people have little awareness of the automatic and unconscious processes that underlie their judgment (Nisbett & Wilson, 1977). When individuals are uncertain about their actions, they tend to theorize and make incorrect inferences about actions and their causes. These biases in our processes of theorizing lead to inaccuracies in individuals’ perceptions of themselves, other and the world, which is common for all people. However, if exaggerated they may lead to inflexible beliefs and perceptual distortions found in different psychiatric disorders (e.g. Ingram & Kendall, 1987). According to Beck’s cognitive model of psychopathology, cognitive distortions or biases may occur in the cognitive content of automatic thoughts, intermediate beliefs and core beliefs (Beck et al., 1991). These biases or distortions

at the *core belief* level can be seen in *intermediate belief* level or *dysfunctional attitudes* and then at the *negative automatic thoughts level*. Besides, even automatic thoughts cannot be achieved without any help of a cognitive psychotherapist. Nevertheless, the individual himself can generally observe the distress. When dysfunctional attitudes are activated by a stressful event, they lead to cognitive errors and as a result, negative view of the self (e.g. “Nobody loves me”), the world (e.g. “World is bad”) and the future (e.g. “I will always be a loser”)- the cognitive triad which is a specific set of three core beliefs, dominates the individual’s thinking. Intermediate beliefs lead to misinterpret the actual meaning of external stimuli, which represents the erroneous cognitive process (Beck, 1976). Negative automatic thoughts that arise involuntarily in consciousness level are distorted thoughts as the end products of both distorted core beliefs and intermediate beliefs (Beck, 1976). These distorted automatic beliefs, intermediate beliefs and core beliefs are hypothesized to be associated with several emotional problems (Beck et al., 1985).

The relationship between automatic thoughts, depression (e.g. Harrell & Ryon, 1983), anxiety (e.g. Muris, Mayer, Den Adel, Roos & van Wamelen) and also schizophrenia (Sevi & Özyurt, 2013) has already been researched. However, the relationship between automatic thoughts and psychotic-like experiences has not been researched yet. Actually, the studies even investigating the relation between cognitions and psychotic symptoms are very few. However, they indicate that psychotic symptoms occur in the light of dysfunctional thoughts and cognitive distortions. Once maladaptive thinking patterns develop, such as dysfunctional schemas, cognitive errors or maladaptive behaviors, it increases the risk of maintaining psychotic experiences.

Psychosis phenotype shares similar underlying mechanisms and potential risk

factors, which were described in the cognitive models of psychosis (Freeman, Garety, Kuipers, Fowler & Bebbington, 2002). According to cognitive models, cognitive and emotional distortions are crucial for the maintenance and development of psychotic symptoms (Garety et al. 2005). What can be viewed as 'psychotic' is, under certain circumstances normal biases can lead to bizarre beliefs. Hallucinations and bizarre beliefs may arise from relatively normal attempts to give meaning to either internal experiences (e.g. bodily sensations) or external experiences (e.g. ambiguous social situations) (Garety, Fowler & Kuipers, 2000).

There are several studies examining cognitive biases in non-clinical samples. One of the cognitive bias that is both observed in psychotic patients and non-clinical samples is attention to threat (ATB) bias, which impairs data processes at the early stages of attention orienting (Green et al., 2001; Prochwicz & Klosowska, 2017). Studies show that one of the important factor that enables transition from attentional bias to psychotic-like experiences is the high capacity to focus attention. When individuals have high capacities to focus their attention they are more likely process threat-related stimuli for a longer time and as a result, may elaborate on threatening data more deeply compared to individuals with poor capacity to focus attention (Prochwicz & Klosowska, 2018). Hence, it increases the false interpretations of neutral events and exaggerates threat anticipation that is assumed to be a cognitive signal for psychosis (Freeman et al., 2012). Jumping to conclusion bias, which occurs when there is a tendency to make quick decisions, even taking into account, there is little evidence for this has been replicated in the psychosis continuum on the healthy individuals experiencing psychotic like experiences (Freeman et al., 2008; Juarez-Ramos et al., 2014; Warman et al., 2007). It is assumed to be arising when individuals experience enhanced distress (Warman et al., 2007) and related to

positive symptoms, especially delusions (McLean et al., 2017). Delusion proneness is associated with bias against disconformity evidence (BADE) in non-clinical samples (Woodward et al., 2007). Additionally, positive psychotic symptoms were found to be associated with external attribution bias, which is a tendency to make external attributions of failures. It is assumed that it is a defense against negative emotions to blame other people for events rather than situations in patients with psychosis. Recent studies showed external attribution bias increase the persecutory symptoms in non-clinical groups as well (An et al., 2010). Thus, one of the potential risk factor lying at different points of psychosis continuum is cognitive biases means distortion of gathering, processing and interpreting data (Beck & Rector, 2000). The primarily way to understand these patterns is working on automatic thoughts.

### **1.3.2. Coping Styles**

According to the stress-vulnerability model of schizophrenia (SPR), people have an underlying predisposition to the disorder and the interactions between these predispositions and environmental stress determines the onset and the course of the disorder (Nuechterlein & Dawson, 1984). Stress is a negative experience that biochemical, physical, behavioral, cognitive and emotional accommodations accompanied (Baum, 1990). Besides examining the role of abnormalities in brain structures, personalities and genetic factors (Cuesta et al., 1999) of the vulnerability, stress has become an important research subject (Weber et al., 2008). Due to the fact that not all people experience high level of stress are having a disorder, the potential buffering factors that help people to tolerate stress are important to examine. Additionally, researchers also arguing that assessment of stressful life events are not sufficient since it does not involve the role of individual's perceptions of the events (Phillips et al., 2007). In order an event to be perceived as stressful it needs to be

judged as harmful, threatening or challenging (Lazarus and Folkman, 1984). Maybe, because of a psychotic disorder, patients perceive events as threatening and less controllable and as a result, they handle them less effectively (Myin-Germens et al., 2001).

Coping styles is an important factor that influence the degree to which stressful life events are destructive in the overall mental health of the individual (Jackson et al., 1996) and are important contributors to stress perception (Lazarus and Folkman, 1984). Coping is an action-oriented effort to master, tolerate, reduce, minimize or manage stressful situations. In this process, coping resources can be used which include individual differences in self-esteem, a sense of mastery, optimism and social support. These coping resources makes a difference in coping processes, such as confronting emotional response or taking direct action to a stressor (Taylor & Stanton, 2007). There are both adaptive and maladaptive ways to cope with stressful events. Adaptive coping styles improve functioning while maladaptive coping styles do not. Unfortunately, many maladaptive styles are effective in reducing symptoms in short-term, but actually they only help to avoid from distress and anxiety (Jacofsky, Santos, Khemlani-Patel & Neziroglu, 2013).

Folkman and Lazarus (1985), characterize coping styles as either problem focused or emotion focused. Problem focused strategies include attempts to change the individual's situations. On the other hand, emotion-focused strategies include attempts to change the response to the situations. Findings suggesting that problem-focused coping are more effective than emotion-focused coping. Additionally, emotion focused coping is more likely to be related to psychological distress (Billings & Moos, 1984; Sigmon, Stanton & Synder, 1995). A more common approach in studies examining psychosis makes a distinction between adaptive and

maladaptive coping strategies. Adaptive coping strategies include being optimistic and self-confident. On the other hand, maladaptive coping strategies include being submissive, feeling insecure, self-blame and denial.

There is a great evidence that several mental disorders including anxiety disorders, depression, schizophrenia and autism lack adaptive coping resources when confronting with challenges of daily living (Repetti et al., 2002). For instance, severity and duration of the depressive and anxiety symptoms are positively related to passive and avoidant coping (Sempértegui et al., 2017). Additionally, patients with psychosis display more emotion focused and less task focused (van Os & Linscott, 2012), inflexible coping strategies and in turn experience higher emotional distress and higher severity of symptomatology (Ritsner et al., 2003).

There are studies investigating the role of coping styles in ultra-high risk (UHR) groups for psychosis (Kommesch et al., 2016; Lee et al., 2011; Phillips et al., 2012; Pruessner et al., 2011; Tait & Birchwood, 2004). According to Lee et al.'s study (2011), people at UHR for psychosis reported more passive and maladaptive coping strategies similar to the recent-onset schizophrenia patients. They use less problem-focused strategies and more rely on tension reduction compared to healthy controls. This similarity between two groups shows that maladaptive coping patterns may exist before the onset of psychotic illnesses, which shows an existing vulnerability. Individuals at risk for developing psychosis have limited abilities to apply diverse coping strategies. Rather they are restricted to maladaptive coping strategies (Kommesch et al., 2016). Additionally, even there is little known about the treatment outcome of coping styles as a predictor of response in UHR groups, there is evidence that coping styles before treatment is related to symptom improvement after getting a therapy. Hence, it might be an important predictor of

improving symptom outcomes in treatment plans (Kommesch et al., 2016).

There are only few studies showing that maladaptive coping is associated with increased levels of psychotic experiences in non-clinical group (Ered et al., 2017, Lin et al., 2017). According to Lin et al.,'s study (2017), there is a bidirectional relationship between coping styles and psychotic-like experiences. Using more maladaptive strategies are associated with an increase in PLE's overtime and also non-clinical PLE's at baseline were predictive of using more maladaptive coping at follow-up. There are also similar findings in Fonseca-Pedrero et al.,'s (2012) study that, in a non-clinical sample consisted of adolescents, those who have high scores on PLE's also have higher scores on the avoidance coping dimension and lower on the active coping dimension compared to control groups. This means that, higher risk group use strategies such as ignoring the problem or self-blame and use strategies like worry and work hard or solving the problems less often.

These studies in order to understand the influence of coping styles conducted with both clinical groups that has psychotic disorders, ultra-high risk groups (UHR) (period immediately preceding the onset of psychosis) and at-risk groups experiencing psychotic-like experiences show that there might be similar mechanisms underlying the spectrum of psychotic disorders which needs to be researched further to provide more evidence and to understand variables to which it is associated with.

### **1.3.3. Perceived Social Support**

Social support is the experience of being valued, cared about, respected and loved by others. It involves different sources such as friends, family, teachers or social groups. Social support can come in the forms of perceived social support,

which is an individual's trust of the availability of sufficient support when needed or in the form of tangible assistance provided by significant others (Roohafza et al. 2014). Perceived social support is the recipient's perceptions about the satisfaction with the support provided and the general availability of support (Sarason, Sarason & Pierce, 1990). It is specifically about support appraisals regarding perceptions of being cared for, loved, esteemed and involved with others. Most studies have found that compared to objectively measured social support, perceived social support is a better predictor of psychological well being (e.g. Barrera, 1981; Schaefer, Coyne & Lazarus, 1981).

As well as psychopathologies has an impact on social functioning, social functioning might also influence disorder outcomes (Erickson et al., 1998). Patients with psychosis have fewer intimate relationships, friends and fewer reciprocal relationships (Cohen & Sokolovsky, 1978; Erickson 1978). Positive symptoms of psychosis are associated with high levels of loneliness and less satisfying social relationships (Angell & Test, 2002). Studies with individuals who have recently experienced their first episode of psychosis found that, compared to healthy controls they are more withdrawn, passive, isolated in their social relationships (Moller & Husby, 2003) and they reported feeling lonely and poor perceived social support (Sündermann et al., 2014). Their close family provides support for most patients. However, patients with psychosis find it difficult to find emotional support and reported that they need advice and trust-based relationships (Bronowski and Zahuska, 2008). One possible reason for perceiving social support as inadequate is high expressed emotion among family members. Expressed emotion is conceptualized as a multi dimensional measure, including critical, emotionally overinvolved and hostile attitudes of relatives towards a family member with a

disorder, that is intended to understand the family emotional atmospheric (e Sa, Wearden & Barrowclough, 2013). According to Sadath et al.,'s study (2017), high levels of perceived stress, moderate to severe levels of expressed emotion and poor social support were observed in the relatives of patients with first episode psychosis. Thus, social support studies show that close family and peers relationships can be used clinically in order to decrease expressed emotion and improve both actual and perceived social support.

Since more is known about the social functioning of people with psychosis, only few studies have examined the quality of social relationships of risk groups. For people who are at ultra-high risk for developing psychosis, their well-being and general functioning are associated with social support levels (Dominguez-Martinez, 2015). In UHR group who reported social support lower found to be more experiencing negative symptoms (Prussner et al., 2011). Lencz et al., (2004) also found that individuals at high risk to develop psychosis reported social withdrawals are the most common presenting symptoms. According to Cannon et al., (2008) study, which examines the predictors of conversion to psychosis in individuals in ultra-high risk group, social impairment was found to be the one of five unique variables.

Similar to coping styles, social relationships are another protective factor against stressful events according to stress-buffering model. Social support can buffer the negative consequences of stressful life events, which might be damaging to health. Additionally, high levels of actual and perceived support can reduce one's negative reaction, physiological stress and negative appraisals (Cohen & Wills, 1985). It is found that both individuals with psychosis and UHR groups reported higher levels of perceived stress and social stress compared to healthy controls

(Palmier-Claus et al., 2012). Robustelli et al., (2017), study which examines a broad descriptive view of social networks in UHR individuals found that, they have less diverse networks, higher levels of loneliness, less availability of social support. Less positive social support includes both friends and families (Schuldberg et al., 1996). According to Pruessner et al.,'s findings (2011) UHR group reported less perceived social support. As a result of the discrepancy between the social relationships one perceives to have and one wishes, loneliness might be experienced (Perlman & Peplau, 1981). Predominantly, rather than quantitative aspects of social relationships, loneliness is influenced by subjective appraisals (Asher & Paquette, 2003). For instance, one can feel lonely within a large network and higher perceived social support is not always associated with larger networks (Macdonald et al., 1998). Loneliness may directly increase depression and anxiety, which might increase the symptoms of psychosis (Heinrich & Gullone, 2006). Additionally, it may distort thinking processes, which also increase anxiety as well (Hawkley et al., 2003). Less perceived social support and loneliness are found to be associated with social anhedonia and avolition. There are only two studies examining the role of perceived social support in in at-risk groups who experience psychotic-like experiences. According to Dangelmaier et al.'s (2006) study, psychosis-prone individuals reported higher levels of negative social support - tension, abandonment by friends, feeling heightened levels of criticism – and increased rates of negative coping styles compared with the comparison group. Similarly, according to Schuldberg, Karwacki and Burns (1996) findings, non-clinical subjects who reported sub-threshold psychotic experiences, reported higher escape-avoidance and accepting responsibility and less searching for social support compared to healthy population. In the current study, it is assumed to be important to include individual's perceptions of social

support in order to clearly understand the effectiveness of social relationships rather than focusing only the quantity of the relationships.

#### **1.4.The Current Study**

So far, there are only few studies conducted on the influence of psychotic-like experiences on developing psychosis. In order to prevent transitions from psychotic like-experiences to psychosis it is considered to be important to determine the possible contributors that facilitate this transition.

The aim of the current study is to examine the possible predictors of PLE's based on a cognitive framework. Accordingly, frequency of negative automatic thoughts are considered to have an impact on PLE's based on Beck's cognitive model (1976) for psychopathologies. Negative automatic thoughts, dysfunctional attitudes, cognitive triad and cognitive errors are central constructs in this model, which dominates individual's thinking. As mentioned above, the relationship between cognitive biases and psychotic-like experiences was known and can be determined through negative automatic thoughts. Thus, in this study it is considered to be important to demonstrate the relationship between psychotic-like experiences and automatic thoughts, which can contribute to cognitive-behavioral interventions targeting at-risk groups for prevention strategies.

One of the main factors associated with mental disorders, including psychotic disorders, is the psychosocial stress (Nuechterlein & Dawson, 1984). In order to perceive an event as stressful, it needs to be judged as harmful, threatening or challenging (Lazarus and Folkman, 1984). If situations are perceived as threatening, one may handle it less effectively by using maladaptive coping strategies (Myin-Germens et al., 2001) which shows that rather than the events themselves, how one

perceive those events has an impact on coping styles. According to stress vulnerability model, coping styles with stressful situations can either augment or buffer the impact of those stressors and may play an important role for the predisposition to psychosis (Jackson et al., 1996). However, only few studies have explored the possible contribution of coping in psychotic-like experiences.

It is also known that social support might also a protective factor against stressful circumstances in developing psychosis in relation with coping styles. Studies show that, individuals with psychotic disorders and also having a tendency to psychotic disorders have less satisfying relationships and smaller social networks (Robustelli, Newberry, Whisman & Mittal, 2017). Based on the cognitive theories mentioned above, it was thought that rather than measuring the quantity of social relationships, the perceptions of participants about their social relationships would be more informative.

Overall, it is expected that individuals who are experiencing more psychotic-like experiences have also higher scores in negative automatic thoughts, tend to perceive events as less controllable and use maladaptive coping strategies and also perceive social relationships as inadequate.

Therefore, the main objectives of this study are to assess the prevalence rates and severity of psychotic-like symptoms in a representative sample. Furthermore, current study will examine how psychotic-like experiences are associated with automatic thoughts, perceived social support and coping styles. This is the first study, which examines these relationships. It also intends to determine the predictive effect of automatic thoughts, coping styles and perceived social support for psychotic-like experiences. Understanding these relationships would be important to

determine individuals who are more prone to develop psychosis, and the most important factors achieved in the end of this study may be used for developing therapy programs, which might help to prevent to develop a psychotic disorder.

#### **1.4.1 Aims of the Current Study**

1. To assess the prevalence of psychotic-like experiences in a general population
2. To investigate the association between PLE's and automatic thoughts, coping styles and perceived social support and;
3. To determine the predictive effects of automatic thoughts coping styles and, perceived social support in determining psychotic-like experiences.

#### **1.4.2 Hypothesis of the Current Study**

1. Psychotic-like experiences scores will be associated with automatic thoughts, coping styles and perceived social support.
2. Psychotic-like experiences will be predicted by automatic thoughts, coping styles and perceived social support.
3. High scores on psychotic like experiences are predicted by high scores on automatic thoughts, low scores on perceived social support and low scores on active coping styles and high scores on passive coping styles.

## CHAPTER 2

### METHOD

This chapter provides information about the demographic characteristics of the participants, materials and the procedure that was followed to conduct this study.

#### 2.1 Participants

A total of 472 participants age between 17 to 65 years ( $M_{\text{age}}= 29$  years old,  $SD= 9.52$ , range=17-65 years old) from Istanbul are included in the study. The exclusion criterion for the study is not having a current psychiatric diagnosis and using a psychiatric medication. Detailed demographic information about participants is presented in Table 2.1.

Table 2.1

*Demographic Characteristics of the Sample*

	<i>N</i>	Percentage (%)
<b>Age Groups</b>		
From 17 to 30	333	70,7
From 30 to 65	138	29,1
Missing	1	0,2
<b>Gender</b>		
Woman	325	68,9
Man	147	31,1
<b>Education Level</b>		
Primary School	5	1,1
Secondary School	5	1,1
High School	60	12,7
Collage (2years)	27	5,7
Bachelor's Degree	321	68,0
Graduate/Postgraduate	54	11,4
<b>Marital Status</b>		
Single	310	65,7
Engaged	24	5,1
Married	117	24,8
Divorced	16	3,4
Widow	5	1,1
<b>Total Family Income</b>		
1400 TL and below	13	2,8
From 1401 TL to 2499 TL	30	6,4
From 2500 TL to 3499 TL	58	12,3
From 3500 TL to 4999 TL	104	22,0
From 5000 TL to 9999 TL	124	26,3
From 9999 TL and above	135	28,6
Missing	8	1,7
<b>Physical Illness</b>		
Yes	26	17,3
No	443	82,4
Missing	3	0,6
<b>Drug Use</b>		
Yes	44	9,3
No	428	90,7
<b>Diagnosis in Family</b>		
Yes	68	14,4
No	404	85,6

## **2.2 Instruments**

### **2.2.1. Socio-Demographic Information Form**

All participants fulfilled a demographic information form (see Appendix A) on socio-demographic features (age, gender, education level, work status, income, marital status), medical and psychiatric problems, psychiatric diagnosis in their family and drug usage.

### **2.2.2. Community Assessment of Psychic Experiences (van Os, Verdoux & Hanssen; CAPE-42)**

Community Assessment of Psychic Experiences (CAPE) was developed by Jim van Os, H el ene Verdoux and Manon Hanssen (n.d). The scale is being used in order to assess psychotic-like experiences in the general population.

CAPE is a 42 item self-report questionnaire. There are 20 items for positive psychotic-like experiences (which indicates that they more frequently had high bizarre experience and perception abnormalities), 14 items for negative psychotic-like experiences (which indicates that they more frequently had social withdrawal, affective flattening and apathy symptoms) and 8 items for depressive psychotic-like experiences (which indicates that they frequently had depressive symptoms) (Stefanis et al., 2002). Furthermore, CAPE rates two dimensions (frequency and distress associated with psychotic-like experiences) (Mark & Touloupoulou, 2015). 0 to 3 (never – sometimes – often – nearly always) scores measures the frequency and have to be recoded in a 4-point scale (not distressed – a bit distressed – quite distressed – very distressed) to measure the distress they cause. If participants rate

'never' in the frequency dimension, then they do not have to respond to distress dimension. The higher scores in the frequency scale means, and individual experiences psychotic-like symptoms more. Similarly, high scores on distress scale means individual experiences more distress due to psychotic-like experiences. The scores that can be gathered from the scales are range between 42 to 168.

Factor analysis and validation studies of CAPE are made by Stefanis and his colleagues (2002). According to their findings, a three-factor model is the best fit of CAPE. Three dimensions of CAPE are significantly correlated with each other and a good discriminant validity score consistent between CAPE and other related scales were found. Additionally, based on the review of Mark and Toulopoulou (2015) and meta-analysis of different studies that examined psychometric properties of CAPE scores, CAPE scores have high reliability and good internal consistency. The alpha coefficient for CAPE-42 is reported as 0.91. For subscales; CAPE-Positive is 0.84; CAPE-Negative is 0.81 and CAPE-Depressive is 0.76.

Saka and colleagues (2015) performed a Turkish translation of CAPE. The Turkish version of the scale was used by Binbay and his colleagues (2016). But its reliability and validity study has been examining in a sample of 453 healthy individuals by Mortan-Sevi and collages as a part of BAUBAP project (in preparation). Internal consistency analysis showed that the instrument has a good reliability with Cronbach Alpha coefficient .91 for CAPE A, .84 for positive dimension, .88 for negative dimension and .85 for depressive dimension. In order to check criterion related validity, the relationship between CAPE and SA-45 was investigated. There is a significant relationship between CAPE A and SA-45, which is found as .77 ( $p < .01$ ). The positive, depressive and negative dimensions and a total score of frequency and distress scores are highly and significantly correlated

with total score of SA-45 and subscales ( $p < 0.01$ ). The factor structure demonstrated a three-factor dimension for positive and negative subscales and one factor for depression subscales. The results of the study suggested that CAPE is a reliable and valid instrument to assess the psychotic-like experiences in non-clinical Turkish sample.

In this study, Cronbach's alpha of the scale was calculated as .88 for the frequency dimension of CAPE.

### **2.2.3 Automatic Thoughts Questionnaire (ATQ; Hollond & Kendall, 1980)**

Automatic Thoughts Questionnaire was used in order to assess negative automatic thoughts. The automatic thoughts questionnaire, which was developed to determine automatic thoughts accompanying depression, consists of 30 items (Hollon and Kendall, 1980). The scale is a 5-point Likert type scale between never (1) and always (5). The score from 30-150 points reflects the frequency of negative automatic thoughts of the individual. The Cronbach's alpha for Turkish version of the scale is .93 and a five-factor model was proposed (Sahin & Sahin, 1992). In this study, Cronbach's alpha of the scale is calculated as .95.

### **2.2.4. Ways of Coping Inventory (WOCS- Sahin & Durak, 1995)**

Ways of Coping Inventory was used in order to assess coping styles. The scale consists of 30 items that measure the style of coping with two main dimensions (Problem-focused / Active and Emotion-focused / Passive). Şahin and Durak (1995) developed a scale of coping based on depression, psychological symptoms and loneliness scores on Folkman and Lazarus's Ways of Coping Inventory (1980). There are 5 factors; optimistic, self-confident, helpless, seeking social support and

submissive. The scale is a 3-point Likert-type between never appropriate (0) and completely appropriate (3). The high score from a subscale means that the individual uses that coping style more. The values obtained in reliability study in Turkey are between .62 and .80 for Self confident, .49 and .68 for Optimistic, .47 and .45 for Seeking of social support, .64 and .73 for Insecure Approach, .47 and .72 for Submissive subscales. Active coping dimension includes self-confident, optimistic and seeking social support factors and passive coping dimension includes insecure and submissive factors (Şahin & Durak, 1995). In this study, Cronbach's alpha was calculated as .41 for the active coping dimension and .75 for passive coping dimension.

#### **2.2.5. Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988)**

Multidimensional Scale of Perceived Social Support was used in order to assess perceived social support. The scale, which has been developed for the subjective evaluation of the adequacy of social support from three different sources, consists of 12 items, which evaluate the support from family, friends and a special person (Zimet et al., 1988). MSPSS is a 7-point Likert-type scale between no (1) and certainly yes (7). The high score obtained from the scale indicates that the social support perceived by the individual is high. The values obtained in reliability study in Turkey are .86 for the total score, .83 for family dimension, .84 for friends dimension and .84 for the significant other dimension (Eker, Arkar & Yıldız, 2001). In this study, Cronbach's alpha of the scale is .86.

### **2.3 Procedure**

This study is a part of a larger project, which was supported by Bahcesehir University Scientific Research Commission (BAUBAP). The field work of the study was started after taking permission from Bahçeşehir University Scientific Research and Publication Ethics Committee. The data was collected from a non-clinical sample including Bahçeşehir University students and individuals between the ages of 17-65 via the snowball method. With the cooperation of the school counselors, available classes were determined to apply the instruments. In order to prevent biases psychology students were not included. Participants participated to the study based on volunteerism. After completing a consent form, demographic form and four self-report measures were fulfilled in a silent room. All scales were requested to be filled at the same time and take about 20-25 minutes to complete.

## CHAPTER 3

### RESULTS

In this section, firstly bivariate correlations will be explained. Secondly, descriptive statistics will be presented. Lastly, multiple regression analyses including one hierarchical for the total score of PLEs and study variables (automatic thoughts, coping styles and perceived social support) and three stepwise methods for the dimensions of PLEs including positive, negative and depressive and study variables (automatic thoughts, coping styles and perceived social support) will be reported.

#### **3.1. Preliminary Analyses and Bivariate Correlations**

In order to check the assumption of the linear combination of predictors' automatic thoughts, coping styles (active and passive styles) and perceived social support (including family, friends and significant other), and their linear relationships with predicted variable psychotic-like experiences (CAPE A) (see Table 3.1) Pearson's correlation analysis was examined.

A significant positive correlation between psychotic-like experiences (CAPE A) and automatic thoughts  $r = .700, p < .01$ , negative correlation with active coping

styles  $r = -.225, p < .01$ , positive correlation with passive coping styles  $r = .486, p < .01$  and negative correlation with perceived social support  $r = -.372, p < .01$ , perceived family support  $r = -.270, p < .01$ , friend support  $r = -.287, p < .01$  and significant other support  $r = -.267, p < .01$ , were found. As depicted in Table 3.1, all other variables have significant relationships with each other.



Table 3.1

*Bivariate Correlations among Variables*

Variable Name	1	2	3	4	5	6	7	8	9	10	11
<b>1.CAPE A</b>											
<b>2.CAPE A-Pos</b>	.831**										
<b>3.CAPE A- Neg</b>	.875**	.511**									
<b>4.CAPE A-Dep</b>	.847**	.536**	.730**								
<b>5.ATQ</b>	.700**	.444**	.643**	.766**							
<b>6.WOCS-Active</b>	-.225**	-.162**	-.227**	-.183**	-.164**						
<b>7.WOCS-Passive</b>	.486**	.365*	.403**	.504**	.530**	-.260*					
<b>8.MSPSS TOT</b>	-.372**	-.289**	-.299**	-.388**	-.421**	.278**	-.336**				
<b>9.MSPSS-Family</b>	-.270**	-.208**	-.195**	-.315**	-.387**	.166**	-.254**	.668**			
<b>10.MSPSS-Friends</b>	-.287**	-.244**	-.230**	-.268**	-.236**	.313**	-.273**	.676**	.434**		
<b>11.MSPSS-Sig.other</b>	-.267**	-.196**	-.227**	-.276**	-.305**	.164**	-.227**	.805**	.226**	.245**	

*Notes.* CAPE A: Total Score of Psychotic-Like Experiences, CAPE A Pos: Positive Dimension of PLEs, CAPE A Dep: Depressive Symptoms of PLEs, CAPE A Neg: Negative Symptoms of PLEs, ATQ: Automatic Thoughts Questionnaire, WOCS-Active: Active Coping Styles, WOCS-Passive: Passive Coping Styles, MSPSS Tot: Total Score of Perceived Social Support, MSPSS Family: Perceived Social Support from Family, MSPSS-Friends: Perceived Social Support from Friends, MSPSS-Sig.other: Perceived Social Support from Significant Other

## **3.2. Descriptive Statistics**

### **3.2.1. Prevalence of Positive Symptoms of Psychotic-Like Experiences in a Non-Clinical Sample**

To examine the prevalence of positive symptoms of psychotic-like experiences in our sample, the frequency of participants having a score above 40 on this dimension was calculated. This score means being above of the average on positive dimension of psychotic-like experiences including magical thinking, bizarre experiences and perceptual abnormalities. It was found that, 7% of the sample ( $N = 33$ ) has delusion and hallucination like psychotic experiences.

### **3.2.2. Differences between PLEs scores according to Age Groups**

The data was splitted into two age groups 17-30 ( $N = 333$ ) and 31-65 ( $N = 138$ ) in order to see the differences in PLEs scores between younger participants and older participants.

An independent samples t-test was conducted to compare the total score of psychotic-like experiences, positive symptoms, negative symptoms and depressive symptoms of psychotic-like experiences for the age groups 17 to 30 (younger participants) to 31 to 65 (older participants).

There was a significant difference between the scores of younger participants ( $M = 73.39$ ,  $SD = 13.50$ ) and older participants ( $M = 64.94$ ,  $SD = 11.81$ );  $t(469) = 6.404$ ,  $p = .00$  on total score of psychotic-like experience. These results suggest that younger participants have significantly higher total score of psychotic-like experiences than older participants.

There was a significant difference between the scores of younger participants

( $M = 31.41$ ,  $SD = 6.25$ ) and older participants ( $M = 28.39$ ,  $SD = 5.46$ );  $t(469) = 4.942$ ,  $p = .00$  on positive dimension of psychotic-like experience scores. These results suggest that younger participants have significantly higher positive symptoms scores on than older participants.

There was a significant difference in the scores of younger participants ( $M = 26.57$ ,  $SD = 5.89$ ) and older participants ( $M = 22.94$ ,  $SD = 4.99$ );  $t(469) = 6.343$ ,  $p = .00$  on negative dimension of psychotic-like experiences scores. These results suggest that young adults have significantly higher negative symptoms scores than older participants.

There was a significant difference between the scores of younger participants ( $M = 15.40$ ,  $SD = 3.98$ ) and older participants ( $M = 13.60$ ,  $SD = 3.34$ );  $t(469) = 4.673$ ,  $p = .00$  on depressive dimension of psychotic-like experience scores. These results suggest that younger participants have significantly higher depressive symptoms scores than older participants. Table 3.2 shows the T-test results by age.

Table 3.2

*Differences in Psychotic-Like Experiences Between Younger (age between 17-30) and Older Participants (age between 31-65)*

	M	SD	T	P
CAPE A TOT			6.404	.00
Young adults	73.39	13.50		
Adults	64.94	11.81		
CAPE A POS			4.942	.00
Young adults	31.41	6.25		
Adults	28.39	5.46		
CAPE A NEG			6.343	.00
Young adults	26.57	5.89		
Adults	22.94	4.99		
CAPE A DEP			4.673	.00
Young adults	15.40	3.98		
Adults	13.60	3.34		

*Notes:* CAPE A TOT: Total Score of Psychotic-Like Experiences Scale, CAPE A POS: Positive Dimension of Psychotic-Like Experiences, CAPE A NEG: Negative Dimension of Psychotic-Like Experiences, CAPE A DEP: Depressive Dimension of Psychotic-Like Experiences

### **3.3 Predicting Total Score of Psychotic-Like Experiences from Automatic Thoughts, Coping Styles (Active / Passive) and Perceived Social Support (Family/ Friends / Significant other)**

A hierarchical regression analysis was performed in order to examine whether automatic thoughts, coping styles and perceived social support would be the predictors of psychotic-like experiences. Based on cognitive models of psychotic continuum it is assumed that automatic thoughts would predict psychotic-like experiences the most. Thus, it is considered to be important to see the effect of

coping styles and perceived social support after controlling the predictor variable automatic thoughts. Since, there is limited research finding on the dimensions of PLEs (positive, negative, depressive), it is thought to be important to explain the most variability in PLEs with the possible fewest predictors. Thus, stepwise regression analyses were computed for the dimensions of PLEs.

In step 1 of the analysis, automatic thoughts was entered into the regression equation and was significantly related to the total score of **psychotic like experiences**,  $F(1,470) = 452.671, p = .00$ , with  $R^2$  of .49. Hence, 49% of the variance in psychotic-like experiences can be predicted by automatic thoughts. In step 2, after controlling the predictive effect of automatic thoughts, with the addition of active and passive coping styles, a significant regression equation was found  $F(3,468) = 166.333, p = .00$ , with  $R^2$  of .51. Hence, %51 of variance in psychotic-like experiences can be predicted by automatic thoughts and active and passive coping styles. In step 3 of the analysis, with the addition perceived social support (total score, from friends, family and significant other), a significant regression equation was found  $F(6,465) = 86.183, p = .00$ , with  $R^2$  of .52. Hence, %52 of variance in the psychotic-like experiences can be predicted by automatic thoughts, active and passive coping styles and perceived social support from family, friends and significant other. Table 3.3 shows the models in this regression analyses.

It was found that automatic thoughts significantly predicted psychotic-like experiences ( $\beta = .61, p = .00$ ). Besides, passive coping styles ( $\beta = .12, p = .00$ ), perceived social support from friends ( $\beta = -.10, p = .04$ ) have also a significant effect on psychotic-like experiences. Active coping styles ( $\beta = -.06, p = .00$ ), perceived social support from family ( $\beta = .06, p = .09$ ), and perceived social support from significant other ( $\beta = -.02, p = .40$ ) was also included in the model but a non-

significant effect was found.

In hierarchical analyses, total score of perceived social support was excluded from the equation. Thus, the regression equation for predicting psychotic-like experiences would be:

$$\text{Psychotic-Like Experiences} = 53.114 + .35 \times (\text{automatic thoughts}) + .27 \times (\text{passive coping styles}) - .27 \times (\text{perceived social support from friends})$$

Table 3.3

*Hierarchical Regression Analysis for Variables Predicting Total Score of PLEs*

Predictor Variables	R	R <sup>2</sup>	ΔR <sup>2</sup>	F	F <sub>change</sub>	B	SE	β
1.Step	.700	.491	.471	452.671**				
ATQ						.409	.019	.700**
2.Step	.718	.516	.027		12.290**			
ATQ						.358	.022	.613**
WOCS-Active						-.021	.008	-.089**
WOCS-Passive						.299	.084	.137**
3.Step	.726	.527	.009		3.436*			
ATQ						.359	.024	.615**
WOCS-Active						-.015	.008	-.064
WOCS-Passive						.267	.084	.123*
MSPSS-Family						.155	.091	.064
MSPSS-Friends						-.270	.093	-.109**
MSPSS-Sig.other						-.040	.048	-.028

Notes. \* $p < .05$ , \*\* $p < .01$

Dependent Variable: Total Score of Psychotic-Like Experiences, ATQ: Automatic Thoughts Questionnaire, WOCS-Active: Active Coping Styles, WOCS-Passive: Passive Coping Styles, MSPSS-Family: Perceived Social Support from Family, MSPSS-Friends: Perceived Social Support from Friends, MSPSS-Sig. Other: Perceived Social Support from Significant Other

### **3.4 Predicting Positive Symptoms of Psychotic-Like Experiences from Automatic Thoughts, Coping Styles (Active / Passive) and Perceived Social Support (Family/ Friends / Significant other)**

For sub-dimensions of psychotic-like experiences scale (positive, negative and depressive), stepwise regression analyses were performed in order to examine whether automatic thoughts, coping styles and perceived social support would

predict the positive, depressive and negative dimensions of psychotic-like experiences.

In model 1, automatic thoughts was included in the regression equation and was significantly related to the **positive dimension of psychotic-like experiences**,  $F(1,470) = 115.488, p = .00$ , with  $R^2$  of .19. Hence, 19% of the variance in positive symptoms of psychotic-like experiences can be predicted by automatic thoughts. In model 2, passive coping styles was also included and a significant regression equation was found  $F(2,469) = 66.391, p = .00$ , with  $R^2$  of .22. Hence, %22 of variance in positive symptoms of psychotic-like experiences can be predicted by automatic thoughts and passive coping styles. In model 3, perceived social support was also included and a significant regression equation was found  $F(3,468) = 47.795, p = .00$ , with  $R^2$  of .23. Hence, %23 of variance in positive symptoms of psychotic-like experiences can be predicted by automatic thoughts, passive coping styles and perceived social support from friends. Table 3.4 shows the models in this regression analyses.

It was found that automatic thoughts significantly predicted positive symptoms of psychotic-like experiences ( $\beta = .33, p = .00$ ), and passive coping styles ( $\beta = .15, p = .00$ ) and perceived social support from friends ( $\beta = -.12, p = .00$ ) have also a significant effect.

In stepwise analyses, active coping styles ( $t = -.755, p = .45$ ), total score of perceived social support ( $t = -.485, p = .62$ ), perceived social support from family ( $t = .388, p = .69$ ), and significant others ( $t = -.767, p = .44$ ), are excluded from the equation. Thus, the regression equation for predicting positive symptoms of psychotic-like experiences would be:

Positive Symptoms of Psychotic-Like Experiences = 26.578+ .18 x (automatic thoughts) + .15 x (passive coping styles) -.13 x (perceived social support from friends)

Table 3.4

*Stepwise Regression Analysis for Predicting Positive Symptoms of PLEs*

Predictor Variables	R	R <sup>2</sup>	ΔR <sup>2</sup>	F	F <sub>change</sub>	B	SE	β
Model 1	.444	.197	.196	115.488**				
ATQ						.118	.011	.444**
Model 2	.470	.221	.217		14.080**			
ATQ						.093	.013	.348**
WOCS-Passive						.179	.048	.180**
Model 3	.484	.235	.230		8.485**			
ATQ						.189	.013	.333**
WOCS-Passive						.154	.048	.155**
MSPSS-Friends						-.139	.048	-.123**

Notes. \* $p < .05$ , \*\* $p < .01$

Dependent Variable: Positive Symptoms of Psychotic-Like Experiences, ATQ: Automatic Thoughts Questionnaire, WOCS-Passive: Passive Coping Styles, MSPSS-Friends: Perceived Social Support from Friends

### 3.5 Predicting Negative Symptoms of Psychotic-Like Experiences from Negative Automatic Thoughts, Coping Styles (Active / Passive) and Perceived Social Support (Family/ Friends / Significant other)

In model 1, automatic thoughts was included in the regression equation and was significantly related to the **negative dimension of psychotic-like experiences**,  $F(1,470) = 332.003$ ,  $p = .00$ , with  $R^2$  of .41. Hence, 41% of the variance in negative symptoms of psychotic-like experiences can be predicted by automatic thoughts. In model 2, with the addition of active coping styles, a significant regression equation was found,  $F(2,469) = 176.383$ ,  $p = .00$ , with  $R^2$  of .42. Hence, %42 of variance in the negative symptoms of psychotic-like experiences can be predicted by automatic thoughts and active coping styles. In model 3 of the analysis, with the addition of

perceived social support from family, a significant regression equation was found,  $F(3,468) = 119.882, p = .00$ , with  $R^2$  of .43. Hence, %43 of variance in the negative symptoms of psychotic-like experiences can be predicted by automatic thoughts, active coping styles and perceived social support from family. Lastly, in model 4 with the addition of perceived social support from friends, a significant regression equation was found,  $F(4,467) = 91.988, p = .00$ , with  $R^2$  of .44. Hence, %44 of variance in the **negative symptoms of psychotic-like experiences can be predicted by automatic thoughts, active coping styles, perceived social support from family and friends**. Table 3.5 shows the models in this regression analyses.

In stepwise analyses, passive coping styles ( $t = 1.231, p = .21$ ), total score of perceived social support ( $t = -.456, p = .64$ ), perceived social support from significant others ( $t = -.456, p = .64$ ), are excluded from the equation. Thus, the regression equation for predicting negative symptoms of psychotic-like experiences would be:

Negative Symptoms of Psychotic-Like Experiences =  $17.854 + .16 \times (\text{automatic thoughts}) - .01 \times (\text{active coping styles}) + .11 \times (\text{perceived social support from family}) - .09 \times (\text{perceived social support from friends})$

Table 3.5

*Stepwise Regression Analysis for Predicting Negative PLEs*

Predictor Variables	R	R <sup>2</sup>	ΔR <sup>2</sup>	F	F <sub>change</sub>	B	SE	β
Model 1	.643	.414	.413	332.003**				
ATQ						.163	.009	.643**
Model 2	.655	.429	.427		12.583**			
ATQ						.158	.009	.623**
WOCS-Active						-.013	.004	-.125**
Model 3	.659	.435	.431		4.355*			
ATQ						.165	.010	.652**
WOCS-Active						-.014	.004	-.134**
MSPSS-Family						.083	.040	.079**
Model 4	.664	.441	.436		5.131*			
ATQ						.164	.010	.647**
WOCS-Active						-.012	.004	-.112**
MSPSS-Family						.119	.043	.113**
MSPSS-Friends						-.097	.043	-.091*

Notes. \* $p < .05$ , \*\* $p < .01$

Dependent Variable: Negative Symptoms of Psychotic-Like Experiences, ATQ: Automatic Thoughts Questionnaire, WOCS-Active: Active Coping Styles, MSPSS-Family: Perceived Social Support from Family, MSPSS-Friends: Perceived Social Support from Friends

### 3.6 Predicting Depressive Symptoms of Psychotic-Like Experiences from Negative Automatic Thoughts, Coping Styles (Active / Passive) and Perceived Social Support (Family/ Friends / Significant other)

In model 1, automatic thoughts was included in the regression equation and was significantly related to the **depressive dimension of psychotic-like experiences**,  $F(1,470) = 667.595$ ,  $p = .00$ , with  $R^2$  of .58. Hence, 58% of the variance in depressive symptoms of psychotic-like experiences can be predicted by automatic thoughts. In step 2, passive coping styles was also included and a significant regression equation was found,  $F(2,469) = 352.064$ ,  $p = .00$ , with  $R^2$  of .60. Hence, %60 of variance in depressive symptoms of psychotic-like experiences can be predicted by automatic thoughts and passive coping styles. In step 3,

perceived social support from friend was also included and a significant regression equation was found,  $F(3,468) = 238.994, p = .00$ , with  $R^2$  of .60. Hence, %60 of variance in **depressive symptoms of psychotic-like experiences can be predicted by automatic thoughts, passive coping styles and perceived social support from friends**. Table 3.6 shows the models in this regression analyses.

It was found that automatic thoughts significantly predicted depressive symptoms ( $\beta = .68, p = .00$ ), passive coping styles ( $\beta = .12, p = .00$ ) and perceived social support from friends ( $\beta = -.07, p = .00$ ) has also a significant effect.

In stepwise analyses, active coping styles ( $t = -.606, p = .54$ ), total score of perceived social support ( $t = -.478, p = .63$ ), perceived social support from family ( $t = .484, p = .62$ ), and significant others ( $t = -.810, p = .41$ ), are excluded from the equation. Thus, the regression equation for predicting depressive symptoms of psychotic-like experiences would be:

Depressive Symptoms of Psychotic Like Experiences =  $8.772 + .11 \times (\text{automatic thoughts}) + .07 \times (\text{passive coping styles}) - .02 (\text{perceived social support from friends})$

Table 3.6

*Stepwise Regression Analyses for Variables Predicting Depressive PLEs*

Predictor Variables	R	R <sup>2</sup>	ΔR <sup>2</sup>	F	F <sub>change</sub>	B	SE	β
Model 1	.766	.587	.586	667.596**				
ATQ						.128	.005	.766**
Model 2	.775	.600	.599		15.680**			
ATQ						.116	.006	.694**
WOCS-Passive						.085	.021	.136**
Model 3	.778	.605	.603		5.739*			
ATQ						.115	.006	.684**
WOCS-Passive						.076	.022	.121**
MSPSS-Friends						-.022	.022	-.073*

Notes. \* $p < .05$ , \*\* $p < .01$

Dependent Variable: Depressive Symptoms of Psychotic-Like Experiences, ATQ: Automatic Thoughts Questionnaire, WOCS-Passive: Passive Coping Styles, MSPSS-Friends: Perceived Social Support from Friends

## CHAPTER 4

### DISCUSSION

The main purpose of the current study is to expand the literature about predictors of psychotic-like experiences that can be used in order to prevent psychosis prone individuals to develop a psychotic disorder. Psychotic-like experiences are a new phenomenon that has been investigated, so there are limited findings in the literature. On that purpose, based on a cognitive framework, prevalence rate of psychotic-like experiences and the association between psychotic-like experiences, automatic thoughts, coping styles and perceived social support was examined. The prevalence rate was calculated based on positive dimension of psychotic-like experiences scale. According to literature, we know that sub-threshold psychotic-like experiences in general is a potential risk factor for the development of psychotic disorder in both clinical (Cannon et al., 2008; Yung *et al.*, 2004; Yung et al., 2003;) and community samples (Poulton et al., 2000; Spauwen *et al.*, 2006; van Os, 2001). However, there are different results about which particular dimensions of PLEs are associated with higher risk. In studies which examined individuals who are considered to be prodromal or ultra-high risk group for psychosis found that, auditory and visual perceptual disturbances, unstable ideas of reference

(Klosterkotter *et al.*, 2001) and high scores on measures of conceptual disorganization, thought content and perceptual disturbance were associated with increased risk (Miller *et al.*, 2003; McGorry *et al.*, 2002). Therefore, in the current study it was considered to be important to calculate the prevalence rate of positive symptoms of psychotic-like experiences scale, which includes magical thinking, bizarre experiences and perceptual abnormalities based on the extended psychosis phenotype. Consistent with the literature (Linscott & van Os, 2013), findings show that prevalence rate of psychotic-like experiences is 7% in this study sample. Thus, 7% of the sample has delusion and hallucination like psychotic experiences.

#### **4.1 Differences in Psychotic-Like Experiences Scores Depending on Age Groups**

According to previous research, psychotic-like experiences in non-clinical samples are associated with similar factors to those associated with clinical samples with psychotic disorders including younger age (Scott *et al.*, 2006; Van Os *et al.*, 2001). According to the results of this study, the occurrence of psychotic-like experiences, including all dimensions (positive, depressive, negative) are higher among younger participants. Thus, it shows that psychotic-like experiences can be observed during a very critical stage of development. Since evolving psychotic-like symptoms are considered to be the risk factors for psychotic disorders, it would be important to target this at-risk population group with supportive or preventative programs in order them to form their identity in a healthier way or to form lasting relationships with no impairment.

## **4.2 Prediction effect of Automatic Thoughts, Coping Styles and Perceived Social Support on PLEs**

### *Automatic Thoughts*

As previously mentioned, the literature suggested a continuum between psychotic symptoms and psychotic like experiences. Generally, the association between psychotic-like experiences and cognitive biases has been examined (e.g. Green et al., 2001; Prochwicz & Klosowska, 2017). Those studies have shown that psychotic prone individuals are more likely to make cognitive biases such as jumping to conclusion bias (Freeman et al., 2008), bias against disconformity (Woodward et al., 2007) or external attribution bias (An et al., 2010). It is known that, according to cognitive model, these cognitive biases may occur in the content of automatic thoughts (Beck et al., 1991). Thus, the primary way to measure the cognitive biases is assessing automatic thoughts. In this study, automatic thoughts have a significant positive correlation with PLEs, which means that when the frequency of automatic thoughts increases the PLEs scores increases as well. Additionally, as it is hypothesized, automatic thoughts plays a significant role predicting psychotic-like experiences. As an individual's negative automatic thoughts are more frequent, it is more likely that the individual has psychotic-like experiences.

According to Beck's cognitive model for psychopathologies, negative automatic thoughts are associated with several emotional problems (Beck et al., 1985). Based on this model, examining the association between psychotic-like experiences and automatic thoughts may indicate that psychotic-like experiences is also one of the emotional problems that can be evaluated through negative automatic thoughts. Not surprisingly, the most powerful and significant association is found between automatic thoughts and depressive dimension of psychotic-like experiences.

The development of automatic thoughts questionnaire is based on the assumption that the etiology and maintenance of depression is influenced by negative self-statements and maladaptive thinking styles (Beck, 1976). Items that question depressive symptoms of CAPE include items that examines negative view about the self, e.g. “Do you ever feel pessimistic about everything?” and negative view about future e.g. “Do you ever feel as if there is future for you?” similar to automatic thoughts questionnaire, e.g. “I’m a loser” or “I’ll never make it.”

However, it is also important to highlight that, automatic thoughts and negative and positive psychotic-like experiences are positively and significantly correlated with negative automatic thoughts. When the frequency of negative automatic thoughts increases, positive and negative symptoms increases as well. Additionally, as it is hypothesized, automatic thoughts plays a significant role predicting positive and negative PLEs. There is only one study, which showed that also the patients with psychosis frequently have negative automatic thoughts (Mortan-Sevi and Özyurt, 2013). According to this study, there is a positive correlation between automatic thoughts and delusion dimension of positive symptoms scale.

Recent researches that examined the cognitive processes demonstrate that psychotic symptoms occur in the light of dysfunctional beliefs and cognitive biases (Beck & Rector, 2000, Aker & Sungur, 2000). According to Frith’s model, there is a deprivation in self-monitoring processes and as a result, patients with psychotic disorder attribute internal situations to the external ones and experienced as alien (Kingdon & Turkington, 1994). Thus, based on the current study’s findings examining automatic thoughts in an at-risk population group may give us information about the dysfunctional thoughts before the occurrence of a disorder.

Given the high predictive effect of automatic thoughts on psychotic-like experiences, it can be concluded that automatic thoughts are important indicator of psychotic-like experiences.

Even there are evidences that there is a distortion in both the content and the structure of thoughts as proposed in several cognitive model of psychosis (e.g. Beck's theory for delusions, the model of Garety and colleagues) cognitive behavioral techniques was not commonly used in the treatment of psychotic disorders. In order to reduce symptoms and prevent relapse, therapeutic procedures, which are designed to alter negative beliefs are proven to be effective (Kovacs, Rush, Beck & Hollon, 1981). According to stress-vulnerability model for psychosis, understanding individuals' own perceptions of events, which affects their emotional state, is important (Myin-Germeys et al., 2001). Based on the results of this study, in order to understand what is stressful for the individual that contribute to develop a disorder and to make an individualized formulation, examining intermediate and core beliefs that lead to occurrence of negative automatic thoughts are thought to be important to include in cognitive-behavioral interventions.

### *Coping Styles*

When examining the results of the current study, passive coping and psychotic-like experiences enhanced each other, whereas associations with active coping styles were negligible. According to studies examining psychotic experiences in different stages on the continuum reveals that coping is associated with psychotic experiences at all levels of the extended psychosis continuum: maladaptive coping styles are associated with higher levels of symptomatology in patients with chronic schizophrenia (Ritsner et al., 2003), poor outcomes in individuals with first-episode

of psychosis (Boschi et al., 2000), ultra-high risk for psychosis (Kommescher et al., 2016; Lee et al., 2011) samples, and within the general population (Lin et al., 2017; Fonseca-Pedrero et al., 2012). These findings suggest that coping styles with potential life stressors can either augment or buffer the impact of stressors which can be destructive in the overall mental health (Jackson et al., 1996). Consistent with the literature, in the current study, especially passive coping style dimension has a predictive effect on psychotic-like experiences. When an individual relies more on passive coping styles (submissive or helpless), it is more likely that an individual experience psychotic-like experiences more, thereby showing a similar coping pattern with patients with psychosis and high-risk groups. Given that there are only few studies examined the association between coping and PLEs this study strengthen the findings that coping styles play an important role for individuals who have predisposition to develop psychosis. Accordingly, longitudinal studies demonstrated that individuals' coping styles were not changed between acute and remitted phase in most of patients with psychosis (Ritsner and Ratner, 2006).

Consistent with the literature, passive coping styles are the predictor of positive dimension of PLEs. Even there are limited findings, Schuldberg, Karwacki and Burns (1996) also found that non-clinical subjects that are experiencing positive symptoms such as magical thinking or perceptual aberrations are searching less for social support and reported higher avoidance compared to healthy controls.

Additionally, active coping styles were significantly predicted negative PLEs which means that if an individual use active coping styles more, the negative symptoms of PLEs score will be low. It is known that individuals, who get high scores on negative symptoms scale, have more frequently features like social withdrawal (Stefanies et al., 2002). Thus, it is understandable that it is harder for them to search for social

support when needed which is considered to be an active coping style.

It is also important to note that there is a positive relationship between automatic thoughts and passive coping styles. Consistent with the view of Folkman and Lazarus (1984) which proposes that, in order an event to be perceived as stressful it needs to be judged as harmful, threatening or challenging, the reason for using maladaptive coping strategies might have an association with how individuals perceive events which are perceived as less controllable and more unknown by individuals experiencing PLEs more, leads to handle them less effectively.

Conversely, when they have less negative automatic thoughts, it is more likely that they perceive events as controllable which leads an optimistic approach which is an active coping style. Since the relationship between depression and automatic thoughts is known, it is thought that similar mechanism works for depressive dimension of PLEs as well.

Thus, in this early level of the continuum, maladaptive coping strategies in the general non-clinical population might have already emerge and leaving the individual less protected against stress which might influence an individual to become more vulnerable to develop psychosis. This fact may show us the specific need for psychosocial support, such as interventions that targeting directly the enhancement of coping strategies in early stages for prevention from psychotic disorders.

### *Perceived Social Support*

In this study rather than the quantity of social relationships, perceived social support is considered to be important to examine. According to the stress-vulnerability model, social support can buffer the negative consequences of stressful

life events by reducing one's negative reaction and negative appraisals (Cohen & Wills, 1985). Since this study's aim is to find some possible important factors in which may be important to include in prevention strategies based on cognitive-behavioral techniques, it is also important to find how perceptions influence social relationships to evaluate and challenge them. There are only studies examining the role of perceived social support in clinical groups and UHR individuals (Sündermann et al., 2014; Palmier-Claus et al., 2012), but not in at-risk groups who experience psychotic like experiences. As it is hypothesized there is a negative relationship between perceived social support and psychotic-like experiences. When an individual has high scores on PLEs scale, it is more likely that he/she perceives social support as negative from both family, friends and significant others.

Contrary to our hypothesis the total score of perceived social support was not a predictor of psychotic-like experiences. However when examined separately for family, friends and significant others, perceived social support from family predicts negative dimension of PLEs and friends predicts the total score of PLEs and also positive, negative and depressive dimensions which shows the importance of examining social support separately from different sources. Surprisingly, according to the multiple regression analyses, perceived social support from family appears to have a function that increases the negative symptoms. There are contradictory results in the literature that while some studies found that perceived social support is a protective factor in the prevention of psychosis (Erikson, Beiser, & Iacono, 1989), not all types are efficacious and actually, some types of support may be perceived as harmful as well. One possible explanation might be that our results show the influence of high expressed emotion of families, which involves emotional over-involvement, critical attitudes, and hostility that are found to be associated with poor

outcome in psychological health including psychosis (Kavangh, 1992). It is also possible that individuals with PLEs might engage in more psychotic-like behaviors such as increased social alienation or isolation, which might limit others' positive support and this lead to the correct their perception of reduced perceived social support.

Additionally, perceived social support from friends have a significant effect in predicting all dimensions of psychotic-like experiences. When one perceives social support from friend as positive their score on PLEs will be low. According to literature, patients with psychosis have fewer friends. Consistent with the literature (e.g. Goering et al., 1992) this study shows that friends fill a more crucial support role for at risk-groups than family. Thus, friends are also an important source of support. When working with at risk groups it is important to consider how to increase perceived social support from both family and friends.

Perceived social support from significant other was not a predictor of psychotic-like experiences. Probably, perceived social support, in particular from close individuals such as friends and family members are the predictors of health. There are similar findings in the literature. For instance, Hupcey et al., 1998 also reported that individuals who get social support selected supporters as their children, spouses, family members and close friends.

It is also important to highlight that after controlling for the effect of automatic thoughts perceived social support from family and friends have a low power in predicting psychotic-like experiences. Literature shows that social networks and perceived social support are components of stress buffering model that change over time. Due to the reason that most studies have a cross-sectional nature (e.g.

Sündermann et al., 2014), it is hard to say whether social networks influence the development of psychosis or patients with psychosis experience social network crises due to the development of the disorder. Since our study is consists of a non-clinical population it is possible that there are less differences in terms of social support. Additionally, because individuals experiencing psychotic-like experiences are closer to the beginning of the continuum, it is possible that their perceptions of social support may not be too much affected by these experiences yet.

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

The results of the study should be interpreted considering the following strengths and limitations. A large sample, differed on a number of factors including a large age range which have been shown to effect the occurrence of psychotic experiences was used which represents a strength of the study. Possible effect of gender, education level, work status, income, marital status, medical and psychiatric problems, psychiatric diagnosis in their family and drug usage was also controlled.

To our knowledge, this is the first study to investigate the potential predicting role of automatic thoughts in the association between subclinical psychotic experiences. Since it is found to be important factor predicting psychotic like experiences working with negative automatic thoughts in therapy might be an important target for intervention.

Even significant relationships and predictive effects were found for passive coping styles, generally non-significant predictive effect and small significant relationships were found for the active coping style, which are sub-dimensions of Ways Of Coping Styles Inventory. One possible reason for the confusing results is that, the reliability coefficient for the active coping styles scale is low (.4) in this

study, which may have influenced our results.

The sample of the study mostly consists of woman ( $N = 301$ , %68), high education level ( $N = 353$ , %79.5) individuals. Therefore, the external validity was threatened with sampling bias and is not representative for the general population.

#### **4.4 Clinical Implications and Future Directions**

The CAPE was not designed for screening psychotic disorders. Rather was designed with the intention of measuring sub-clinical psychotic experiences (Konings et al., 2006). Even people who have high scores on subclinical psychotic experiences are more likely to develop psychosis; there is also a continuum between the individuals with psychotic-like experiences and individuals at ultra-high-risk for psychosis (Dominguez et al., 2011; Kaymaz et al., 2012; Poulton et al., 2000; van Os and Reininghaus, 2016). Thus, future research should examine whether our results are valid for the ultra-high-risk groups as well.

No causal relationships can be inferred due to the cross-sectional design of the study. Longitudinal studies are needed to provide more information about the causality between variables included in this study. Additionally, in our sample, psychopathology was assessed with relevant measurements in the scope of the BAUBAP project, and in the reliability and validity studies of the Turkish version of CAPE-42, which is done by Mortan-Sevi and collages; there is a significant relationship between certain psychopathologies such as depression and anxiety. Thus, it is thought to be important to include potential affective psychopathologies, which are known to be closely related with psychotic-like experiences to examine the possible interactions with automatic thoughts, coping styles and perceived social support in the future studies.

It is also known that certain cognitive biases are associated with psychotic like experiences such as jumping to conclusion bias, however, there is only one Turkish scale to measure cognitive biases that was translated in Turkish (Ardanç, 2017). However, it was thought that it would be more appropriate to use this scale in small samples and in clinical practice since it takes time to respond. In studies conducted in Western cultures have been using “Davos Scale for Cognitive Biases” (van der Gaag et al., 2013) in psychotic related disorders. Turkish adaptation of this scale is considered to be important for further researches that aim directly measuring cognitive biases.

Because psychotic-like experiences are considered an intermediate phenotype in a continuum, it might be important to target an at risk population groups in order to prevent individuals from experiencing more severe symptoms. Based on the current findings of the study, it is considered to be important that evaluating the negative automatic thoughts before, during and after the treatment might be important to determine and apply the target of the therapy. Additionally, prevention strategies aimed at modifying coping styles help in decreasing non-clinical psychotic-like experiences (Farhall et al., 2007). Thus, the aim of the intervention would be to delay or prevent the progression of psychotic-like experiences towards a psychotic disorder (Bak et al., 2003).

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## APPENDIX A

### BİLGİLENDİRİLMİŞ ONAM FORMU

Bu çalışma BAUBAP projesi kapsamında Bahçeşehir Üniversitesi Psikoloji Bölümü Öğretim Üyesi Dr. Oya Mortan Sevi ve Klinik Psikoloji Yüksek Lisans öğrencileri Zekiye Zeybek, Feyzan Ustamehmetoğlu ve Müge Gülen tarafından yürütülmektedir. Bu araştırmanın amacı toplumda psikiyatrik belirtilerin ne sıklıkta ortaya çıktığını incelemek ve bazı değişkenlerle ilişkisini araştırmaktır. Araştırma kapsamında sizden 20-25 dakika sürecek bir ölçek çalışmasına katılmanız istenmektedir. Bu çalışmaya katılmak tamamen gönüllülük esasına dayanmaktadır. Çalışmanın amacına ulaşması için sizden beklenen, bütün soruları eksiksiz, kimsenin baskısı veya telkini altında olmadan, size en uygun gelen cevapları içtenlikle verecek şekilde cevaplamanızdır.

Bu formu okuyup onaylamanız, araştırmaya katılmayı kabul ettiğiniz anlamına gelecektir. Ancak, çalışmaya katılmama veya katıldıktan sonra herhangi bir anda çalışmayı bırakma hakkına da sahiptir. Bu çalışmadan elde edilecek bilgiler tamamen araştırma amacı ile kullanılacak olup kişisel bilgileriniz gizli tutulacaktır. Sizden herhangi bir maddi talepte bulunulmayacak ve çalışmaya katıldığınız için bir ödeme yapılmayacaktır. Araştırmaya katılımınız için teşekkür ederiz. Çalışma ile ilgili bir sorunuz olduğu takdirde aşağıdaki e-mail adresi üzerinden araştırmacı ile iletişime geçebilirsiniz.

Dr. Öğretim Üyesi Oya Mortan Sevi  
Bahçeşehir Üniversitesi Psikoloji Bölümü  
İktisadi, İdari ve Sosyal Bilimler Enstitüsü  
[oya.mortansevi@eas.bau.edu.tr](mailto:oya.mortansevi@eas.bau.edu.tr)

Araştırmadan önce verilmesi gereken bilgileri gösteren yukarıdaki metni okudum. Bana sözlü açıklamalar da yapıldı. Bu koşullarla söz konusu araştırmaya kendi rızamla hiçbir baskı ve zorlama olmaksızın katılmayı kabul ediyorum.

Katılımcının İmza

## APPENDIX B

### Bilgi Formu

1. Yaş : \_\_\_\_

2. Cinsiyet :  Kadın  Erkek

3. Eğitim Durumu

İlkokul

Lise

Üniversite

Ortaokul

Yüksekokul

Yüksek lisans/Doktora

4. Mesleğiniz? \_\_\_\_\_

Şu anda çalışıyor musunuz?

Evet

Hayır

5. Aylık hane geliriniz ne kadar? (Hanenizde yaşayanların aylık toplam geliri)

0-1400 TL

2500- 3499 TL

5000- 9999TL

1401- 2499 TL

3500- 4999 TL

10.000+ TL

6. Medeni Durumu

Bekâr

Nişanlı

Evli

Boşanmış

Dul

7. Herhangi bir fiziksel rahatsızlığınız var mı?

Evet

Hayır

Belirtiniz (rahatsızlık):

8. Hiç psikiyatrik yardım aldınız mı?

Evet

Hayır

Belirtiniz (başvuru nedeni):

9. Şu anda psikiyatrik ilaç kullanıyor musunuz?

Evet

Hayır

Belirtiniz (ilaç adı):

10. Herhangi bir uyuşturucu madde kullandınız mı?

Evet

Hayır

Belirtiniz (madde):

11. Ailenizde psikiyatrik tanı alan kimse var mı?

Evet

Hayır

Belirtiniz (tanısı):

## APPENDIX C

# CAPE (TPYÖ) (EU-CAPE)

### Ölçek ile ilgili açıklamalar:

CAPE belirli duygular, düşünceler ve zihinsel deneyimleri ölçmek için geliştirilmiştir. Bu duygu, düşünce ve zihinsel deneyimlerin toplumda daha önce varsayılandan çok daha yaygın olduğunu ve pek çok insanın bunlara benzer duygu, düşünce ve/veya zihinsel deneyimleri hayatlarının bir kısmında yaşadığını düşünüyoruz.

Sonraki sayfalar A ve B sütunlarına ayrılmıştır. A Sütununda belirli duygu, düşünce ya da zihinsel deneyimlerin hayatınız boyunca hangi sıklıkla yaşadığınızı belirtebilirsiniz. Lütfen en uygun olanın yanına işaret koyunuz.

**Doğru ya da yanlış cevap yoktur.**

Eğer hayatınızda bu duygu, düşüncelerden dolayı zorlandığımız birden fazla dönem olduysa, lütfen en kötü zamanı düşünerek cevaplayınız.

**Eğer “hiçbir zaman” ı işaretlediyseniz, lütfen bir sonraki soruya geçiniz.**

**Eğer “bazen”, “sıklıkla” veya “neredeyse her zaman”ı işaretlediyseniz, lütfen B sütununda bu deneyim nedeniyle ne kadar sıkıntı yaşadığınızı, zorlandığınızı belirtiniz.**

<i>Hayatınız boyunca bu duygu, düşünce ve deneyimleri hangi sıklıkta yaşadınız?</i>	Sütun A				Sütun B			
	Hiçbir zaman	Bazen	Sıklıkla	Neredeyse her zaman	Sıkıntı yok	Biraz sıkıntı	Belirgin sıkıntı	Çok sıkıntı
1. Kendinizi üzgün hissettiğiniz olur mu?								
2. İnsanların sizin hakkınızda imalarda bulunduğunu veya farklı anlamlara çekilebilecek sözler söylediklerini hissettiğiniz olur mu?								
3. Hayat dolu bir insan olmadığınızı hissettiğiniz olur mu?								
4. Başkalarıyla konuşurken pek konuşkan birisi olmadığınızı hissettiğiniz olur mu?								
5. Dergilerde ya da televizyonda gördüğünüz şeylerin özel olarak sizin için yazıldığını hissettiğiniz olur mu?								
6. Bazı insanların göründükleri gibi olmadıklarını hissettiğiniz olur mu?								
7. Herhangi bir şekilde size kötülük ediliyormuş gibi hissettiğiniz olur mu?								

<i>Hayatınız boyunca bu duygu, düşünce ve deneyimleri hangi sıklıkta yaşadınız?</i>	Sütun A				Sütun B			
	Hiçbir zaman	Bazen	Sıklıkla	Neredeyse her zaman	Sıkıntı yok	Biraz sıkıntı	Belirgin sıkıntı	Çok sıkıntı
8. Önemli olaylar karşısında hiç duygulanmadığınızı ya da çok az duygulandığınızı hissettiğiniz olur mu?								
9. Her konuda kötümser olduğunuzu hissettiğiniz olur mu?								
10. Size karşı bir komplo kurulduğunu hissettiğiniz olur mu?								
11. Çok önemli birisi olacağınızın alın yazınızda olduğunu hissettiğiniz olur mu?								
12. Hiçbir geleceğiniz yokmuş gibi hissettiğiniz olur mu?								
13. Çok özel ya da sıra dışı bir kişi olduğunuzu hissettiğiniz olur mu?								
14. Artık yaşamak istemiyormuş gibi hissettiğiniz olur mu?								
15. İnsanların zihinden zihine iletişim kurabildiğini düşündüğünüz olur mu?								

<i>Hayatınız boyunca bu duygu, düşünce ve deneyimleri hangi sıklıkta yaşadınız?</i>	Sütun A				Sütun B			
	Hiçbir zaman	Bazen	Sıklıkla	Neredeyse her zaman	Sıkıntı yok	Biraz sıkıntı	Belirgin sıkıntı	Çok sıkıntı
16. İnsanlarla birlikte olmaya ilgi duymadığınızı hissettiğiniz olur mu?								
17. Bilgisayar gibi elektrikli aletlerin düşüncelerinizi etkileyebileceğini hissettiğiniz olur mu?								
18. Bir şeyler yapma konusunda hevesli olmadığınızı hissettiğiniz olur mu?								
19. Sebepsiz yere ağladığınız olur mu?								
20. Büyüye, cincilere veya medyumların gücüne inanır mısınız?								
21. Enerjinizin kalmadığını hissettiğiniz olur mu?								
22. İnsanların size görünümünüz nedeniyle tuhaf tuhaf baktığını hissettiğiniz olur mu?								
23. Zihninizin bomboş olduğunu hissettiğiniz olur mu?								

<i>Hayatınız boyunca bu duygu, düşünce ve deneyimleri hangi sıklıkta yaşadınız?</i>	Sütun A				Sütun B			
	Hiçbir zaman	Bazen	Sıklıkla	Neredeyse her zaman	Sıkıntı yok	Biraz sıkıntı	Belirgin sıkıntı	Çok sıkıntı
24. Sanki size ait düşünceler zihninizden çekilip alınıyor gibi hissettiğiniz olur mu?								
25. Günlerinizi hiçbir şey yapmadan boşa geçirdiğinizi hissettiğiniz olur mu?								
26. Kafanızdaki düşünceler size ait değilmiş gibi hissettiğiniz olur mu?								
27. Duygularınızın yeterince yoğun olmadığını hissettiğiniz olur mu?								
28. Hiç düşünceleriniz, başkaları tarafından işitilecek diye endişe edeceğinize kadar canlı olur mu?								
29. İçten, doğal olmadığınızı hissettiğiniz olur mu?								
30. Kendi düşüncelerinizi yankı yapar gibi işittiğiniz olur mu?								
31. Kontrolünüzün sizin değil de başka bir gücün elinde olduğunu hissettiğiniz olur mu?								

<i>Hayatınız boyunca bu duygu, düşünce ve deneyimleri hangi sıklıkta yaşadınız?</i>	Sütun A				Sütun B			
	Hiçbir zaman	Bazen	Sıklıkla	Neredeyse her zaman	Sıkıntı yok	Biraz sıkıntı	Belirgin sıkıntı	Çok sıkıntı
32. Duygularınızın körelmiş olduğunu hissettiğiniz olur mu?								
33. Yalnızken sesler duyduğunuz olur mu?								
34. Yalnız kaldığınızda birbiriyle konuşan sesler işittiğiniz olur mu?								
35. Dış görünümünüzü ya da kişisel temizliğinizi ihmal ettiğinizi hissettiğiniz olur mu?								
36. İşleri hiçbir zaman yoluna koyamayacağınızı hissettiğiniz olur mu?								
37. Hobilerinizin az ya da ilgi alanlarınızın kısıtlı olduğunu hissettiğiniz olur mu?								
38. Kendinizi suçlu hissettiğiniz olur mu?								
39. Başarısız biri olduğunuzu hissettiğiniz olur mu?								

<i>Hayatınız boyunca bu duygu, düşünce ve deneyimleri hangi sıklıkta yaşadınız?</i>	Sütun A				Sütun B			
	Hiçbir zaman	Bazen	Sıklıkla	Neredeyse her zaman	Sıkıntı yok	Biraz sıkıntı	Belirgin sıkıntı	Çok sıkıntı
40. Gergin hissettiğiniz olur mu?								
41. Bir başkası, bir yakınınızın kılığına girmiş gibi hissettiğiniz olur mu?( ailenizden birinin, bir arkadaşımızın ya da bir tanıdığınızın)								
42. Hiç diğer insanların göremediği nesnelere, kişileri ya da hayvanları gördüğünüz olur mu								

## APPENDIX D

### Otomatik Düşünceler Ölçeği

Aşağıda kişilerin zaman zaman aklına gelen bazı düşünceler sıralanmıştır. Lütfen her birini okuyarak bu düşüncenin SON BİR HAFTA içinde AKLINIZDAN NE SIKLIKTA GEÇTİĞİNİ işaretleyiniz. Lütfen her bir maddeyi dikkatle okuyunuz ve maddelerin yanındaki uygun sayıyı aşağıdaki şıkları dikkate alarak işaretleyiniz.

1=Hiç      2=Ender Olarak      3=-Arada Sırada      4=Sıklıkla      5=Hep aklımdaydı

		1	2	3	4	5
1	Tüm dünya bana karşıymış gibi geliyor.					
2	Hiçbir işe yaramıyorum.					
3	Neden hiç başarılı olamıyorum?					
4	Beni hiç kimse anlamıyor.					
5	Başkalarını düş kırıklığına uğrattığım oldu.					
6	Devam edebileceğimi sanmıyorum.					
7	Keşke daha iyi bir insan olabilseydim.					
8	Öyle güçsüzüm ki...					
9	Hayatım istediğim gibi gitmiyor.					
10	Kendimi düş kırıklığına uğrattım.					
11	Artık hiçbir şeyin tadı kalmadı.					
12	Artık dayanamayacağım.					
13	Bir türlü harekete geçemiyorum.					
14	Neyim var benim?					
15	Keşke başka bir yerde olsaydım.					
16	Hiçbir şeyin iki ucunu bir araya getiremiyorum.					
17	Kendimden nefret ediyorum.					
18	Değersiz bir insanım.					
19	Keşke birden yok olabilseydim.					
20	Ne zorum var benim?					
21	Hayatta hep kaybetmeye mahkumum.					
22	Hayatım karmakarışık.					

23	Başarısızım.					
24	Hiçbir zaman başaramayacağım.					
25	Kendimi çok çaresiz hissediyorum.					
26	Bir şeylerin değişmesi gerek.					
27	Bende mutlaka bir bozukluk olmalı.					
28	Geleceğim kasvetli.					
29	Hiçbir şey için uğraşmaya değmez.					
30	Hiçbir şeyi bitiremiyorum.					

***Şahin, N. H. and Şahin, N. (1992). "Reliability and validity of the Turkish version of the ATQ " Journal of Clinical Psychology, 48(3), 334-340.***

## APPENDIX E

### SBÖ

**Bu ölçek, kişilerin yaşamlarındaki sıkıntılar ve stresle başa çıkmak için neler yaptıklarını belirlemek amacıyla geliştirilmiştir. Lütfen sizin için sıkıntı ya da stres oluşturan olayları düşünerek, bu sıkıntılarınızla başa çıkmak için GENELLİKLE NELER YAPTIĞINIZI hatırlayın ve aşağıdaki davranışların sizi tanımlama ya da size uygunluk derecesini işaretleyin. Herhangi bir davranış size uygun değilse %0'ın altına, çok uygun ise %100'ün altına, ya da tanımlama derecesine göre diğerlerinin altındaki boşluğa (X) işareti koyun.**

**Sizi ne kadar iyi tanımlıyor?**

<b>Bir sıkıntım olduğunda...</b>	<b>%0</b>	<b>%30</b>	<b>%70</b>	<b>%100</b>
1- Kimsenin bilmesini istemem	( )	( )	( )	( )
2- İyimser olmaya çalışırım	( )	( )	( )	( )
3- Bir mucize olmasını beklerim	( )	( )	( )	( )
4- Olayları büyütmeyip, üzerinde durmamaya çalışırım	( )	( )	( )	( )
5- Başa gelen çekilir diye düşünürüm	( )	( )	( )	( )
6 - Sakin kafayla düşünmeye, öfkelenmemeye çalışırım	( )	( )	( )	( )
7- Kendimi kapana sıkışmış gibi hissedirim	( )	( )	( )	( )
8- Olayın/olayların değerlendirmesini yaparak en iyi kararı vermeye çalışırım	( )	( )	( )	( )
9- İçinde bulunduğum kötü durumu kimsenin bilmesini istemem	( )	( )	( )	( )
10- Ne olursa olsun direnme ve mücadele etme gücünü kendimde bulurum	( )	( )	( )	( )

<b>11-</b> Olayları kafama takıp, sürekli düşünmekten kendimi alamam	( )	( )	( )	( )
<b>12-</b> Kendime karşı hoşgörülü olmaya çalışırım	( )	( )	( )	( )
<b>13-</b> İş olacağına varır diye düşünürüm	( )	( )	( )	( )
<b>14-</b> Mutlaka bir yol bulabileceğime inanır, bunun için uğraşırım	( )	( )	( )	( )
<b>15-</b> Problemin çözümü için adak adarım	( )	( )	( )	( )
<b>16-</b> Her şeye yeniden başlayacak gücü kendimde bulurum	( )	( )	( )	( )
<b>17-</b> Elimden hiçbir şeyin gelmeyeceğine inanırım	( )	( )	( )	( )
<b>18-</b> Olaydan/olaylardan olumlu bir şey çıkarmaya çalışırım	( )	( )	( )	( )
<b>19-</b> Her şeyin istediğim gibi olamayacağına inanırım	( )	( )	( )	( )
<b>20-</b> Problemi/Problemleri adım adım çözmeye çalışırım	( )	( )	( )	( )
<b>21-</b> Mücadeleden vazgeçerim	( )	( )	( )	( )
<b>22-</b> Sorunun benden kaynaklandığını düşünürüm	( )	( )	( )	( )
<b>23-</b> Hakkımı savunabileceğime inanırım	( )	( )	( )	( )
<b>24-</b> Olanlar karşısında “kaderim buymuş” derim	( )	( )	( )	( )
<b>25-</b> “keşke daha güçlü olsaydım” diye düşünürüm	( )	( )	( )	( )

26- Bir kiři olarak iyi ynde deęiřtięimi ve olgunlařtıęımı hissedirim	( )	( )	( )	( )
27- “Benim suęum ne” diye dřnrm	( )	( )	( )	( )
28- “Hep benim yzmden oldu” diye dřnrm	( )	( )	( )	( )
29- Sorunun geręek nedenini anlayabilmek ięin bařkalarına danıřırım	( )	( )	( )	( )
30- Bana destek olabilecek kiřilerin varlıęını bilmek beni rahatlatır	( )	( )	( )	( )

**Kaynak:**

**řahin, N.H. ve Durak, A. (1995). Stresle Bařaıkma Tarzları lęeęi: niversite ęrencileri ięin Uyarlanması. *Trk Psikoloji Dergisi*, 10(34), 56-73.**

## APPENDIX F

### ALGILANAN SOSYAL DESTEK ÖLÇEĞİ

Aşağıda 12 cümle ve her bir cümle altında da cevaplarınızı işaretlemek için 1'den 7'ye kadar rakamlar verilmiştir. Her cümlede söylenenin sizin için ne kadar çok doğru olduğunu veya olmadığını belirtmek için o cümle altındaki rakamlardan yalnız bir tanesini işaretleyiniz. Bu şekilde 12 cümlenin her birine bir işaret koyarak cevaplarınızı veriniz.

Lütfen hiçbir cümleyi cevapsız bırakmayınız. Sizce doğruya en yakın olan rakamı işaretleyiniz.

Kesinlikle hayır    1    2    3    4    5    6    7    Kesinlikle evet

		1	2	3	4	5	6	7
1	Ailem ve arkadaşlarım dışında olan ve ihtiyacım olduğunda yanımda olan bir insan (örneğin, flört, nişanlı, sözlü, akraba, komşu, doktor) var.							
2	Ailem ve arkadaşlarım dışında olan ve sevinç ve kederlerimi paylaşabileceğim bir insan (örneğin, flört, nişanlı, sözlü, akraba, komşu, doktor) var.							
3	Ailem (örneğin, annem, babam, eşim, çocuklarım, kardeşlerim) bana yardımcı olmaya çalışır.							
4	İhtiyacım olan duygusal yardım ve desteği ailemden (örneğin, annem, babam, eşim, çocuklarım, kardeşlerim) alırım.							
5	Ailem ve arkadaşlarım dışında olan ve beni gerçekten rahatlatan bir insan (örneğin, flört, nişanlı, sözlü, akraba, komşu, doktor) var.							
6	Arkadaşlarım bana gerçekten yardımcı olmaya çalışırlar.							
7	İşler kötü gittiğinde arkadaşlarıma güvenebilirim.							
8	Sorunlarımı ailemle (örneğin, annem, babam, eşim, çocuklarım, kardeşlerim) konuşabilirim.							

9	Sevinç ve kederlerimi paylaşabileceğim arkadaşlarım var.								
10	Ailem ve arkadaşlarım dışında olan ve duygularıma önem veren bir insan (örneğin, flört, nişanlı, sözlü, akraba, komşu, doktor) var.								
11	Kararlarımı vermede ailem (örneğin, annem, babam, eşim, çocuklarım, kardeşlerim) bana yardımcı olmaya isteklidir.								
12	Sorunlarımı arkadaşlarımla konuşabilirim.								

