İSTANBUL BİLGİ UNIVERSITY
INSTITUTE OF GRADUATE PROGRAMS
CLINICAL PSYCHOLOGY MASTER'S DEGREE PROGRAM

TURKISH ADAPTATION OF A BRIEF SELF-REPORT MEASURE OF FANTASY PRONENESS: THE CREATIVE EXPERIENCES QUESTIONNAIRE (CEQ)

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İSTANBUL
2022

Turkish Adaptation of a Brief Self-Report Measure of Fantasy Proneness:
The Creative Experiences Questionnaire (CEQ)

Fantezi Yatkınlığının Kısa Bir Öz Bildirim Ölçeğinin Türkçe Uyarlaması:
Yaratıcı Deneyimler Anketi (YDA)

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Tezin Onaylandığı Tarih: 20.07.2022

Toplam Sayfa Sayısı : ……..

Anahtar Kelimeler (Türkçe)	Anahtar Kelimeler (İngilizce)
1) Fantezi yatkınlığı	1) Fantasy proneness
2) Gündüz düşü	2) Daydream
3) Dissosiyasyon	3) Dissociation
4) Şizotipi	4) Schizotypy
5) Büyüsel düşünce	5) Magical ideation
6) Sosyal istenirlik	6) Social desirability

ACKNOWLEDGEMENTS

It has been ten years since I chased after psychology and found myself falling into the unknowns of the wonderland that I have been living in. When I finally started to write the first manuscript of my adventure, my thesis, I found myself in a cycle of feeling larger and small, not knowing which way I ought to go, and feeling stuck at 6 p.m. being busy solving riddles without an answer. There are many people who supported me in preparing the first work that is a representation of my adventures in psychology, which I will never stop chasing after and that have become an integral part of my life. I would like to express my gratitude to everyone who supported me emotionally and motivationally in this process, by giving me the right pills and cakes, reminding me that if I only walk long enough I will surely get somewhere, and helping me to get through this seemingly never-ending process much easier.

First, I would like to thank my supervisor, Zeynep Maçkalı, whose academic knowledge I benefited from during this difficult writing process and who undoubtedly played the biggest role in the creation of this thesis. Her kindness and sensibility made this process much easier to handle. I would also like to thank my jury members, Ryan Macey Wise and Mehmet Eskin for their invaluable contributions and compliments. I also thank to Gergely Czukor for his time and guidance.

Here, I would like to express my gratitude to my instructors and supervisors, whose wisdom enlightened my path in becoming a clinical psychologist and a psychotherapist, they have allowed me to see beyond the looking-glass. I would especially like to thank Alev Çavdar Sideris, who was involved in almost every stage of my graduate education. I want to thank my classmates for their company throughout these challenging master's training.

I would also like to express my gratitude to Hale Bolak Boratav, whom I admire and was honored to work with, first as her assistant and now as her colleague. I also feel grateful to have had the opportunity working with Diane Sunar. I got a better view

of the knowledge and skills I gained during this process of working with them while conducting my own research. I cannot wait to see the day our work is published. I also owe a debt of gratitude to Müjde Peker Booth, Robert W. Booth and Celia Naivar Şen, whom I crossed paths with while I was an undergraduate student. They will always have their share in every contribution I would make to the field.

I would like to thank the translation committee members Sezen Bektaş Yüksel, Hüseyin Yüksel, Ceren Karakuş and Tuba Güler for their incredible contribution to this work. I would also like to thank everyone who contributed to the collection of data in a very short time by advertising the announcement and participating in the study.

I would like to thank my dear friends Ayşenur, Gülten and Tuba, who have been with me since I set foot in the field of psychology, with whom I have shared this adventure for ten years. Special thanks to my dear friend Merve, I always felt lucky that our paths crossed. I would also like to thank Sezin, Burak, Rabia, Ceren, Kübra, and Emine. I could not have successfully completed this process without my friends, I have always felt their support with me.

Finally, I am grateful to my family who supported me whenever I needed it throughout my life. I dedicate this thesis to the two most precious people in my life, to my mother who unconditionally loved me and always believed in me, and to my beloved sister Şükran. She was the one who introduced me to psychology and experienced the greatest joy with me when I took the first step towards becoming a psychologist. She has always inspired me with her personality, vision, and determination. She is my Lorina, so much so that with her presence that I have always felt, I always find the courage to chase my dreams. Her memory will always live with me.

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ABSTRACT

The primary purpose of this study is to adapt the Creative Experiences Questionnaire (CEQ), a brief 25-item self-report measure of fantasy proneness which was originally developed in Netherland, to Turkish and to assess its reliability and validity in Turkey population. The original measure was translated from English to Turkish by following a guide of cross-cultural adaptation. An exploratory factor analysis (EFA) was conducted to evaluate the factor structure of the CEQ, and it revealed outcomes that highly resembled the original. Single factor solution was determined based on the scree plot and none of the items were removed. Reliability and validity analyses were conducted with 464 participants from diverse backgrounds. The findings show that the CEQ presents adequate internal consistency and test-retest stability. Significant correlations were found between the CEQ and standard measures of constructs that were reported among the highest correlates of fantasy proneness: dissociation and magical ideation. CEQ scores negatively correlated with impression management dimension of social desirability. These results support the criterion validity of the measure. Furthermore, the negative relationship with impression management shows that the items do not allude to deceiving or lying which has been seen as a primary limitation of self-report measures. Consequently, the results of the present study demonstrated that the CEQ is a valid and reliable instrument for adult population in Turkey. Initial information regarding the relationship between fantasy proneness and the demographic variables of the population was also documented. While fantasy proneness scores do not significantly differ between genders, it was observed that the scores are negatively correlated with age. A positive relationship between interest in creative activities and fantasy proneness was reported. Moreover, people who are involved in or aiming to be involved in creative activities professionally were found more fantasy prone than others. The CEQ can be used in multivariate analysis and can be involved in experimental research in various research domains. The findings are

discussed along with clinical implications of the study, limitations and recommendations for future research.

Keywords: fantasy proneness, daydream, dissociation, schizotypy, magical ideation, social desirability

ÖZET

Bu çalışmanın temel amacı, orijinal olarak Hollanda'da geliştirilen, fantezi yatkınlığının 25 maddelik kısa bir öz bildirim ölçeği olan, Yaratıcı Deneyimler Anketi'ni (YDA) Türkçe'ye uyarlamak ve Türkiye toplumunda güvenilirliğini ve geçerliliğini değerlendirmektir. Orijinal ölçek, kültürler arası bir adaptasyon rehberi izlenerek dikkatle İngilizce'den Türkçe'ye çevrilmiştir. YDA'nın faktör yapısını değerlendirmek için açımlayıcı faktör analizi (AFA) yapılmış ve orijinaline oldukça benzeyen sonuçlar ortaya çıkmıştır. Yamaç grafiğine dayalı olarak tek faktörlü çözüm belirlenmiş ve hiçbir madde çıkarılmamıştır. Güvenilirlik ve geçerlilik çalışması, farklı özgeçmişlere sahip 464 katılımcı ile gerçekleştirilmiştir. Bulgular YDA'nın yeterli iç tutarlılık ve test-tekrar test kararlılığı sunduğunu göstermektedir. YDA ile fantezi yatkınlığının en yüksek bağıntıları arasında rapor edilen disosiyasyon ve büyüsel düşünce yapılarının standart ölçekleri arasında önemli korelasyonlar bulunmuştur. YDA puanları sosyal istenirliğin izlenim yönetimi boyutuyla negatif ilişkilidir. Bu sonuçlar ölçeğin ölçüt geçerliliğini desteklemektedir. Ayrıca izlenim yönetimiyle olan negatif ilişki, maddelerin öz bildirim ölçeklerinin birincil sınırlaması olarak görülen aldatma veya yalan söylemeye gönderme yapmadığını göstermektedir. Sonuç olarak, bu çalışmanın bulguları YDA'nın Türkiye'deki yetişkin nüfus için geçerli ve güvenilir bir araç olduğunu göstermiştir. Fantezi yatkınlığı ile nüfusun demografik değişkenleri arasındaki ilişkiye dair ilk bilgiler de belgelenmiştir. Fantezi yatkınlığı puanları cinsiyetler arasında anlamlı farklılık göstermezken, puanların yaşla negatif yönde ilişkili olduğu görülmüştür. Yaratıcı faaliyetlere ilgi ile fantezi yatkınlığı arasında pozitif bir ilişki raporlanmıştır. Ayrıca yaratıcı faaliyetlere profesyonel olarak dahil olan veya dahil olma niyetinde olan kişiler diğerlerine göre daha fazla fanteziye yatkın bulunmuştur. YDA çeşitli araştırma alanlarında çok değişkenli analizde kullanılabilir ve deneysel araştırmalara dahil edilebilir. Bulgular çalışmanın klinik çıkarımları, sınırlılıklar ve gelecekteki araştırmalar için öneriler ile birlikte tartışılmıştır.

Anahtar Kelimeler: fantezi yatkınlığı, gündüz düşü, dissosiyasyon, şizotipi, büyüsel düşünce, sosyal istenirlik

“I can’t believe that!’ said Alice.

‘Can’t you?’ the Queen said in a pitying tone.

‘Try again: draw a long breath and shut your eyes.’

Alice laughed. ‘There’s no use trying,’ she said: ‘one can’t believe impossible things.’

‘I daresay you haven’t had much practice,’ said the Queen. ‘When I was your age, I always did it for half-an-hour a day. Why, sometimes I’ve believed as many as six impossible things before breakfast.”

— Lewis Carroll, 1872

INTRODUCTION

We may have projected ourselves into mysterious realms outside our reach to explore beyond the limits of our experience as a child. As we grew older, we may have turned to fantasy to help us escape from unpleasant situations, boredom, misery, or routine. In Lewis Carroll's (1865) children's book sequel *Alice's Adventures in Wonderland*, Alice was portrayed as a child who was stuck in these two functions of fantasy, as she was a youngster who advances to adulthood. She wanders in her fantasy with anxiety, perhaps once she had done it in a freer and less hesitant manner. Thus, she looks for the rules of the real world throughout the story to cope with the unwanted feelings. As it can be seen in the dialogue with the Queen, thinking about impossible things is a useless act for her while being amidst impossibility. Furthermore, fantasy can be used to cope with loneliness or weakness as we get older; we may turn to happier memories or longingly imagine what we would do if we could go back in time. Perhaps this was the case for the Queen.

Fantasy is one of the least known concepts in human life. The assumptions that have been made about the motivation behind the fantasies of both Alice and the Queen are based on common knowledge. We now know a great deal about this human function, which also allows us to call Alice's dream a fantasy, thanks to psychoanalytic theory, which has contributed to the conceptualization and understanding of fantasy, and empirical research on fantasy and fantasy proneness, which has presented enormous data.

The discussion of fantasy in psychoanalytic theory began with Freud's introduction of the term unconscious phantasy (1900/1958). While Freud did not see phantasies as the main unit of the unconscious system, Klein viewed unconscious phantasy as a primary and fundamental activity (Segal, 1991). Freud stated that dream formation and phantasy formation share the same root, and they are both the fulfillment of desires (1908/1953), Kleinian view suggested that phantasy is the root itself as

unconscious, dreams, conscious fantasies, symptoms, and transference patterns are transformations of phantasy (Rodomonti et al., 2021). It was Isaacs (1952) who differentiated the terms phantasy and fantasy from each other, arguing that fantasy corresponded more to the conscious or preconscious phenomena. While some theorists underlined the significance of fantasy in terms of psychopathology (e.g., Winnicott, 1971), others regarded fantasy as a tool of adaptation (e.g., Hartmann, 1958).

While fantasy has been studied for almost a century in theory, its investigation in empirical research peaked with the introduction of the trait "fantasy proneness" in the research tool the Inventory of Childhood Memories and Imaginings (ICMI) by Wilson and Barber (1983). They described a specific group of subjects who exhibited distinct and linked characteristics such as intense engagement with vivid, realistic hallucinogenic fantasies; spending and enjoying half of their leisure time fantasizing. Similarly to discussions in psychoanalytic theory, some researchers regard fantasy proneness as pathological because it implies a withdrawal into a dream world as a result of an inability to cope with reality (e.g., Waldo & Merritt, 2000), whereas others regard it as healthy, adaptive, and self-enhancing aspect of psychological functioning (e.g., Singer, 1996).

Fantasy proneness has been studied, focusing on two major concepts in the first two decades of its discovery: hypnotic suggestibility and trauma (Merckelbach, Horselenberg, et al., 2001). Over time, new concepts were studied with the construct (e.g., schizotypy), and the number of questions to be answered increased. The increased need for a briefer measure of fantasy proneness led the way to the development of the Creative Experiences Questionnaire (Merckelbach, Horselenberg, et al., 2001). Both ICMI and CEQ have paved the way for a better understanding of the structure.

Even a short dialogue that was quoted from a children's story brings up number of questions regarding the phenomenon. Based on the Wonderland reality: What kind of factors in Alice’s life caused her to be poor at fantasizing? Do people lose their ability when they get older? Why the Queen was more fantasy prone than Alice when

she was at her age? Is it because she is more stimulated and encouraged to fantasize than Alice as she has been living in the Wonderland? In the reality of the story's universe: Did Alice lose her touch with reality; how can all these fantasy ingredients feel natural to her when she cannot believe impossible things? Moreover, for our world, the question that can come to mind is: Do people who are interested in art or creative activities differ from others in terms of fantasy proneness such as Lewis Carroll?

This study aims to adapt the Creative Experiences Questionnaire to Turkish, through an adapted measure, encourage research with the Turkish population that would search for answers for these questions and a number of other concerns in the existing literature. In addition to adapting a brief self-report measure of fantasy proneness, the CEQ, this study provides initial information regarding fantasy proneness for the Turkish population.

CHAPTER 1

LITERATURE REVIEW

This section aims to cover the literature on the construct of fantasy proneness and present the current study. In the first section, the term *fantasy* was conceptualized in terms of its use in the fantasy proneness literature. The issues surrounding the term from various aspects were outlined for comparison and clarification. The psychoanalytic etiology and controversies related to fantasy were presented together with empirical studies in fantasy and related fields.

In the second section, the definition of *fantasy proneness* was made, and related terms outlined in the literature were discussed for differentiation. Previous research on fantasy proneness was summarized, highlighting the correlations to which it is most relevant. Dissociation and magical ideation, which are two correlates determined to be examined, were explained in more detail in the third and fourth sections. In the fifth section, different measures of fantasy proneness were described. Finally, the scope and purpose of the present study were explained, addressing the need to adapt a fantasy measure to the Turkish language and culture.

1.1. FANTASY

The origin of the term fantasy is based on the Greek word "antasía" (phantasia), meaning appearance, outlook and illusion (Weibel et al., 2018). The Latin equivalent of this word is imago (Weibel et al., 2018). In order to better understand the term fantasy that has been used today, a closer look should be taken to the terms "imagination" and "creativity".

Imagination is the capacity to create visual experiences or sensations in the mind without using sensory data (O'Connor & Aardema, 2005). Although it is very

strongly tied to fantasy, there are major differences (Weibel et al., 2018). While imagination works to recreate experiences that are already exist in the mind, fantasy is seen as a creative technique of using imagination in a productive manner (Barrett, 2010). *Creativity* is a process of finding a different way of combining some associated components, and an act with an innovative output (Cropley, 2011). Unlike creativity, fantasy does not require a goal or a specific outcome (Weibel et al., 2018); however, it may result in some creative solutions by using imagination (Bowers, 1979; Lynn & Rhue, 1986; Vygotsky, 1930/2004). That fantasy involves both imaginative (e.g., Procter, 1995; see also Merckelbach, Horselenberg, et al., 2001) and creative components (e.g., Barrett, 2010) is a prevailing direction in contemporary definitions. Various other definitions exist. It has also been described as a way of escaping reality. For instance, Hume (1984) defined fantasy as "any departure from … reality" (p.21), and Bacon et al. (2013) described fantasy as a human activity that often involves deep imaginative engagement and that one of its purposes is to escape reality. However, for the current study, the definition of fantasy was made based on the literature related to the fantasy proneness construct introduced by Wilson and Barber (1983).

Although "imagining" was commonly used to refer to the same phenomenon, Wilson and Barber (1983) chose to use the terms "fantasy" and "fantasize" to name the construct. The reason behind this preference was that imagining was easily confused with the term "imaginative," which refers to creativity and novelty of mental experiences without the necessity of fantasizing (Webster & Saucier, 2010). Imagination, as mentioned above with details, and imaginative involvement are the terms that help to define fantasy-proneness. Another term Wilson and Barber chose not to use is "daydreaming," although it had been used to refer to the same phenomenon. However, the primary reason why Wilson and Barber (1983) did not prefer to use this term was that it had negative connotations such as laziness, aimlessness, and uselessness.

Overall, the links between fantasy and the terms imagination and creativity, which are commonly used for defining fantasy, are explained. The term fantasy was preferred for the conceptualization of the construct of fantasy proneness rather than imagining and daydreaming although they had been used as synonyms at that time. A definition of fantasy is determined based on the literature of fantasy proneness construct that has been studied for decades. Accordingly, fantasy is a conscious or preconscious phenomenon that uses imagination in a creative way to combine or form rich and absorbing scenes and/or inner worlds.

As described in the literature on fantasy proneness, it corresponds to what psychoanalysts define as *conscious phantasy* (fantasy) (Isaacs, 1952). It is a phenomenon that has been studied by psychoanalytical theorists for nearly a century. Psychoanalytic theory cannot be ignored while talking about fantasy; therefore, the psychoanalytic background of fantasy was given a place in this study. Moreover, it is believed that psychoanalytic theory and practice would contribute to the deepening of studies on fantasy proneness, and empirical studies on fantasy proneness would help the improvement of psychoanalytic theory and practice. The theoretical contributions are essential for understanding fantasy proneness thoroughly and for arriving at more useful clinical implications.

1.1.1. Psychoanalytic Background of Fantasy

Freud's studies led him to recognize and introduce the concept of *unconscious phantasy*. The unique spelling of the letter *ph* in the word phantasy was used by his English translators in order to distinguish the term's psychoanalytical significance (Isaacs, 1952). The inherent ambiguities of the terms "phantasy" and, to a greater degree, "unconscious phantasy" aggravated controversy among psychoanalytical theorists.

Although Freud coined the term unconscious phantasy, he gave little space to it in his work. In *The Interpretation of Dreams* (1900/1958) he uses the term

"unconscious desire" to explain his method of interpreting dreams; however, he does not explicitly discuss the relationship between unconscious desire and unconscious phantasy (Laplanche & Pontalis, 1973). Phantasy was mentioned in the Dora case story and more specifically in *Hysterical Phantasies and Its Relation to Bisexuality* (Spillius et al., 2011). In Freud's view, there are some phantasies in the unconscious system, but the main unit of the unconscious system is not phantasies but unconscious instinctual wishes and their psychological representations (Rodomonti et al., 2021; Spillius, 2001). Freud (1908/1953) stated in *Creative Writers and Daydreams* that dream formation and phantasy formation are parallel processes because both are the fulfillment of desires. Freud (1900/1958) commented on the relevance of daydreams, which he associated with unconscious phantasies, but did not go into detail about the commonalities and differences between the two phenomena. According to Spillius (2001), Freud believed that the majority of phantasies begin as daydreams or conscious phantasies and are later suppressed.

Melanie Klein borrowed Freud's concept of unconscious phantasy, but her definition of phantasy is broader in scope and has a larger position in her theory than Freud's and is accorded greater. As a result of Klein's research on the early phases of development, the concept of unconscious phantasy has begun to gain hold in psychoanalytic theory (Emde, 1995; Isaacs, 1952; Segal, 1964). Klein was astonished to see that, both consciously and unconsciously, young infants experience anxiety and guilt due to their profound hateful and destructive phantasies (Emde, 1995). Klein is likewise of the opinion that the potential for phantasies emerges in early childhood. She states: "Analytic work has shown that babies of a few months of age certainly indulge in phantasy-building. I believe that this is the most primitive mental activity and that phantasies are in the mind of the infant almost from birth." (Klein, 1936, p. 290).

Klein eventually conceptualized the different phantasies she discovered in both children and adults as aggregation in mental processes, which she defined as *paranoid-*

schizoid position and *depressive position* (Klein, 1935, 1940, 1946). Her idea of unconscious phantasy also encompasses frequent engagement with introjection and projection, together with the ubiquity of novel material in the phantasies of children (Emde, 1995; Riviere, 1952). Therefore, Klein's conceptualization differentiates more from Freud's by giving more space to the interaction between the inner and outer worlds of the individual (Emde, 1995). For Freud, phantasy is not a primary activity. It has the same root, but it does not form the basis of thought, symptoms, dreams, and art (Segal, 1991). By contrast, for Klein, unconscious phantasy is a primary and fundamental activity, constantly interacting with perception, shaping it but also being shaped by it, an authentic expression of both drives and defenses (Segal, 1991).

When one looks at dreams via Freud's (1900/1958) eyes, one sees a royal road to the unconscious, but when one looks through Kleinian and Bionian perspectives, one finds themselves in the unconscious itself, phantasies (Grotstein, 2009). Psychological health depends on the capacity to fantasize or dream reality and that the basic content of the unconscious, dreams, conscious fantasies, symptoms, and transference patterns are viewed as transformations of phantasy (Rodomonti et al., 2021). The therapeutic activity of psychoanalysis is viewed as an attempt to transform unconscious phantasy into conscious thought (Spillius et al., 2011). In the child-analyst relationship, as in the adult-analyst relationship, the phantasies of early life are repeated and staged in the most clear and dramatic manner with many vivid details (Riviere, 1952).

Psychoanalysts were divided about the correct spelling of the word. In 1943, the "Controversial Discussions" in London brought to a head the conflicts between Anna Freud and Melanie Klein and their followers, but the "Gentleman's Agreement" mediated by Susan Isaacs marked a significant step toward reconciliation (Isaacs, 1952, p.80). She proposed that each side agree on the words "fantasy" and "phantasy," with "fantasy" referring to conscious or pre-conscious phenomena such as daydreams,

fictions, etc., and "phantasy" referring to unconscious phenomena that mental material that may or may not become conscious.

Not all analysts have embraced Isaacs' recommendation. While American analysts use fantasy for both conscious and unconscious phantasies (Spillius et al., 2011), British analysts use phantasy. Analysts who prefer to use phantasy argue that it is difficult to differentiate whether the phantasies a patient expresses are unconscious, implicit, or fully conscious (Spillius et al., 2011). Laplanche and Pontalis (1968) criticized Isaacs' usage, contending that it conflicts with Freud's focus on the strong resemblance between the unconscious phantasies of hysterics and perverts and the delusional fears of paranoid patients.

Consequently, the conceptualization of fantasy was made possible by Freud and Klein and through discussions of their theories. Fantasy has a greater place in psychoanalytic theory than that. Some theorists have made a completely different definition, while others have contributed to the theory by emphasizing the relevance of the concept to psychopathology or its function in adaptivity. While some of these contributions are listed below, fantasy/fantasizing has been used as a holistic term in order to avoid ambiguity.

The definition that was proposed by Donald Winnicott differs from both Freud's and Klein's, and it emphasizes the role of fantasy in the scope of psychopathology. He claims in *Playing and Reality* that fantasizing is an isolated phenomenon marked by dissociation from both internal and external reality (Winnicott, 1971). Because of the defensive mechanisms at its core, Winnicott asserted that fantasizing differs from real life and dreaming activities. While both real life and dreaming activities are associated with repression, fantasizing is characterized by dissociation. This activity, according to Winnicott, interferes with both real life and dreaming since a person absorbed in fantasizing stops investing in their psychic and external reality. Because it allows regaining integration, authenticity, and connection with both, the analytic process puts an end to this dissociative state.

In contrast to Winnicott's and Freud's views of fantasy as regressive and pathological, Heinz Hartmann (1958) regards fantasy as a tool of adaptation directed to the future and an expression of the way a person's inner world is constructed. Hartmann emphasized the function of fantasy in adaptation to reality and argued that fantasy enhanced the individual's interaction with reality. In one of their most important works, he established fantasy as a fundamentally adaptive activity. He underlined the ego's important role in psyche adaptation to the individual's environment, as well as the importance of ego functions in learning about reality for the sake of adaptation.

Although Freud's view has been interpreted as an emphasis on psyhopathology, Emde (1995) interpreted Freud's (1908/1953) model, in which the fantasy scene is projected into the future, as already giving a potentially adaptive role to fantasy. According to Robert Emde (1995), mental processes such as imagination and daydreaming are manifestations of expectations, intentions, planning, and goal-oriented activities aimed at managing internal and external reality and adapting to the environment, and they are all active during early development. Thus, psychopathology is defined by a rigid pattern of stereotypic functioning that prevents adapting to new conditions in a flexible manner (Emde, 1995). He viewed daydreaming and fantasy as areas of nonconscious mental activity that are regulated by norms and expectations and can help open up new possibilities.

The Kleinian/Bionian perspective towards fantasy was also interpreted in terms of adaptivity. Grotstein (2004, 2009) proposed that all defense mechanisms are unconscious fantasies about the interaction between internal objects and the self. Fantasies are essential for comprehending, accepting, and adapting to the personal realities (both inner and external) that we face (Grotstein, 2009). Grotstein emphasized how each of the psychopathologies might be produced by a nonadaptive capacity to imagine as a result of a deficient alpha function (Grotstein, 2004, 2009). As a result, psychological wellness is dependent on the ability to fantasize/dream reality (Grotstein, 2009).

Hanna Segal emphasized both the destructive and constructive aspects of fantasy, with a particular focus on the use of fantasy as a defense, as well as fantasy as a possible hypothesis for testing against reality and thus as a significant factor in the development of thinking (Segal, 1991, 1994). From a self-psychology perspective, Shane and Shane (1990) proposed a model in which fantasies stem from the self's needs and longings and that fantasies have to do not only with sexuality and aggression but also with other motivational systems in their attempt to control psychological dangers and restore a threatened sense of the self. John Steiner (1993) proposed that some patients have a fantasy of a "psychic retreat," which they feel will shelter them from both the guilt and agony of depressive-position thinking and the persecutions of paranoid-schizoid thinking. Ronald Britton (1995) explains patients' concept of "the other room" as a fantasized area where the absent object is considered to continue their existence with the other component of the oedipal triangle.

Philip M. Bromberg (2008) suggested that unconscious fantasy is similar to "dissociated fantasy" from an interpersonal/relational standpoint (Bromberg, 1998, p. 311). He proposed that if the self is both multiple and integral, reality is nonlinear and cannot be differentiated in absolute terms from fantasy. As a result, reality (me) for one part of the self is fantasy (not-me) for another. What we consider unconscious is determined by which part of ourselves has access to consciousness at the time. Hence, the patient and analyst should engage in a relational battle that incorporates the realities of both me and not-me. In this manner, the patient sees and reflects on the existence of other selves and learns to adapt to them.

The views of the theorists that first come to mind when fantasy is mentioned, Freud and Klein, were discussed. A distinction was made between fantasy and phantasy, and the views of other theorists on these concepts were included. As mentioned earlier, conscious phantasy/fantasy, which refers to conscious or preconscious phenomena such as daydream, is similar to what is meant by fantasy in fantasy proneness literature and in empirical literature on fantasy in general. Moreover,

psychoanalytic theory shares another commonality with empirical research as two sides of the coin were discussed: the role of fantasy in the development of psychopathology and its role in adaptivity. Another resemblance between empirical research and theory is that a disagreement seems to exist regarding the distinction between fantasy and fantasy-related concepts. Therefore, before moving on to fantasy proneness, empirical studies regarding fantasy and terms that were usually associated with it were discussed.

1.1.2. Contemporary Research on Fantasy

In 1966, Jerome Singer initiated the first research program. This study demonstrated that fantasies are inclined to increase as a reaction to heightened emotional activation and intimidating stimuli and identified three broad types of fantasies: positive-constructive fantasies, guilt and fear-of-failure fantasies, and attentional control fantasies. This program also inspired variety of studies on fantasy. Recent empirical research has examined the function of daydreaming and mind-wandering in daily fantasy.

According to Smallwood (2010), mind-wandering is an adaptive phenomenon that facilitates the management of various goals. Since our brains hold a hierarchy of focal areas, there are times when, while doing a primary task, our mind fantasizes about a secondary goal triggered by an external stimulus (Smallwood & Schooler, 2006). Thus, mind-wandering was defined as a shift in executive control from a primary activity to the processing of different tasks (Smallwood & Schooler, 2006). Other researchers (e.g., Klinger et al., 2018; Mason et al., 2007; McVay & Kane, 2010) have suggested that mind-wandering occurs while the brain is unoccupied and is created automatically, continually, and inadvertently in a resource-free way (McVay & Kane, 2010).

A number of studies conclude that present worries, forthcoming events, and goal-related signals define the content of fantasies (Klinger et al., 2018; McVay &

Kane, 2010). Several studies reveal that a substantial percentage of mind-wandering or daydreaming segments are future-focused (e.g., Andrews-Hanna et al., 2010). In contrast, a substantial percentage of mind-wandering and spontaneous thoughts appear to be memories and reflections on past events (Andrews-Hanna et al., 2010), which serve the adaptive function of reviewing past experiences to benefit future endeavors.

According to Klinger (2009), daydreams and fantasies are a specific kind of mental processing (Klinger, 1971; Mason et al., 2007) that are triggered when individuals are awake and unable to attain a goal via action (Klinger, 2013). In addition to occurring during waking hours, fantasies occur continuously during sleep (Beck, 2002). A number of recent cognitive-neuroscientific theories on dreaming reflect the assumption that there is physiological and psychological continuity between waking life and dream life (e.g., Schredl, 2010). Recent research has shown, for example, that a default network of brain regions is normally active during resting phases and supports daydreaming and mind wandering during waking states (Domhoff & Fox, 2015). These studies suggest that both dream and fantasy material are produced by the same neural network (Domhoff & Fox, 2015).

According to Dorsch (2015), what we sometimes mistake for daydreaming is actually mind-wandering, since it consists of a series of linked mental episodes, much like focused daydreaming. However, she underlines two crucial features of focused daydreams that lack in mind-wandering instances: representational purposiveness and unity. In addition, the two phenomena vary in terms of whether they have a narrative framework and how we might interpret the series of mental episodes involved. Mind-wandering does not even create separate and coherent series of mental episodes with distinct temporal bounds, whereas focused daydreams are imaginative mental activities. This does not suggest, however, that mind-wandering cannot entail mental or even imaginative agency.

Many definitions of daydreaming and mind-wandering include all non-task-related cognition (Singer, 1975; Smallwood et al., 2003), which is rather

comprehensive. Bigelsen and Schupak (2011) used the word "fantasy" to characterize the maladaptive daydreaming habit of their research group. According to Klinger's (1971) definition, fantasy is a fictitious narrative created only for the author's personal entertainment. As previously proven, daydreaming is substantially more common than fantasy. By emphasizing fantasy, Klinger (1990) revealed that majority of us have imaginative daydreams, but that the really fanciful ones comprise a tiny fraction of our thoughts.

Some scholars describe mind-wandering as a spontaneous, independent flow of thinking unrelated to the present environment (Preiss & Cosmelli, 2017; Smallwood, 2013). Similar to Smallwood's (2013) definition of mind wandering, Singer's (1975) definition of daydreaming is characterized by thoughts that migrate away from the external world. Singer (1975) adds that these thoughts are continuous series of private reactions to an internal stimulus, and that this sequence may include memories, experiences, or creatively produced images of the future. Piaget (1951) described fantasy as "interiorized play"; children who engage in make-believe exhibit its active expression. For instance, children express their inner world, ideas, and pictures via pretend play. Thus, Singer (1981) conceptualized children's pretend play as the externalization of fantasy.

Consequently, daydreaming, mind-wandering, and fantasy are interwoven so firmly that they were often employed interchangeably in various studies. However, some researchers considered fantasizing, mind-wandering, and daydreaming as representing the same set of mental activities (e.g., Rodomonti et al., 2021) as all include imagining. However, both daydreaming and fantasy are distinguished from mind-wandering by being defined by involving imaginative agency which does not imply that mind-wandering cannot involve it (Dorsch, 2015). Mind-wandering is often considered a component of daydreaming and fantasy. Therefore, daydreaming and fantasy are often used interchangeably. Nevertheless, this does not change the fact that fantasy/fantasizing is a broader concept than daydreaming. Daydreaming mostly

corresponds to the conscious or preconscious aspect of fantasy; however, fantasy can also involve unconscious phenomena. Moreover, the term daydreaming has been associated with laziness or idleness in different societies (Klinger et al., 2009). Although the term fantasy that was used in ‘fantasy proneness’ corresponded to daydream, Wilson & Barber (1983) preferred to use the term fantasy because of these attributions.

1.2. FANTASY PRONENESS

Wilson and Barber (1983) introduced the concept of fantasy proneness to refer to a particular group of subjects known as 'fantasy-prone persons' with the term 'fantasisers' also serving as a label. They discovered fantasy proneness as a result of their investigation of hypnotic susceptibility focusing on a sample exceptionally hypnotic. They conducted extensive interviews and uncovered a variety of distinct and linked characteristics. These individuals with a inclination for fantasy indicated a lengthy history of active imaginative involvement in reading, play activities, and mystical/religious experiences dating back to their early years. They tended to engage in prolonged and intensive engagement with vivid, realistic hallucinogenic fantasies. They enjoyed spending up to fifty percent of their spare time fantasizing (Lynn & Rhue, 1986) and were sensitive to hypnosis (Reyes et al., 2017). They were experiencing bodily concomitants of fantasies (e.g., feeling sick when visualizing rotten food), and a number of individuals reported the ability to reach orgasm without physical contact (Lynn & Rhue, 1986). In addition, several reported anomalous (including out-of-body) and other paranormal experiences (e.g., belief in recovering others through telepathy).

Highly fantasy-prone individuals were viewed as frequently absorbed in mental operations to the moment where the boundary between fantasy or pseudomemories and reality may become blurred (Bacon et al., 2013; Merckelbach, 2004; Merckelbach, Horselenberg, et al., 2001; Reyes et al., 2017). In addition, it was shown that they are

likely to experience paranormal experiences such as apparitions, ghosts, UFOs, psychic abilities, afterlife messages, etc. (Reyes et al., 2017). Therefore, some researchers have argued that fantasy-prone individuals exhibit greater degrees of psychopathology, suggesting that fantasy-proneness implies a withdrawal into a dream world prompted by an inability to cope with reality (e.g., Waldo & Merritt, 2000).

On the other hand, the other side of the coin, healthy, adaptive, and self-enhancing aspects of fantasy and daydreaming have been also mentioned by authors (Klinger et al., 2009; Plante et al., 2017; Singer, 1996). Wilson and Barber (1983) noted that fantasy proneness might be an adaptive way of coping and maladaptive if they are intense, distressing, and/or interfere with everyday functioning. Lynn et al. (1996) hypothesized that control over fantasy may be the differentiating factor between healthy and disordered creative predisposition. Similarly, Cuper and Lynch (2008) showed that participating in fantasy is only detrimental when accompanied by a perception that one lacks control over life events. There are suggestions as to under what circumstances fantasy proneness may develop psychopathological traits, but it is still unclear (Merckelbach et al., 2022).

Wilson and Barber (1983) proposed fantasy proneness as a normally distributed, unitary trait. The group that played a role in introduction of this concept was accordingly located at the upper end of this continuum. Sánchez-Bernardos and Avia (2004) investigated the relationship between fantasy proneness and personality dimensions and stated that fantasy proneness cannot be conceptualized as a trait under a high-level personality trait. Lynn and Rhue (1988) have questioned Wilson and Barber's argument that fantasy-proneness is a syndrome-like trait in which all of these qualities are considered to be typical of a fantasy-prone person. Lynn and Rhue (1986) defined fantasy proneness as the ability to establish a theme, after which an imaginative scenario emerges that has some characteristics of a dream and some characteristics of a movie, as opposed to implication that it is autism based on withdrawal from reality. Instead of claiming that fantasy proneness is a coherent personality trait, they described

it as "a unique constellation of personality traits and experiences that coalesced around a deep, profound, and long-standing involvement in fantasy and imagination" (p.35).

Taking into consideration the commonalities in the descriptions of Wilson and Barber (1983), Lynn and Rhue (1986, 1988), and Merckelbach et al. (2022), for the current study, fantasy proneness is defined as a trait-like construct and experiences that attach additional meaning or value to deeply involved perceptual and cognitive representations. A summary of studies regarding its relationship with demographic variables, its differences and similarities with associated concepts, its possible developmental pathway, and its highest correlates were provided below.

1.2.1. Fantasy Proneness and Demographic Features

Wilson and Barber (1983) estimated the prevalence of fantasy proneness to be 2% to 4%, but did not define what group this reflected (Ogden, 2018). Since Wilson and Barber's (1983) pioneering work, researchers have shown that fantasy activities are frequent in the general population (Singer, 1996).

It has been shown that some populations engage in fantasy at a higher rate. Average scores on fantasy proneness scales are greater for actors, role players, dancers, artists, opera singers, and cosplayers (e.g., Merckelbach, Horselenberg, et al., 2001; McCain et al., 2015; Reyes et al., 2017; Schelleman-Offermans & Merckelbach, 2010; Thomson & Jaque, 2015). In these groups, one can anticipate an inclination to engage with fictional stories, notable fantasy immersion abilities, and a tendency toward make-believe (Panero et al., 2020). Merckelbach (2004) showed that persons with a high level of fantasy proneness excel in role-playing and pretense activities and are better storytellers than those with a low level of fantasy proneness. Weibel et al. (2018) found that word poets are competent at using their imagination creatively to create compelling stories. In addition, artists and role players received higher ratings than "novices," with impact sizes ranging from moderate to strong (Weibel et al., 2018).

Inconsistent reports exist regarding age and sex/gender differences in fantasy proneness scores. As a remarkable coincidence, it has been discovered that highly hypnotizable women have a long history of intense imaginative involvement (Lynn & Rhue, 1988; Rhue & Lynn, 1987; Wilson & Barber, 1983). Myers (1983) was one of the first researchers to reveal a significant effect of gender and age on fantasy proneness score through large-scale research (conducted with 1337 participants) that was carried out with children and adolescents aged between 8 and 18. She found that girls were more prone to fantasy than boys. Similarly, Sánchez-Bernardos and Avia (2004) also found gender differences among an adolescent sample; girls scored higher than boys on fantasy vividness, fantasy to escape, and make-believe. However, unlike Myers, they did not find any effect of age on fantasy proneness. Muris et al. (2003) also found that adolescent girls scored higher than boys. Merckelbach, Horselenberg, and Muris (2001) found no significant effect of gender or age on adult mean scores; however, men had slightly higher mean scores. Reyes et al. (2017) found that male cosplayers were more fantasy prone than female cosplayers, and the difference between the scores was significant.

Green and Lynn (2008, 2011) found young adults who were undergraduate students reported a significant gender difference as female participants scored higher than males in their two different studies. Levin at al. (2004) reported no gender differences between the scores; however, it was observed that the sample size of the study was relatively small, the number of female and male participants were unequally distributed, and a group of participants had a specific condition as they depersonalization disorder outpatients. Rauschenberger and Lynn (2003) also reported no significant difference, but participants were selected based on their fantasy proneness scores from a sample pool. Overall, there are limited studies that investigated the association between age and fantasy proneness and the studies that were encountered and reported no gender differences between fantasy scores were not representative in terms of sample profile.

Weibel et al. (2018) gave the most descriptive data about the link between fantasy proneness with age and gender (2017). The correlation between age and creative fantasy scores was weakly negative. They identified a substantial difference between women and men in terms of imaginative fantasy, but there was no such difference in terms of creative fantasy. They discovered weak negative correlations between age and imaginative fantasy, as well as between age and creative fantasy. In contrast, Merckelbach et al. (2022) investigated the associations of sex and fantasy proneness scores and the associations of age and fantasy proneness scores by using the data from the studies that specified related information and found non-statistically significant associations. Therefore, they preferred not to involve the relevance of age and sex while interpreting their results. They noted that if discrepancies regarding gender or age exist, they are likely to be rather minor.

While occupation and hobbies are statistically significant determinants of fantasy proneness, main demographic variables such as gender and age were not given attention as significant predictors of fantasy proneness. Therefore, data is limited regarding their relationship with fantasy proneness. These variables are not unaccompanied in terms of not having thorough investigations into the scope of fantasy proneness constructs. Previous studies pointed out that the concepts of fantasy proneness, hyperassociativity, transliminality, apophenia, and oddity need to be studied further for clearer conceptualizations (Merckelbach et al., 2022).

1.2.2. Fantasy Proneness and Related Concepts

Hyperassociativity seems to be a feature of REM sleep (Stickgold et al., 2001) and indicates the shift from wakefulness to sleep onset (Schacter, 1976). Dissociative persons whose daytime thought displays coherence or integration with dream-like experiences also exhibit hyperassociativity (Lynn et al., 2014; Soffer-Dudek, 2017; van Heugtenvan der Kloet et al., 2015). Reduced reality monitoring, self-referential and

self-reflective processing/meta-consciousness, and increased hyperassociativity, along with more ludicrous and vivid fantasy-like content, differentiates the dream state from the waking state (Cernis et al., 2014; D'Agostino et al., 2013; Kunzendorf et al., 1997). Yet, the cognitive processes that form pictures while dreaming are functioning throughout the sleep-wake cycle (Domhoff, 2010), and the contents of daydreams can be more bizarre than those of nocturnal dreams (Wollman & Antrobus, 1986).

According to van Heugten-van der Kloet et al. (2015), dissociative disorders are characterized by fluid and hyperassociative cognition, which are fueled by excessive REM sleep, microsleep episodes through the day, or both. When sleep-like experiences transcend over into daily life, it promotes highly associative, fantasy-based thinking during wakefulness (Lynn et al., 2019), consistent with other results that suggest a significant relationship between fantasy-proneness and dissociative experiences (Giesbrecht et al., 2008). The unexpected and distressing infiltration of dreamy mentation during the day imparts an unsettling sense of unreality to encounters, stimulates anxiety and hyperassociativity, weakens meta-consciousness, and triggers depersonalization/derealization episodes (Lynn et al., 2019).

Watson (2001) argued that the interrelationships of absorption, schizotypy, and fantasy-proneness reflect the trait of transliminality, which is defined as "the tendency for psychological material to cross (trans) thresholds (limines) into or out of consciousness" (p. 853; Thalbourne & Houran, 2000). Carhart-Harris (2007) claimed that the onset of dreamy experiences while waking is connected with bursts of theta and slow wave activity in the medial temporal lobe (2–8 Hz). Hartmann and Kunzendorf's (2006) review concluded that the dreams of people with "thin" (transliminal) boundaries between conscious and nonconscious material (e.g., fluid, overinclusive thinking, hyperassociative) are more bizarre and emotional than those of people with "thick" boundaries. Lynn, Maxwell, and colleagues (2019) proposed that schizotypy (like dissociation) is linked to impaired inhibition, hyperassociativity, meta-consciousness, and (similar to schizophrenia) fantasy-proneness and classified it as

transliminality. The profile of substantial transliminality correlations coincides that of fantasy proneness (e.g., Evans et al., 2019; Thalbourne & Houran, 2000). Transliminality is a more explanatory concept than fantasy proneness, which is a descriptive term (Merckelbach et al., 2022).

DeYoung et al. (2012) describe apophenia as the typical human tendency to detect significant patterns and causal relationships when, in reality, the observation is due to chance. Common examples of moderate apophenia include seeing faces in random visual patterns, confusing random noises for the sound of one's own name and believing that anything might bring good or bad luck (DeYoung et al., 2012). Positive schizotypy is another term for apophenia and is characterized by magical ideation, overinclusive thinking, and perceptual aberration (DeYoung et al., 2012). The best verified subfactors of the schizotypy construct include negative schizotypy, which predominantly reflects anhedonia and lack of enjoyment in sensory and social experience (Kwapil et al., 2008; Vollema & van den Bosch, 1995).

Individuals with a high level of Openness/Intellect (but none of the other Big Five) reported experiencing more dreams and more vivid dreams than those with a low level of the trait (Watson, 2003). Perhaps persons with a high Openness score, which includes fantasy-proneness and apophenia, engage in cognitive processes similar to dreaming when awake (DeYoung et al., 2012). Positive schizotypy is positively associated with Openness/Intellect, whereas negative schizotypy is negatively associated with Openness/Intellect, according to previous study (Kwapil et al., 2008; S. R. Ross et al., 2002).

The concepts of hyperassociativity, transliminality, apophenia, and oddity were described and their relationship with fantasy proneness were addressed. Merckelbach et al. (2022) recommended that these concepts should be distinguished from one another, and researchers should be aware whether they share an underlying conceptual space. More specifically, the fundamental concern here is that they may all map onto a general tendency to experience consciousness shifts and, if so, whether a loss of

executive control or improper gating underpins the psychopathological expression of this tendency (Merckelbach et al., 2022). In order to address all these concerns, understanding where these concepts fit in the developmental trajectory is essential.

1.2.3. Developmental Pathway of Fantasy Proneness

Following the studies by Wilson and Barber (1983), various developmental routes of fantasy proneness have been suggested. In addition to a lengthy history of imaginative and fantasy activity, the fantasizers reported recurrent and severe childhood punishments (Lynn & Rhue, 1986; Wilson and Barber, 1983). According to Lawrence et al. (1995), early trauma may nurture this trait, with fantasy-proneness giving a "mental escape" from adverse childhood experiences (Lynn & Rhue, 1986) and serves as an automatized habitual defensive reaction of dealing with aversive environment, isolation and loneliness (Persson & Vanek, 2005).

Research also suggests that fantasy-proneness may be a result of acculturation in an environment that fosters creativity and pleasurable, adaptive fantasy activities. Lynn and Rhue (1988) discovered a group of individuals who had been encouraged to engage in imaginative play as youngsters and who had been read to by adults who encouraged their fantasies. According to Jang et al. (1998), there is evidence that fantasy-proneness includes a genetic component; hence, it is difficult to conceptualize fantasy-proneness as a defensive response to traumatic events. Their proposal also diminishes the good impacts of a nurturing setting that reinforces fantasy involvement.

Both trauma and being encouraged to fantasize seems to play role in modification of the level of being prone to fantasy. Especially trauma has been a popular correlate that has been suggested and studied in early studies of fantasy proneness. However, the focus has shifted in later years to different concepts that were discovered to be correlating with fantasy proneness.

1.2.4. Fantasy Proneness and Its Correlates

Prior to the year 2000, psychological trauma and hypnotic suggestibility/hypnotizability, which the high level associated with receptivity to a range of hypnotic suggestions for shifts in mood, cognition, and perception, were significant issues in the empirical research on fantasy proneness (Merckelbach et al., 2022). Lynn and Rhue (1986) found that 80% of college students with a strong fantasy proneness were highly hypnotizable (see also Wilson & Barber, 1983). Further investigations have agreed on the finding that the correlation between hypnotizability and fantasy proneness is weaker than it was suggested. Rhue and Lynn (1989) discovered that the correlation between fantasy proneness and hypnotizability averages around 0.30. Braffman and Kirsch (1999) discovered no association between fantasy proneness and hypnotizability. Green & Lynn (2008) claimed that their data do not support Wilson & Barber's (1981) claim that highly hypnotizable people spend a disproportionate amount of awake time daydreaming or fantasizing.

Researchers also suggested that a certain degree of imaginative involvement is required to respond effectively to hypnotic suggestions. In fact, it was shown that those with low fantasy proneness were much less likely to respond to hypnotic suggestions than those with medium or high fantasy proneness (Council & Huff, 1990; Rhue & Lynn, 1989). Other characteristics, such as expectations surrounding hypnosis, are considerably more significant predictors of hypnotic suggestibility than fantasy proneness (Braffman & Kirsch, 1999; Kirsch et al., 1995; Lynn, Green, et al., 2019). Although research has not demonstrated a strong relationship between fantasy proneness and hypnotic suggestibility, fantasy proneness may be positioned within a larger network of variables that are empirically connected to but easily separate from hypnotic suggestibility (Kihlstrom et al., 1994; Lynn & Rhue, 1986, 1988).

Merckelbach et al. (2022), in their metanalysis, stated that sufficient evidence had been gathered up to the year 2000 to conclude that the relationship between the

two constructs, hypnotic suggestibility and fantasy proneness, accounts for a small amount of shared variance (e.g., Lynn & Rhue, 1988). They defined 19 most studied correlates of fantasy proneness. Only the studies published between 2000 and 2018 that used Inventory of Childhood Memories and Imaginings (Wilson & Barber, 1983) or Creative Experiences Questionnaire (Merckelbach, Horselenberg, et al., 2001) to measure fantasy proneness were included. Correlates of fantasy proneness with the largest correlations (*rs* > .50) were: absorption, hallucinatory experiences, two schizotypal features; magical ideation and perceptual aberrations and dissociative symptoms. Unusual sleep experiences (such as nightmares and hypnagogic hallucinations) and excessive daydreaming were other two correlates that were hovering around 0.50. The other correlates with medium to low correlation coefficients were a subgroup of dissociative symptoms in the Dissociative Experiences Scale (Bernstein & Putnam, 1986), acceptance of anomalous phenomena and suspiciousness/paranoia, imagery vividness, depression, anxiety, global trauma self-reports, absentmindedness, interrogative suggestibility/compliance, memory illusions, memory hits, and self-reports of violent childhood trauma.

Top correlates of fantasy proneness, absorption, hallucinatory experiences, dissociation and schizotypy, were discussed in a detailed way and some information regarding the other correlates of the construct were provided. Based on this recent evidence that was provided by Merckelbach et al. (2022) and the others, two of the highest correlates of fantasy proneness (ie. dissociation and magical ideation) were selected to be studied in the current study. The reasons behind the decision were explained below in detail.

1.2.4.1. Absorption

Absorption is a condition of enhanced imaginative involvement in which a person's attention is intensively concentrated on one behavioral domain, frequently to

the exclusion of explicit information processing in other domains (Levin & Fireman, 2001-2002; Tellegen & Atkinson, 1974). High absorption suggests the capacity to temporarily limit reality monitoring (Parra & Argibay, 2012). Absorption and fantasy-proneness were found to be substantially overlapped (Levin & Fireman, 2001-2002).

As with fantasy proneness and imaginative involvement, absorption is not pathological in and of itself, but it can interact with external variables such as trauma or abuse to form a dissociative disorder (Levin et al., 2004). Numerous studies demonstrate a correlation between dissociation, fantasy-proneness, and psychological absorption (e.g., Rauschenberger & Lynn, 1995). High-absorption individuals also report a high frequency of subjective paranormal experiences, such as aura vision and apparitions (Parra, 2009). In addition, Glicksohn and Barrett (2003) discovered that the trait of absorption might function as a predisposing factor for hallucinatory experiences.

1.2.4.2. Hallucinatory Experiences

Merckelbach, Horselenberg, and Muris (2001) reported that persons who scored high on fantasy-proneness assessments had a general predisposition to endorse bizarre or even odd objects, indicating that fantasy proneness may be strongly associated with non-clinical characteristics of psychotic-like experiences. Van De Ven and Merckelbach (2003) proposed that fantasy-proneness represents a unique response bias that arises from impaired reality testing, and that this may facilitate misinterpretation of internally created experiences, which may increase hallucinatory experiences (e.g., Cahill & Frith, 1996). Hallucinations are regarded to be a part of the continuum of normal conscious experiences, which includes vivid daydreaming; nevertheless, the precise nature of this connection remains obscure (Van De Ven & Merckelbach, 2003). Moreover, necessity of examining fantasy-proneness as a

mediator between childhood trauma and auditory hallucination tendency emphasized (Merckelbach & Van De Ven, 2001).

1.2.4.3. Dissociation

It has been shown that fantasy proneness is a crucial factor in the relationship between trauma and dissociation (Lynn et al., 2014). The results highlight the role of fantasy-proneness as a mediator between trauma and dissociation. In both clinical and non-clinical groups, correlations ranging from .42 to .72 have been documented between fantasy proneness and dissociation (Ogden, 2018). Both clinical and non-clinical groups are more likely to have dissociative symptoms among those prone to fantasies (Giesbrecht et al., 2008; Lynn et al., 2014).

1.2.4.4. Schizotypy

Researchers have found strong associations between fantasy-proneness and schizotypy scores (Merckelbach, Horselenberg, et al., 2001; Watson, 2001). Moreover, a number of studies have identified comparable substantial correlations between schizotypy, fantasy proneness, and dissociation (Hoshi et al., 2011; Merckelbach, Rassin, et al., 2000; Pope & Kwapil, 2000). Berenbaum (1999) proposed that schizotypy, fantasy proneness, and dissociation are expressions of a number of underlying beliefs resulting from a background of trauma. However, no evidence to substantiate this assumption was identified in research that evaluated prior trauma (Irwin, 2001; Merckelbach & Giesbrecht, 2006). Merckelbach et al. (2022) found that correlation between self-reports of violent childhood trauma and fantasy measures was minimal.

Adult schizotypy has been revealed to have considerable association with fantasy proneness according to research (e.g. Irwin, 2001). Sánchez-Bernardos & Avia

(2004) studied the relationships between these concepts in a sample of adolescents. The full range of schizotypal characteristics was shown to be associated with imaginative tendencies triggered by fantasy proneness. The simultaneous investigation of fantasy and schizotypy revealed that, in teenagers, fantasy converges with magical ideation, a cognitive-perceptual component of schizotypy, but diverges from the interpersonal characteristics of schizotypy.

The majority of the relevant literature on suggestibility, hallucinations, trauma, dissociation, schizotypy, and fantasy proneness has been addressed. Literature related to other correlates of fantasy proneness is also mentioned below.

1.2.4.5. Other Correlates of Fantasy Proneness

Two further indicators of fantasy proneness with effect sizes ranging around 0.50 are, respectively, unusual sleep experiences and excessive daydreaming. In the instance of excessive daydreaming, the conclusion is virtually circular, as vivid daydreaming is a significant component of fantasy proneness (Bigelsen et al., 2016; Bigelsen & Schupak, 2011; Somer et al., 2016). Despite this, unusual sleep experiences are an intriguing indicator of fantasy proneness in light of the numerous research that have consistently established interconnections between sleep disturbances, positive schizotypy, and dissociative symptoms (for reviews, see Lynn, Maxwell, et al., 2019; Merckelbach et al., 2022).

Some studies have hypothesized that fantasy proneness promotes memory illusions (e.g., Geraerts et al., 2005) and interrogative suggestibility (e.g., Ost et al., 1997). Even though the effect sizes related with interrogative suggestibility and memory illusions are substantial, the results of the meta-analysis disprove the assumption that they are important correlates of fantasy proneness (see also Patihis & Lynn, 2017). However, Frost et al. (2013) presented a more sophisticated two-stage

model of fantasy proneness and memory illusions that emphasizes the significance of trustworthiness in sources of misinformation instead of fantasy proneness.

Strong believers in and witnesses of paranormal phenomena are likely to be fantasy prone individuals (Parra & Argibay, 2012). Irwin (1991) conducted a questionnaire survey to 122 Australian university students in order to evaluate interrelationships between paranormal belief, psychological adjustment, and fantasy proneness. This research was conducted in response to findings from a prior study (Irwin, 1990). They reported that paranormal belief was positively connected with fantasy proneness. In addition, Rao (1992) reported a substantial positive correlation between paranormal experiences and fantasy proneness. Lawrence et al. (1995) reported a direct but weak relationship between childhood fantasy and paranormal belief and experience, as well as a direct connection between childhood trauma and paranormal experience.

In sub-clinical populations, fantasy proneness is also correlated with poor mood states (Levin & Spei, 2003). To escape painful reality, to avoid blame, or to disassociate from trauma fantasies facilitate coping (Bacon et al., 2013); however, there are further, broader implications. Smith and Mathur (2009) have demonstrated that children who are prone to fantasy not only have superior coping abilities and emotional control than their less imaginative peers, but also score better on tests of cognition and communication.

Significant overlap between the constructs of fantasy proneness, hallucinatory experiences, absorption, dissociation, and schizotypy suggests they constitute a common domain. In this adaptation study, for measuring the concurrent validity dissociation and magical ideation were chosen out of the highest correlates. Merckelbach et al. (2022) state that dissociation is by far the most studied correlate in this field and its appeal as a research topic is a result of arguments over the significance of fantasy proneness to dissociative symptomatology. The size of the correlation between fantasy proneness and dissociative symptomatology is significant and it is

among the most consistently replicated and robust findings in this field. Therefore, they suggested that a comprehensive theory of dissociation would have to take into consideration its strong connection with fantasy proneness. However, it has been claimed that the link between fantasy-proneness and dissociation may be a result of content overlap among measures assessing these variables and may overlap through their connection with trauma history (Dalenberg et al., 2012). Aside from having a traumatic background, Kluemper and Dalenberg (2014) asserted that fantasy proneness and dissociative symptomatology are comparable in that they both entail absorption. However, Pekala et al. (1999-2000) discovered that even after deleting absorption questions from the Dissociative Experience Scale (DES; Bernstein & Putnam, 1986), fantasy-proneness still accounted for considerable variation in dissociation. Therefore, examining the relationship between dissociation and fantasy proneness is seen as more relevant. As schizotypy is a construct as broad as dissociation and fantasy proneness instead of focusing on schizotypy, magical ideation is decided to be studied to obtain more diverse results.

1.3. DISSOCIATION

Dissociation is defined generically as "a disruption or discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, and behavior" (Diagnostic and Statistical Manual of Mental Disorders 5, American Psychiatric Association, 2013; DSM 5; p. 291). There is little doubt that dissociation is a diverse construct (Terhune et al., 2011). There is evidence that dissociation encompasses two separate processes: detachment and compartmentalization (Brown, 2006). Detachment corresponds to alterations in consciousness characterized by decreased awareness of environmental or intrinsic stimuli (e.g., depersonalisation), whilst compartmentalization is a lacking in the ability to control or consciously access normally controllable actions, information, or

processes (e.g., conversion blindness) (Terhune et al., 2011). It is often believed that dissociation results from traumatic experiences in childhood (e.g., Putnam, 1985). It may lead to serious psychopathological disorders such as depersonalization disorder and dissociative identity disorder (Muris et al., 2003; Giesbrecht, Merckelbach, & Geraerts, 2007). In its moderate form, dissociative experiences such as derealization, absorption, and memory problems are relatively prevalent in the general population (Giesbrecht, Merckelbach, & Geraerts, 2007).

It is believed that pathological dissociation has severe long-term personal consequences (Eisen & Lynn, 2001) as opposed to the comparatively mild dissociation associated with fantasy and daydreaming (Putnam, 1985). The troubling symptoms of pathological dissociation include depersonalization, amnesia, identity confusion, and derealization (Eisen & Lynn, 2001). Janet (1919/1925), around the turn of the twentieth century, claimed that dissociation comprises a defensive segregation of memories, or what he termed 'disaggregated memories', thereby establishing a link between trauma and dissociation. Janet noted that when individuals are overloaded by traumatic events that conflict with their previous schemas of safety, for instance, they are frequently unable to integrate the events into their narrative memory and thus avoid thinking about trauma-related material. Janet revealed that the ongoing avoidance of trauma-related signs enabled the separation of highly charged memories from regular consciousness, resulting in extreme circumstances to pathological symptoms like as amnesia and multiple personalities.

Dissociative phenomena are largely regarded to be a daily occurrence (see Lynn & Rhue, 1994). Non-pathological dissociation comprises experiences in which attention is intensely focused or absorbed (e.g., viewing a magnificent sunset) and there is a loss of awareness or deterioration of monitoring of internal states and external activity (Eisen & Lynn, 2001). Two prevalent traits related with nonpathological dissociation in children and adults are absorption and fantasy proneness (Eisen & Lynn, 2001). It is believed that fantasy and imaginal activities have a dissociative component

characterized by a lack of awareness of external circumstances, difficulties in reality monitoring, the impression of being "on autopilot," and vivid daydreaming (Eisen & Lynn, 2001).

1.3.1. Dissociation and Fantasy Proneness

Dissociative symptoms are relatively common in the general population, with 80–90% of respondents reporting that they occasionally experience such symptoms (Gershuny & Thayer, 1999). Recent study has demonstrated that early traumatic experiences cannot account for the high prevalence of dissociative symptoms (Merckelbach & Muris, 2001). In fact, feelings of absorption, a crucial aspect of dissociation, are quite prevalent among the general population (Leonard et al., 1999). For instance, individuals visit the movies, watch television, or read stories to temporarily lose touch with reality and become absorbed in fantasy.

Another strong correlation exists between dissociative experiences and fantasy proneness (e.g., Merckelbach et al., 2002). The first large-scale study to establish a major overlap between dissociative experiences and fantasy proneness was conducted by Silva and Kirsch (1992), who found significant relationship between the two constructs within their undergraduate sample. Rauschenberger and Lynn (1995), and Waldo and Merritt (2000) recruited high and low fantasy-prone students from their respective student groups and compared their dissociation levels using a different methodology. Students with a high degree of fantasy proneness reported considerably more dissociative symptoms than those with a low or moderate degree of fantasy proneness in both studies. Muris et al. (2003) found a strong relationship between dissociation and fantasy proneness based on a non-clinical sample of children and adolescents. This demonstrates that the overlap between the two constructs is not limited to adults but can also be observed earlier along the development. This association has been verified in clinical samples (Merckelbach et al., 2005; Pekala et

al., 1999-2000) and is not restricted to healthy student samples. A clinical investigation examined the relationship between dissociation and fantasy proneness (Pekala et al., 1999-2000). In this study, a large sample of male substance-abusing patients completed self-report measures of dissociation, fantasy proneness, and early trauma. Replicating the findings of non-clinical research, researchers discovered a moderate relationship between dissociation and fantasy proneness. The considerable overlap between these two constructs indicates that they share a common domain (Merckelbach et al., 2005)

Many of the studies investigating the relationship between fantasy proneness and dissociation was based on the idea that both are caused by traumatic experiences. Dalenberg et al. (2012) hypothesized that dissociation and fantasy-proneness may correlate fallaciously in part due to their shared association with trauma history. Furthermore, Kluemper and Dalenberg (2014) suggested that fantasy proneness and dissociative symptomatology overlap because both are rooted in a traumatic past and involve absorption. They suggested that the association between dissociative symptoms and fantasy proneness depended on the absorption items exist in the respective assessments of these constructs (i.e., DES and CEQ or ICMI). However, Pekala et al. (1999-2000) showed that the association between dissociation and fantasy-proneness is not due to content overlap among scales. Even after the extraction of absorption items from the Dissociative Experience Scale-II (DES-II; Carlson & Putnam, 1993) fantasy proneness was observed as a significant contributor. Moreover, the view that fantasy proneness is more related to benign forms of dissociation as absorption may encourage the assumption that fantasy proneness is unrelated to taxon items of the DES (DES-T) (Waller et al., 1996), which represents pathological forms of dissociation (e.g., wearing clothes but not remembering putting them on). However, Merckelbach et al. (2022) reported an association with a medium effect size between fantasy proneness and DES-T; nonetheless, the association was smaller than the one with general dissociation.

Lynn et al. (2019) noted that it remains unclear if fantasy relates to self-reported trauma, fantasy serves as a way of coping during trauma exposure, or both (see Merckelbach et al., 2002). The meta-analysis carried by Merckelbach et al. (2022) revealed that self-reported (childhood) trauma weakly correlate with fantasy proneness. Thomson and Jaque (2011) observed that actors and subjects in control group did not differ in terms of self-reported trauma but did differ in terms of fantasy proneness and dissociation, with actors having greater degrees of both. This is consistent with the findings of Lynn et al. (2014), who evaluated evidence demonstrating that self-reported trauma cannot fully explain the overlap between fantasy proneness and dissociation. These data corroborate the alternate explanation that there are nontraumatic pathways to fantasy proneness including genetic predisposition (Ott et al., 2005), parental reinforcement of creativity (Lynn & Rhue, 1988), or boredom (Bigelsen et al., 2016).

The ability to cope with negative early life experiences is associated with both dissociation and fantasy proneness. In dissociation, individuals cope by disconnecting themselves from the reality of their negative experiences and environment, whereas in fantasy, they create an alternative for current reality (Reyes et al., 2017). Since this fantasy is likely to have intrinsic rewards as individuals create favorable fantasies, the more this fantasy is used as a way of coping, the more likely it will be employed in the future (Kwapil et al., 2002).

In the context of the Five Factor Model, both dissociative experiences and fantasy proneness have been examined (FFM; Costa & McCrae, 1992). Dissociative experiences or tendencies are most significantly linked to high *openness to experience* (Kihlstrom et al., 1994; McCrae & Costa, 1997) that was defined as willingness to encounter new things and to be inquisitive and creative (Costa & McCrae, 1992). It was followed by neuroticism and introversion (Sánchez-Bernardés & Avia, 2004). Openness to experience has also been associated to fantasy-proneness (Reyes et al., 2017).

The variable of dissociation was described and its relationship with fantasy proneness was explained. As both traits have been seen as related to trauma, evidence points out that trauma phenomenon is not sufficient to explain the developmental routes of these traits. Another trait that has been considered sharing a same domain with fantasy proneness construct is schizotypy. Its dimension of magical ideation was determined as the second variable to be studied and it was described in detail and its association with fantasy proneness was further explained.

1.4. MAGICAL IDEATION

Significant historical and phenomenological connections exist between schizophrenia spectrum disorders, psychotic disorders, and psychotic-like symptoms/experiences (PLEs) (Lee et al., 2016; Schultze-Lutter et al., 2019). Schizotypy has been characterized as a vulnerability to and characteristic of subclinical levels of symptoms associated with schizophrenia-spectrum disorders (DeYoung et al., 2012). A considerable attention has been paid to these vulnerability indicators over the last 30 years due to its potential preventive impact (Garzitto et al., 2016). Sub-clinical psychotic symptoms like perceptual abnormalities, lack of feelings, bizarre behavior, social withdrawal/anxiety, and magical ideation, are schizotypal features that were highly linked to prodromal phases of psychotic disorders (Garzitto et al., 2016; Lee et al., 2016). However, later, it was no longer thought that schizotypy was a gradation of sickness limited to a distinct subset of the general population; rather, it is seen as a continuum graded across all people, with extreme symptoms manifesting as illnesses (DeYoung et al., 2012; Garzitto et al., 2016; Lee et al., 20016; Schultze-Lutter et al., 2019).

Schizotypy is now a phenomenon neither fundamentally disordered nor equal to schizophrenia that is considered multifaceted (Schultze-Lutter et al., 2019). At least two dimensions (positive and negative) are anticipated (Nelson et al., 2013; Vollema

& van den Bosch, 1995), and it is the accumulation or co-occurrence of increasing levels of both dimensions in an individual that leads to taxon-like entities like schizophrenia (Schultze-Lutter et al., 2019). Consequently, factor analyses of both schizotypy and schizotypal personality disorder (SPD) measurements reveal that schizotypy consists of the same three dimensions as schizophrenia: a positive, a negative, and a disorganized dimension (Vollema & van den Bosch, 1995), though they have vastly different conceptualizations (Gross et al., 2014). In the discussion of a continuum hypothesis of psychosis (Pedrero & Debbané, 2017), the positive dimension receives the most attention, despite the fact that Claridge's (1997) fully dimensional model assumes that this dimension is the one that is least (inherently) associated with schizophrenia vulnerability.

In contrast to the disorder-based perspective on schizotypy, temperament-based theories recognize the presence of benign qualities underlying one-dimensional schizotypy, which may only become pathological in excess. This is especially true for positive schizotypy, which, among other expressions, includes spiritual experiences, personal enlightenment, and feelings of connectivity with other people and/or the environment (Schultze-Lutter et al., 2019). According to a recent review of studies on benign schizotypy (Mohr & Claridge, 2015), increased positive schizotypy is more likely to be beneficial, i.e., associated with personal well-being, flexible and nontraditional thinking (including creativity), and positive personality traits and psychosocial factors (e.g., spirituality, openness to experience, and fantasy proneness). In contrast to the continuum hypothesis of psychosis, which emphasizes positive schizotypy, and in accordance with findings on the prediction of psychoses, high negative schizotypy and/or high disorganized schizotypy appeared as factors associated with psychopathological functioning and mental illness (Mohr & Claridge, 2015). Recent studies have shed light on the effect of positive schizotypy on happiness (Fumero et al., 2018). Experiences such as reference concepts and suspicion are significantly associated with poor environmental mastery, negative affect, and hence,

poor autonomy (Fumero et al., 2018). Other experiences such as magical ideation, odd beliefs, and unusual perceptual experiences were either strongly associated with happiness, feelings of competence, positive affect, and personal development, or unrelated to these outcomes (Fumero et al., 2018).

Magical ideation/thought/thinking is one of the cognitive perceptual components of schizotypy (Irwin, 2001). It is a system of thinking that was first recognized in psychotic persons and defined as the belief or acceptance that two events with no causal connection (Eckbald & Chapman, 1983). It has been placed under PLEs in number of studies (e.g., Lee et al., 2016), and has also been called psychosis proneness (Cicero et al., 2010). It is related to individual's belief in the power to influence or create events in the external world (Woolley, 1997). It refers to a group of non-quantifiable ideas and methods of thinking, such as fatalism, astrology, spiritual energy transmission, and the belief in mind transfer and psychological interaction (Eckbald & Chapman, 1983; Einsten & Menzies, 2004). It is also defined as a trait-like concept that suggests a tendency for remarkable ideas and experiences; however, temporary and dependent on the mental state of the person (Tan et al., 2018).

It is claimed that magical ideation is an early, threat-activated stage of ontological response. In his work *Totem and Taboo* (1912-1913/1955), Freud first defined magical ideation psychoanalytically. It has been stated that magical ideation produces the illusion of control or enhances a person's sensation of control in circumstances when real control is impossible (Einsten & Menzies, 2004). Piaget stated that children use magical thinking until the ages of 11 to 12 years old. Other researchers have indicated that the magical thinking system may not fade beyond 12 years of age (e.g., Bolton et al., 2002). Adults may employ magical thinking systems and associated rituals to lessen and neutralize anxiety, especially when they fear they have lost control, contrary to Piaget's belief that it is a uniquely infantile trait (Bolton et al., 2002; Einstein & Menzies, 2004; Einstein & Menzies, 2006).

1.4.1. Magical Ideation and Fantasy Proneness

Fantasy proneness has been associated with schizotypy (e.g., Sánchez-Bernardos & Avia, 2004), and creative capacity (Lack et al., 2003). Both schizotypy and creativity have been linked to psychopathological experiences in psychosis populations (Crabtree & Green, 2016). Strong connections have been established between fantasy-proneness and schizotypy and more specifically magical ideation aspect of schizotypy (e.g., Irwin, 2001; Klinger et al., 2009; Merckelbach, Rassin, et al., 2000; Sánchez-Bernardos & Avia, 2004; Watson, 2001). Fantasy proneness and magical ideation differ in that magical ideation is associated with a formed association, such as a belief that extraterrestrials are controlling one's behavior and movement, which can dissipate outside of a psychotic episode, whereas fantasy-prone individuals may be more likely to enjoy of that kind scenarios and exhibit magical ideation (Dasse et al., 2015; Tan et al., 2018). In adolescents, fantasy converges with magical ideation, but diverges from the interpersonal elements of schizotypy, according to Sánchez-Bernardos & Avia's (2004) research.

Strong connections have been established between fantasy-proneness and magical ideation suggests a similar tendency with dissociative disorders (Lynn et al., 2019). The cognitive-perceptual component of schizotypy (ie. unusual perceptual experiences, paranoid ideation, ideas of reference, and magical ideation) has been identified as the main predictor of dissociative tendencies, but some cautionary remarks are still in order. Accordingly, the involvement of magical ideation in both schizotypy and dissociative tendencies might be indicating a more fundamental overlap of processes in these domains. Irwin (2001) states that in order for a schizotypal person to engage in magical thinking some dissociative skills are required. Specifically, magical thinking may depend upon the suspension or dissociation of any information or process of reality testing that would discount the rationality of the person’s line of thought. Conversely, having dissociative tendencies may predispose a person to

dissociate from the harsh realities of life and hence to an indulgence in magical thinking.

Undergraduate samples' scores on the dissociation showed a robust overlap with perceptual aberration, magical ideation, and schizotypy in general (see Merckelbach et al., 2000; see also Pope & Kwapil, 2000). It was observed that the elimination of shared elements from the materials of dissociation and schizotypy had no effect on their relationship. Startup (1999) found a positive correlation between schizotypy and dissociation. He added that link is not attributable to items common to both schizotypy and dissociation scales and based on statistical grounds, the relationship between two variables are not due to childhood trauma (see also Watson, 2001). Merckelbach, Rassin, and Muris (2000), investigated the role of fantasy proneness between two variables and stated that when statistically omitting fantasy proneness, the connection between dissociation and schizotypy became weaker but remained maintained. Giesbrecht, Merckelbach, Kater, and Sluis (2007) disagreed with these conclusions that the relationship between dissociation and schizotypy is not due to neither fantasy proneness (Merckelbach et al., 2000) nor childhood trauma (Startup, 1999). They reported that dissociation and schizotypy had a substantial overlap and the influence of the three mediators (ie. fantasy proneness, self-reported childhood trauma, and cognitive impairments) might explain 58% of the link between dissociation and schizotypy. Fantasy proneness and cognitive failures accounted for the big portion of the overlap whereas self-reported childhood trauma predicted rest of it. In this investigation, three mediators had distinct effects on three subscales of the Schizotypal Traits Questionnaire (STA; Claridge & Broks, 1984) measuring magical ideation, paranoid ideation, and unusual perceptual experiences. When all three mediators were included in the model, the relationship between dissociation and the subscale for magical ideation was nearly totally mediated. In contrast, the relationships between dissociation and the subscales paranoid ideation and unusual perceptual experiences were only partially mediated by fantasy proneness and fantasy proneness paired with

cognitive failures, respectively. However, correlation between childhood trauma and the higher variation was not observed in these investigations. The findings for each mediator component independently were not substantially different from those of previous studies. The bulk of the correlation between dissociation and schizotypy was due to fantasy proneness. Fantasy proneness explained the largest amount of dissociation-schizotypy overlap.

Fantasy proneness has numerous aspects, which can be measured with reliable and valid instruments. To date, two instruments have been widely used by researchers: the Inventory of Childhood Memories and Imaginings (Wilson & Barber, 1983) and Creative Experiences Questionnaire (Merckelbach, Horselenberg, et al., 2001). These tools, their versions and recent fantasy proneness measures were explained below.

1.5. MEASURES OF FANTASY PRONENESS

With the identification of fantasy-prone persons the first self-report measure of fantasy proneness was established by Wilson and Barber (1983), the Inventory of Childhood Memories and Imaginings (ICMI). The Creative Experiences Questionnaire (CEQ; Merckelbach, Horselenberg, et al., 2001) was established in response to the need for a simpler measure, and it has since gained widespread acceptance. Other self-report instruments include the Imaginative Involvement Questionnaire (IIQ; Naylor & Simonds, 2015), the Fantasy Engagement Scale (FES; Plante et al., 2017), the Fantasy Questionnaire (Weibel et al., 2018), and the Retrospective Childhood Fantasy Play Scale (RCFPS; Kirkham et al., 2019). However, they have not been applied on a sufficient scale as of yet (Merckelbach et al., 2022). More detailed description of the mentioned tools of fantasy proneness provided below.

1.5.1. Inventory of Childhood Memories and Imaginings (ICMI)

Wilson and Barber (1983) designed the Inventory of Childhood Memories and Imaginings (ICMI) as the first self-report measure of fantasy proneness, examining childhood and adult fantasies and beliefs (e.g., vividly reexperiencing sensations when imagined; enjoying or believing fairy tales; out-of-body experiences). ICMI is a 103-item dichotomous (yes/no) self-report measure. It has satisfactory test-retest reliability and convergent validity with the Tellegen Absorption Scale (TAS: Tellegen, 1976) and the Creative Imagination Scale (see Wilson & Barber, 1983).

In several studies, shorter versions of the ICMI have been used (e.g., Lynn & Rhue, 1988). The 48-item version developed by Myers (ICMIC; 1983) aimed to assess the likelihood of children and adolescents to engage in fantasy. Merckelbach, Horselenberg, and Muris (2001) constructed the widely recognized 25-item Creative Experiences Questionnaire (CEQ). A 52-item version of the ICMI has also been regularly used by researchers since then (e.g., Green & Lynn, 2008).

1.5.2. Imaginative Involvement Questionnaire (IIQ)

The Imaginative Involvement Questionnaire was designed by Naylor and Simonds (2015) because they believed that fantasy proneness, daydreaming, and absorption are all connected with the higher order construct of imaginative involvement. Therefore, they aimed to create a measurement tool that evaluates all three simultaneously. They used existing measures of these concepts as the basis for the IIQ such as Creative Experiences Questionnaire (CEQ) for fantasy dimension. By adding new items addressing novelty and positive valence in imaginative involvement, they aimed to present a coherent and stable measure.

The internal consistency of each factor, Negative Fantasy, Sensory Imagery Intensity, Daydream Novelty, and Positive Fantasy, was deemed satisfactory and the

model fit was confirmed. IIQ was presented as a reliable and valid measure for a wide array of individual characteristics associated with imagination.

1.5.3. Fantasy Engagement Scale (FES)

Plante et al. (2017) created a measure of fantasy engagement that evaluates both the positive and negative features of fantasy engagement. Wellness, mental imagery, and escapism were determined as suitable subjects to involve in the measure. Four investigations proved the instrument's reliability and validity.

1.5.4. Retrospective Childhood Fantasy Play Scale (RCFPS)

The Retrospective Childhood Fantasy Play Scale is a brief 11-item self-report measure developed by Kirkham et al. (2018) that focuses on involvement in and preference for fantasy play throughout childhood. It has been claimed that the RCFPS is a suitable replacement for longitudinal studies. It was recommended to be used in educational and developmental research for examining the correlations between childhood fantasy play and individual differences in adulthood (e.g., in the areas of creativity, theory of mind, and narrative skills). It is a one-dimensional scale with some preliminary validity and a decent fit.

1.5.5. Fantasy Questionnaire

Weibel et al. (2018) designed a questionnaire with the intent of constructing a measure that conceptualizes fantasy as a positive feature. The results of component analysis indicated the existence of two factors, imaginative fantasy, and creative fantasy. Imaginative fantasy was conceptualized as vivid imagination and intense engagement with images and daydreams. Creative fantasy was conceptualized as a

process of generating new ideas using fantasy. Internal consistency, discriminant and convergent validity, incremental validity, and test–retest reliability was reported satisfactory. Three behavioral experiments further verified the validity of the instrument.

1.5.6. The Creative Experiences Questionnaire (CEQ)

Fantasy proneness research has gained popularity among researchers after Wilson and Barber's (1983) generation of the 103-item ICMI; however, demand for a shorter tool measuring fantasy proneness also arose. In several studies, shorter versions of the ICMI have been used throughout time (e.g,, Lynn & Rhue, 1988; Myers, 1983). Merckelbach et al., (2001) stated that they were difficult to locate and most of them did not provide psychometric information. The only version that provided psychometric data was 48-item version developed by Myers (1983) that aimed to assess the likelihood of children and adolescents to engage in fantasy. According to Merckelbach, Horselenberg, and Muris (2001), Myers' version was also a lengthy scale like other versions of the ICMI. Therefore, 25-item CEQ (Merckelbach et al., 1998; Merckelbach, Horselenberg, et al., 2001) was developed to respond to the demand of shorter instrument. While developing the CEQ, authors tried to develop an overall and an inclusive measure of fantasy proneness as simple and short as possible. The items of the CEQ concern the developmental antecedents of fantasy proneness, intense elaboration and deep involvement of fantasy and daydreaming, and the concomitants and outcomes of fantasizing. By condensing the Wilson and Barber's ICMI (1983) a brief measure of fantasy proneness was constructed which is widely recognized to date.

To the present author's knowledge, there is only one cross-cultural adaptation of the CEQ which was developed by Sánchez-Bernardos and Avia (2004). It was adapted to Spanish to be applied to adolescents. Therefore, their sample consisted of 495 students from elementary to high school from Madrid. There were 284 boys

(57.4%) and 211 girls (42.6%), ranging in age from 14 to 18 years, mean CEQ score was 15.0 (*SD* = 0.86). They followed the path that was followed in the original study; therefore, five items (6, 7, 16, 17 & 24) were removed due to their corrected item-to-total correlations being lower than .15. A principal component factor analysis with varimax rotation was carried out on the 20-item Spanish CEQ. Six factors with an eigenvalue greater than 1.0 and accounted for 48% of the variance were reported. However, following examination of the scree plot, Sànchez-Bernardos and Avia decided on a three-factor solution which explained 31% of the cumulative variance. The first factor (eigenvalue: 2.25) explained 11.26% of the variance, the second factor explained 9.93% (eigenvalue: 1.98), and the third factor 9.65% (eigenvalue: 1.93). First factor had nine items and was related to vividness intensity of fantasies, the second factor was related to fantasy of escape and the third was related to make-believe/suggestibility.

All in all, among all these measures of fantasy proneness the CEQ is the most ideal to be considered for adaptation to expand research on fantasy proneness among different populations. It is a brief and yet an inclusive measure of fantasy proneness that was proven to be reliable and valid multiple times (see Merckelbach et al., 2022). Although the tools that were developed in recent years represents different qualities of the construct better, they were not as widely used as the CEQ; therefore, information regarding their psychometric qualities are not sufficient.

1.6. PRESENT STUDY

The present study is a cross-cultural adaptation study of the Creative Experiences Questionnaire (CEQ; Merckelbach, Horselenberg, et al., 2001). Fantasy proneness is a construct that is highly correlated with various clinical domains that have been studied in Turkey, such as dissociative symptoms and schizotypal features. It was considered that an available measure of fantasy proneness and its involvement in future

research would extend the scope of these concepts and enrich their content. Moreover, fantasy proneness is a construct that has been studied for almost four decades. However, there are a considerable number of gaps in the existing literature that has been recommended to be studied. Therefore, presenting a reliable, valid, and brief self-report measure such as the CEQ would encourage scholars to address them.

Some of the gaps and recommendations in the existing literature are: first, the distinction and similarities between fantasy proneness and related concepts need to be clarified (e.g., transliminality); second, more advanced statistical analysis methods need to be used for better theoretical formulations of the construct; third, possible moderators should be studied in order to generate causal models; fourth, different longitudinal studies need to be conducted to understand adaptive and maladaptive fantasy's developmental aspects; fifth, the relative impact of fantasy proneness on personal development, problem-solving, decision-making, and career paths should be better understood; and last, the vulnerabilities and strengths of being highly or poorly prone to fantasy and its implications in clinical practice need to be better understood.

The studies to test the psychometric properties of the adapted questionnaire, the reliability and validity study, will provide some further contributions. Although it can be confidently said there are robust correlations between fantasy proneness; and dissociation, magical ideation, the theoretical significance of these correlations is far from clear (Merckelbach et al., 2022). The correlational study between these concepts may present a basis for subsequent research and may help to create data regarding a different context. Inconsistent results regarding the relationship between age and gender with fantasy proneness have been reported in previous studies. Because this study is the first research regarding the fantasy proneness of the Turkish population, the significance of these demographic variables will be re-examined.

1.6.1. Aims and Scope

The aim of this research is to create the Turkish version of the CEQ, and to investigate its psychometric properties: its factor structure, reliability, validity and generalizability to the population aged between 18 and 60 years. Factor structure of the adapted version will be discovered and will be compared with the original CEQ. The relationship between fantasy proneness and variables of dissociation and magical ideation will be investigated to evaluate the convergent validity. For the evaluation of discriminant validity, the relationship between fantasy proneness and social desirability will be investigated as Horselenberg et al., (2000) did not find a significant relationship between these two variables (see also Merckelbach, Horselenberg, et al., 2001). If the instrument be found reliable and valid, through convergent validity study the relationship between fantasy proneness and its indicated correlates will be interpreted for Turkey population. Moreover, the relationship between the main demographic features (ie. gender, age, interest in creative activities) and fantasy proneness will be investigated within a different context.

CHAPTER 2

METHOD

In this chapter, the inclusion and the exclusion criteria regarding data were explained. Demographic characteristics of the participants whose data were evaluated as eligible were described. The instruments that were used for data collection were explained in detail. Steps of the procedure (ie. translation, pilot study, data collection) were listed and information regarding determined data analysis methods were provided.

2.1. PARTICIPANTS

Individuals between the ages of 18 and 60 were eligible to participate to the study. The online survey was answered 907 times, only 510 (56.2%) were fully completed. Of these 397 incomplete surveys, 311 included those who did not consent participation and never filled out any scale or demographic form after consent. Eighty-six of them consisted of surveys that were left incomplete after some of the questions were answered. Among 510 surveys 43 were excluded due to wrong answer to at least one of the leading questions that were included to the survey to observe the attention (i.e., Please select 20% among options; Please select 3 among options). Two of the surveys were excluded because the participants did not meet the age criteria. Four hundred sixty-five (51.3%) completed surveys were eligible for the analysis.

Demographic characteristics of the sample are presented in Table 2.1. Participants' ages varied between 18 and 59 (M = 30.2, SD = 7.79). Tabachnick and Fidell's (2013) approach regarding distribution was adopted for the present study which they suggested kurtosis-skewness values should be between + 1.5 and - 1.5. Age was normally distributed, with skewness of 1.12 (SE = 0.11) and kurtosis of 1.26 (SE

= 0.23). Those aged between 18-45 made up 95.1% of the total sample. Of the 465 participants, 360 (77.4%) individuals identified themselves as woman aged 18 to 59 (M = 29.99, SD = 7.48), 101 (21.7%) as man aged 18 to 58 (M = 31.2, SD = 8.83) and 4 (0.8%) from other genders aged 21 to 35 (M = 27.25, SD = 6.85).

One hundred thirty-three (28.6%) of the participants' either did not prefer to indicate their sexual orientation or gave an answer that could not be interpreted as sexual orientation (e.g., woman, man, normal, etc.). On the other hand, 296 (63.7%) of the participants identified themselves as heterosexual, 11 (2.4%) as homosexual, 20 (4.3%) as bisexual (indications of pansexual and heteroflexible were also included to this category), 5 (1.1%) of the participants identified themselves as from other sexual orientations (ie. asexual, queer, questioning). Although 'queer' is commonly used to express gender identity, it is also referred to as sexual orientation (e.g., Dunbar et al., 2017), therefore it was grouped with other low frequency expressions. Regarding the relationship status, 318 (68.4%) of the participants reported themselves to be single with or without an ongoing relationship, while 138 (29.7%) currently married and 9 (2.1%) divorced or widowed.

Participants of the present study mostly had high level of education as 230 (49.5%) participants completed an undergraduate, and 162 (34.9%) completed a graduate level of education. Two hundred sixty-four (56.8%) of the participants did not have any ongoing education degree, 11 (2.4%) were high school students, 8 (1.7%) were associate degree students, 82 (17.6%) were bachelor's degree students, 71 (15.3%) were master's level students, 29 (6.2%) were doctorate level students.

In terms of income level, sample is accumulated around middle level of income. Thirteen (2.8%) of the participants had high level of income, 101 (21.7%) had middle-high, 217 (46.7%) had middle, 84 (18.1%) had middle-low and 50 (10.8%) had low level of income. Regarding the occupation, 7.7% were unemployed, 1.9% were housewife, 32.9% were officer or employee, 29% self-employed, 0.9% were retired, and 27.5% were students.

Table 2.1

Demographic Characteristics of Participants (N = 465)

		n	%
Gender	Female	360	77.4%
	Male	101	21.7%
	Other	4	0.9%
Sexual Orientation	NA	133	28.6%
	Heterosexual	296	63.7%
	Homosexual	11	2.4%
	Bisexual	20	4.3%
	Other	5	1.1%
Marital Status	Single without RS	187	40.2%
	Single with RS	131	28.2%
	Married	138	29.7%
	Widow	2	0.4%
	Divorced	7	1.5%
Education Level	Secondary School	2	0.4%
	High School	71	15.3%
	Associate Degree	17	3.7%
	Bachelor's	213	45.8%
	Master's	145	31.2%
	Doctorate	17	3.7%
Working Status	Unemployed	36	7.7%
	Housewife	9	1.9%
	Officer/Employee	153	32.9%
	Self-Employment	135	29.0%
	Retired	4	0.9%
	Student	128	27.5%
Ongoing Education Level	Not a student	264	56.8%

	High School	11	2.4%
	Associate Degree	8	1.7%
	Bachelor's Degree	82	17.6%
	Master's	71	15.3%
	Doctorate	29	6.2%
SES	Low	50	10.8%
	Middle-low	84	18.1%
	Middle	217	46.7%
	Middle-high	101	21.7%
	High	13	2.8%

Participants were also asked about their living situation. 55.7% was with family, 17.2% living alone or with a pet, 5.8% with friends, 5.8 % with a partner, 5.4% with spouse, 5.8% with a family member (ie. mother, father, child, sibling), 1.1% with a relative, 4.8% at places other than home (e.g., dorm). Number of siblings that participant had ranged was between 0 and 13, almost half of the participants (45.8%) reported that they have one sibling while $M = 1.80$, $SD = 1.78$.

Apart from demographic information, participants were asked about their psychiatric/psychological help history and their reason to get psychiatric/psychological help, as matters of diversity. Ninety-four (20.2%) of the participants indicated that they have psychiatric diagnosis. The 20.2% was shared between the diagnosis categories which the highest were anxiety disorders with 9.9% (e.g., general anxiety disorder, social phobia, etc.), and depressive disorders with 7.5% (e.g., major depression, atypical depression, etc.). Other than these, 1.7% indicated ADHD, 1.3% indicated obsessive-compulsive disorder and related disorders, 1.1% indicated bipolar and related disorders and 1.7% indicated different diagnosis such as anorexia nervosa. 40.9% of participants did not get any help, 30.1% got help in the past and 29.0% indicated that they continue to receive help. 40% of the participants have received

psychotherapy, 18.7% have received psychological counseling, and 22.2% have used medicine.

Overall, the sample was quite diverse in terms of age, occupation, and SES. The sample can be inferred as slightly diverse in terms of sexual orientation and psychiatric/psychological history. Majority of the sample consisted of women. The overall demographic profile of the sample can be described as consisted of predominantly highly educated with low to middle-high income level.

2.2. INSTRUMENTS

2.2.1. Informed Consent Form

There was an informed consent form that the participants approved before enrolling in the study (see Appendix A). Authors (Merckelbach, Horselenberg, et al., 2001) chose to avoid references to “fantasy'” for the name of the measure because the term could be associated with negative connotations for some respondents. Therefore, the information that the Creative Experiences Questionnaire (CEQ) measures fantasy proneness was not shared with the participants. Although the extent of the measure was not extensively explained in this form, the participants knew that the study was an adaptation study of a questionnaire related to creative experiences. The name of the questionnaire was also explicitly mentioned in the form. The participants were informed that if they have any question related to the study, they can contact the researcher via e-mail.

2.2.2. Demographic Information Form

The form involved questions regarding respondents’ age, gender, sexual orientation, marital status, level of education, working status, ongoing education level,

interest in creative activities, level of interest in creative activities, living situation, number of siblings, socioeconomic level, psychiatric/psychological history (see Appendix B). It was indicated there are statistically non-significant associations of fantasy proneness with sex (Merckelbach et al., 2022). However, participants' gender and sexual orientation were asked to get better data about the measure's generalizability. Both gender and sexual orientation questions were presented open-ended for the aim of being inclusive. Providing information regarding sexual orientation was optional. Participants were informed at the beginning of the demographic form that all these demographic information were being asked to see whether our sample represents the target population; hence, aim to observe the diversity.

2.2.3. The Creative Experiences Questionnaire (CEQ)

The CEQ was created by the researchers Merckelbach, Horselenberg, and Muris (2001) as a brief and convenient self-report measure of fantasy proneness. It is comprised of 25 yes/no questions derived from the ICMI (Wilson & Barber, 1983). The participants respond 'yes' or 'no' to each of 25 questions; 'Yes' answers to CEQ items are summed to obtain a total score (range: 0-25), with higher scores indicating higher levels of fantasy proneness. Examples of items are: ''As a child, I thought that the dolls, teddy bears, and stuffed animals that I played with were living creatures"; ''In general, I spend at least half of the day fantasizing or daydreaming''; "My fantasies are so vivid that they are like a good movie''. Although items that overlap with dissociation measures were sought to be reduced, especially the Dissociation Experiences Scale (DES; Bernstein & Putnam, 1986), two CEQ items (i.e. ``I often confuse fantasies with real memories" and ``I sometimes feel that I have an out of body experience") evidently overlap with some DES items (e.g. ``not sure whether one has done something or only thought about it" and ``feeling as though one's body is not one's

own", separately), but were retained in the final CEQ version because they are presented by Wilson and Barber (1983) as hallmark features of fantasy proneness. However, they were kept in the final CEQ version as Wilson and Barber portray them as distinctive aspects of fantasy proneness. Schelleman-Offermans & Merckelbach (2010) stressed the point that none of the CEQ items allude to deceiving or lying, otherwise it would cause to study made-up stories of highly fantasy prone individuals.

A factor analysis (principal component with varimax rotation) was performed on the CEQ with a sample of 332 high school and university students, and university employees aged between 16 and 60, the mean age was 22.7. Nine factors, that explained 56% of the CEQ variance, with an eigenvalue of greater than 1.0 were extracted. However, scree plot inspection proposed a single-factor solution (eigenvalue: 3.8) that explained 15% of the variance. While this is a small percentage, it is worth noting that only four of the 25 items had a corrected item-to-total correlation of less than .20. Some authors (e.g., Raine, 1991) argue that an item should be removed from the scale if less than 10% of respondents endorse it and/or the corrected item-to-total correlation is less than .15. The percentages of respondents who endorsed each item, as well as item-to-total correlations, were investigated by the authors. Each item had a higher than 10% endorsement rate, and correlations were always greater than .15 (all p's < .05). In this sample, Cronbach's alpha for CEQ scores was .76, which was satisfactory.

CEQ possesses strong internal consistency and and reliability in terms of test-retest stability (r = .95, in a sample of 17 undergraduate students). It also correlates highly with contemporaneous measures of fantasy proneness. It establishes concurrent validity by correlating with another fantasy proneness index, the 44 items version of the ICMI (Myers, 1983), and establishes convergent validity as it correlates standard measures of the closely related constructs such as dissociation (Merckelbach et al., 1999; Merckelbach, Muris, et al., 2000) and schizotypy (Merckelbach, Rassin, et al., 2000). Moreover, its discriminant validity also supported by the study which the

connection between social desirability and fantasy proneness investigated and significant relationship was not found (Horselenberg et al., 2000). CEQ has predictive validity in the sense that it shows higher scores in persons who are known to have fantasy-prone qualities (e.g., those who have had paranormal experiences, amateur actors) than in people who are not (Merckelbach, Horselenberg, et al., 2001; see also Sánchez-Bernardos & Avia, 2004) (see Appendix C and Appendix D).

2.2.4. Dissociative Experiences Scale II (DES-II)

The Dissociative Experiences Scale (DES) was developed by Bernstein and Putnam (1986), as a self-report measure of dissociative tendencies. Although the measure is good at detecting dissociative identity (multiple personality) disorder and other chronic complex dissociative disorders, it was not intended for diagnostic purposes. It measures the frequency of dissociative experiences. According to the validity and reliability findings of the original form of the scale, the inter-item Cronbach alpha internal consistency coefficient was .70 and the test-retest reliability was .84.

DES, the first form, required marking based on the visual analog method. Carlson & Putnam, (1993) updated the measure in order to facilitate evaluation, and a new format known as DES-II was created. Sample items are: “Some people sometimes find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them” and “Some people sometimes have the experience of feeling that their body does not belong to them.” Participants rate each of 28 questions on a scale from 0-100%, with 10% increments in frequency. After verifying that all items have been answered, all item scores are added and divided by 28 to determine the total DES score. This gives a score between 0 and 100. Higher scores indicate higher dissociative tendencies. Internal consistency is high in the DES, with test-retest

correlations ranging from .74 to .84. The DES has excellent psychometric properties as .92 Cronbach's Alpha value was reported (van IJzendoorm & Schuengel, 1996).

Original form was adapted into Turkish by Yargıç et al. (1995) and found reliable and valid. Updated version's reliability and validity was tested by Şar et al. (1997). Cronbach's alpha value was reported as .97 and the split-half reliability was .95. The test-retest reliability was reported as .77. As a result of analysis of variance, it was observed that the mean DES-II total score differed significantly from the dissociative disorder group, other diagnostic groups, and the normal control group (see Appendix E).

2.2.5. Magical Ideation Scale (MIS)

Magical Ideation Scale (MIS) was developed by Eckbald and Chapman (1983) to evaluate individuals' level of magical ideation. Subjects respond to questions that indicate psychotic experiences, schizotypal experiences, affective symptoms, difficulties in concentrations and magical thoughts such as "I have worried that people on other planets may be influencing what happens on Earth.", "I sometimes have a feeling of gaining or losing energy when people look at me or touch me" and "Some people can make me aware of them just by thinking about me." It consists of 30 items with "True" or "False" answers. The total number of points that can be taken ranges between 0 and 30. Items 7, 12, 13, 16, 18, 22, and 23 are reverse and they are scored 1 if answered false and all others are scored 1 if answered true. Higher scores suggest higher tendency to magical thinking. It is a reliable and valid questionnaire. The Cronbach Alpha coefficient was found 0.85. Bocci & Gordon, (2007) indicated that its consistency ranges between .82 and .87. The Turkish adaptation study conducted by Atbaşoğlu et al. (2003). The test-retest score was reported .84 and Cronbach alpha coefficient was found .78. Convergent validity was provided by its significant

relationship with Paranormal Belief Scale-R (PBS-R; Tobacyk, 2004) scores (r = .61) (see Appendix F).

2.2.6. Social Desirability Scale (SDS)

Social Desirability Scale was developed by Crowne and Marlowe (1960). Social desirability is conceptualized as giving culturally appropriate and acceptable responses to satisfy an individual's need for approval (Akın, 2010). It is also known as one the limitations of self-reported measurement tools that researchers have been trying to overcome for years. Therefore, SDS was developed as a scale that intends to detect underreporting (van Helvoort et al., 2022). The final form consisted of 33 items, and Kuder-Richardson reliability coefficient was found to be .88. In addition, the reliability coefficient obtained from the test-retest study of the scale was .89.

The scale was adapted into Turkish by Akın (2010). The adaptation study viewed social desirability as a construct and reported two factors as the result of factor analysis. This two-factor model was inspired by Paulhus' (2002) conceptualization of social desirability. Self-deceptive enhancement (SDE), conceptualized as an unconscious, positively biased self-descriptions and belief of possessing a number of positive qualities that an individual believes to be true (Danioni & Barni, 2021; Parmač Kovačić et al., 2014; de Vries et al., 2014). Impression Management (IM), conceptualized as a conscious disposition to portray a favorable self-image by underreporting negative attributes and overreporting positive attributes (Danioni & Barni, 2021; Parmač Kovačić et al., 2014; de Vries et al., 2014). Cronbach's Alpha internal consistency and test-retest reliability coefficients were calculated. The internal consistency reliability coefficients of the scale were found to be .96 for the 'impression management' dimension (items: 2,4,7,8,10,11,14,16,18,21,22,24,25,27,28,29) and .95 for the 'self-deception' dimension (items: 1,3,5,6,9,12,13,15,17,19,20,23,26). The test-retest reliability coefficients were found to be .83 for the impression management

subscale and .79 for the self-deception subscale. The Turkish adaptation of the scale consists of 29 items. Impression management dimension consists of 16 items and self-deception dimension consists of 13 items. In the scale in which a 5-point Likert type scale is used, the total score is obtained by calculating the arithmetic mean of the scores obtained from each item. High scores indicate that the individual's level of social desirability increases. The scale does not contain reverse items (see Appendix G).

2.3. PROCEDURE

2.3.1. Translation

For the cross-cultural adaptation of the measure, the guidelines of Beaton et al. (2000) were followed. In Stage 1, CEQ was translated independently by two native Turkish speakers. The translators took note of the nuances, expressions, or ambiguities with which they challenged with. Translator-1 was a PhD candidate in English Language Teaching and Translator-2 was a clinical psychologist. Both had different backgrounds but had research experience. In Stage 2, the versions of the first translator (T-1) and the second translator (T-2) were compared, each issue were addressed, and the agreed version of the translation (T-12) was created. In Stage 3, the T-12 was forwarded to the translators who were completely blind to the original version. Translator-3 was a master's degree student in clinical psychology field, and Translator-4 was an undergraduate degree student in translation science. They individually translated the questionnaire back into its original language. They compared the translations addressing the difficulties and then came up with a consensus labeled BT-12. In Stage 4, T-12 and BT-12 versions were discussed by a committee that included all translators, author, supervisor, and an English native-speaker scholar. Unclear wording, or conceptual errors in the translations were addressed. While the committee agreed on the translation of some items, discussions continued for the others. Stage 5,

unresolved issues shared with the correspondent developer of the original survey. Based on the developer's feedback, the scale was finalized by the author and shared with all committee members, due to the absence of a disagreement, the final version of the translation was accepted for the cross-cultural adaptation study (see Appendix D).

It is worth to mention that the idea of the term "fantasy" might be associated with different concepts, even negative ones (Merckelbach, Horselenberg, et al., 2001) is also valid in Turkey context. It can be easily observed that the general concept of fantasy is frequently associated with one of its subtypes, "sexual fantasies". The term fantasy tended to be associated with laziness or lack of concentration. A translation of the term which is phonetically very similar to exists in Turkish language, "fantezi". However, there is another word that gives the same meaning, "düşlem", and it was discussed by the translators and the committee. Because of two reasons "düşlem" was disregarded: First, it is not as commonly used as "fantezi", and second, it was concluded that when the term fantasy used in a context it does not associate with connotations that covers the essential meaning of the term.

2.3.2. Pilot Study

For pilot study, convenience sampling method was used. 15 individuals filled the questionnaire anonymously through google forms. They were asked if they had any issue in understanding any item and none were indicated. Questions to evaluate the face validity of the questionnaire was also asked. For gathering data regarding the face validity of the adapted version, participants were also asked about what the questionnaire might be measuring, and how they would name it.

2.3.3. Data Collection

Upon Ethics Board's approval, data for the present study was collected via online data collection tool, SurveyMonkey. The invitations for participation were distributed via social media platforms, acquaintances of the author, and academic advisors. Participants who approved the conditions written in the informed consent form were then asked to fill the questionnaires (The Creative Experiences Questionnaire, Dissociative Experiences Scale, Magical Ideation Scale, and Social Desirability Scale) which the sequences were randomized via the survey engine. Demographic Information Form was asked to be filled after the questionnaires to avoid any possible priming. The form did not involve any identificatory questions. Participants were only asked to provide their email address and their initials if they would like to participate to the second phase of the study. They were informed about the purpose of asked information and ensured about the confidentiality. The main survey took approximately 20 minutes to complete.

Among 510 participants who completed the survey, 355 (69.6%) of them approved to attend the second phase of the study and provided their email address and initials. Four weeks later first 200 eligible participants were contacted in order to collect data for test-retest reliability analysis. In this second application, participants only filled the CEQ with the demographic information that would be needed to match the data. All 200 participants were contacted for second time as a reminder for filling out the forms. 110 (55%) participants completed the survey and 3 (1.5%) left uncomplete. The data was analyzed in IBM SPSS Statistics (Version 28).

2.4. DATA ANALYSIS

Factors in the Turkish adaptation of the fantasy proneness measure was investigated through an exploratory factor analysis (EFA) that was conducted with

principal component analysis (PCA) with varimax rotation. Descriptive statistics and internal consistency coefficients (i.e. Cronbach's α and Mcdonald's Omega) of as well as Pearson product-moment correlation coefficient (*r*) among the CEQ, MIS, DES, and SDS scores were computed using SPSS. Test-retest reliability was calculated through Pearson product-moment correlation coefficient.

CHAPTER 3

RESULTS

In this chapter, first, related demographic characteristics of the 310 participants that were involved in the EFA were reported, and results of the factor analysis was interpreted by mainly adopting the criteria that was determined for the original CEQ. However, further analysis was conducted to reassure if the factor structure that was determined by the criteria of the original is the ideal. Therefore, two and five factor structure were explored. Second, as single factor structure was determined for the Turkish version of the CEQ further analysis conducted accordingly. The results of internal reliability and test-retest reliability were reported. Finally, validity of the adaptation was explained. Information regarding face validity, criterion validity and predictive validity were indicated.

3.1. EXPLORATORY FACTOR ANALYSIS (EFA)

It was decided to conduct an exploratory factor analysis (EFA), a technique for discovering the factor structure inherent to a particular measuring tool. Comrey and Lee (1992) stated that sample size of 500 as very good and 300 as good for factor analysis. Keeping in mind the possibility that a confirmatory factor analysis (CFA) might be needed if the results of the EFA suggest more than one factor, data from two-thirds of the total sample (n = 310) was used for the EFA. The procedures utilized by Merckelbach, Horselenberg, and Muris (2001) for data analysis of original/English version of the CEQ were followed. Therefore, PCA with varimax rotation was conducted on the CEQ scores of the participants.

Mean age of the participants was 30.5 (SD = 7.6) ranged between 18-59. Two hundred forty-two (78.1%) were women with 30.2 (SD = 7.16) mean age ranged

between 18-59, 64 (20.6%) were men with mean age 31.8 (*SD* = 9.18) ranged between 20-58, 4 (1.3%) participants were from other genders (ie. nonbinary, queer) with mean age 27.3 (*SD* = 6.85) ranged between 21-35. Eighty-three (26.8%) of the participants were students, which 2(0.6%) of them was high school students, 66 (30.3%) was undergraduate level students, and other 64 (20.7%) participants were graduate level students. 26 (8.4%) of the participants were unemployed, 6 (1.9%) were housewives, 192 (53.6%) were employee or self-employed, and 3 (1.0%) were retired.

Bartlett's test of sphericity, which evaluates the significance of all correlations inside the correlation matrix was significant (2(310) = 1288.42, $p < .001$), showing that the factor analytic model was suitable for this data set. The Kaiser-Meyer-Olkin (KMO) measure of sample adequacy indicated that the strength of the associations between variables was high (KMO = .77). Hence, it was acceptable to proceed with the analysis.

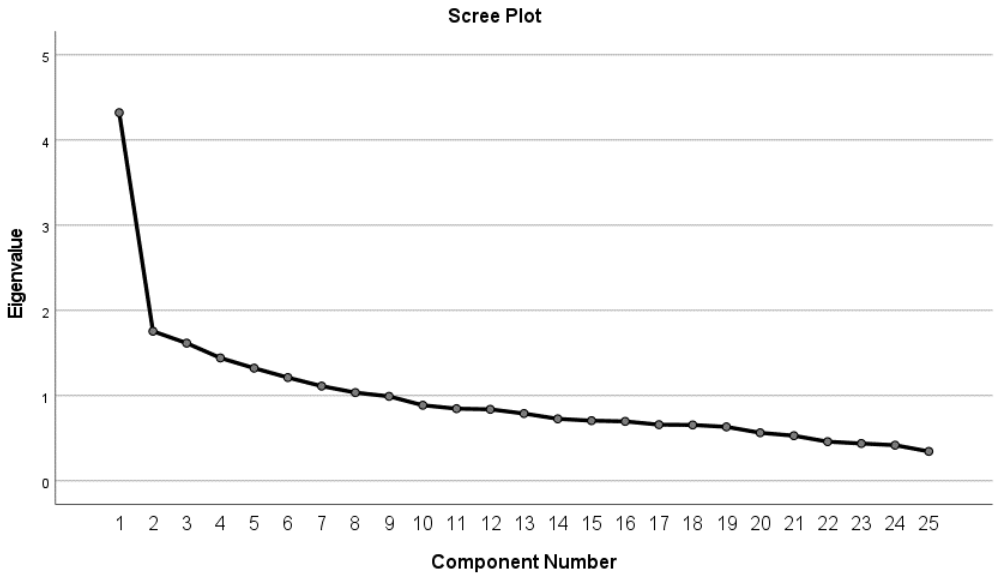
Initial factor extraction produced eight factors with eigenvalues larger than 1.0. The first variable offered the greatest variance explanation with 17.3% (eigenvalue: 4.32). By sequence: The second component offered 7.02 % (eigenvalue: 1.76); the third, 6.46% (eigenvalue: 1.62); the fourth, 5.26% (eigenvalue: 1.44); the fifth, 5.29% (eigenvalue: 1.32); the sixth, 4.85% (eigenvalue: 1.21); the seventh, 4.45% (eigenvalue: 1.11); and lastly, the eight offered 4.14% (eigen value: 1.04) of the variance. Hence, there was not a substantial difference between the last seven factors. All the eighth factors offered 55.35% of the variance in the CEQ. However, scree plot suggested a single-factor solution (eigenvalue: 4.32), which explained 17.3% of the variation.

There are two criteria that are widely recognized regarding which components to be kept. First, Kaiser's criterion recommends keeping all variables with eigenvalues larger than 1 (Kaiser, 1960). Second, Jolliffe's criterion suggests maintaining factors above .70 (Jolliffe, 1973). Both criteria have been argued as exaggerating the number of extracted components (see Costello & Osborne, 2005; see also Field, 2009). To

determine the number of retained components, it is recommended to utilize the scree test in conjunction with the eigenvalues (Cattell, 1978). The scree test is only reliable with a sample size of 200 or more (Yong & Pearce, 2013). Figure 3.1 illustrates the scree test, which comprises eigenvalues and factors. The number of variables to maintain corresponds to the number of data points above the cutoff (i.e., point of inflexion). To define the 'break,' researchers draw a vertical line and horizontal line commencing at each end of the curve (Yaşlıoğlu, 2017; Yong & Pearce, 2013).

Figure 3.1

Scree Plot Graphic (n=310)



The current EFA results were found to be equivalent to those of Merckelbach, Horselenberg, and Muris (2001) (conducted with 332 high school students, college students, and university personnel ranging in age from 16 to 60, the mean age was 22.7). They reported nine components that accounted for 56% of the CEQ variation with an eigenvalue larger than 1. As indicated in the description of the CEQ in the

instruments section, the authors of the original questionnaire suggested a single factor based on scree plot inspection which proposed a single-factor solution (eigenvalue: 3.8) that explained 15% of the variance. In the current study, scree plot inspection also suggested a single-factor solution with eigenvalue of 4.32 and explained 17.35 % of the variance and the sample size was already higher than 200. As the authors supported their assumption with the item-to-total correlation and the internal consistency of the questionnaire, these values were also checked.

Some researchers (e.g., Raine, 1991) contend that an item should be eliminated from a scale if less than 10% of respondents endorse it and/or if its corrected item-to-total correlation is less than .15. Only three of the 25 items had corrected item-to-total correlation smaller than .20. The revised item-to-total correlations and proportions of respondents who endorsed each item were displayed in Table 3.1. Except for the sixteenth item (When I recall my childhood, I have very vivid and lively memories) with an r = .13 but with an endorsement rate of 43%, all the items were both endorsed 10% or above and reported item-to-total correlations larger than .15 ($p < .05$).

Table 3.1

Percentage Endorsement and Corrected Item-Total Correlations (n = 310)

			Merckelbach, Horselenberg, and Muris (2001)	
	Yes (%)	Corrected item-total r	Yes (%)	Corrected item-total r
1) As a child, I thought that the dolls, teddy bears, and stuffed animals that I played with were living creatures	21	.38	34	.38

2) As a child, I strongly believed in the existence of dwarfs, elves, and other fairy tale figures.	41	.37	45	.35
3) As a child, I had my own make believe friend or animal.	17	.24	29	.26
4) As a child, I could very easily identify with the main character of a story and/or movie.	79	.31	83	.17
5) As a child, I sometimes had the feeling that I was someone else (e.g., a princess, an orphan, etc.).	31	.40	42	.39
6) As a child, I was encouraged by adults (parents, grandparents, brothers, sisters) to fully indulge myself in my fantasies and daydreams.	17	.20	28	.23
7) As a child, I often felt lonely.	47	.23	20	.27
8) As a child, I devoted my time to playing a musical instrument, dancing, acting, and/or drawing.	56	.22	69	.21
9) I spend more than half the day (daytime) fantasizing or daydreaming.	31	.48	23	.36
10) Many of my friends and/or relatives do not know that I have such detailed fantasies.	59	.43	36	.31
11) Many of my fantasies have a realistic intensity.	30	.46	53	.31
12) Many of my fantasies are often just as lively as a good movie.	41	.57	48	.37
13) I often confuse fantasies with real memories.	10	.21	14	.16

14) I am never bored because I start fantasizing when things get boring.	27	.42	43	.43
15) Sometimes I act as if I am somebody else and I completely identify myself with that role.	21	.39	24	.41
16) When I recall my childhood, I have very vivid and lively memories.	43	.13	58	.22
17) I can recall many occurrences before the age of three.	13	.18	12	.24
18) When I perceive violence on television, I get so into it that I get really upset.	55	.29	26	.20
19) When I think of something cold, I actually get cold.	25	.31	35	.19
20] When I imagine I have eaten rotten food, I really get nauseous.	43	.31	38	.18
21) I often have the feeling that I can predict things that are bound to happen in the future.	28	.26	30	.37
22) I often have the experience of thinking of someone and soon afterwards that particular person calls or shows up.	58	.20	60	.36
23) I sometimes feel that I have had an out of body experience.	23	.30	19	.35
24) When I sing or write something, I sometimes have the feeling that someone or something outside myself directs me.	16	.30	14	.29
25) During my life, I have had intense religious experiences which influenced me in a very strong manner.	15	.17	11	.25

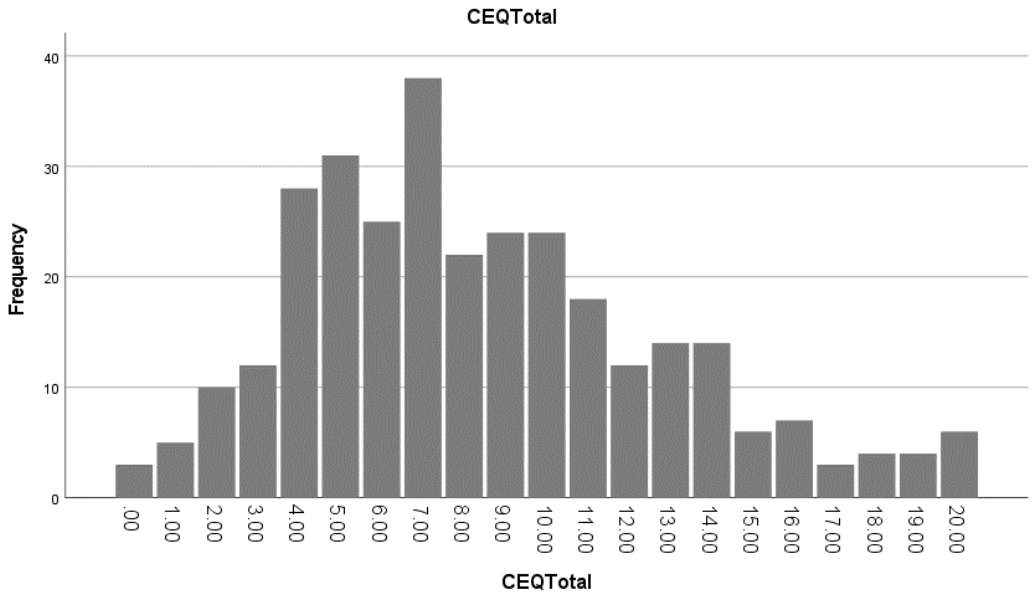
Skewness and kurtosis parameters indicated that the CEQ scores were normally distributed (skewness = 0.617; *SE* = 0.138; kurtosis = - 0.042; *SE* = 0.276). Fig. 3.2 shows the frequency distribution of the CEQ scores in this sample. An independent-samples t-test was conducted to check if the difference between women (*M* = 8.49, *SD* = 4.29) and men (*M* = 7.98, *SD* = 4.66) in the CEQ total scores was significantly different. Levene's test for homogeneity of variances revealed that equal variances are assumed (*F* = .797, *p* = .373). There was not a significant difference in CEQ scores between women and men, *t* (304) = 0.320, *p* = .207.

Through vertical boxplot possible outlier contamination was controlled, and none was detected. Cronbach's Alpha was computed to be .78. Hayes and Coutts (2020) pointed out that although Cronbach's Alpha is the most popular measure of reliability, it is not optimal compared to McDonald's Omega. Because of requiring the estimation of item factor loadings and error variances in a confirmatory factor analysis (CFA) for its computation, omega was not widely preferred as Cronbach's Alpha. OMEGA macro generated by Hayes and Coutts (2020) calculates McDonald's Omega without relying on the estimation of factor loadings or error variances using CFA. Therefore, in this study, McDonald's Omega for the measurement of the internal consistency also assessed and found to be .77 which is very close to Cronbach's Alpha value. Both results pointed out that the questionnaire has acceptable internal consistency.

Hence, the results showed that the measure is internally consistent and item-to total correlations are sufficient as suggested by Merckelbach, Horselenberg, and Muris (2001) (see also Raine, 1991). Based on their interpretation the original measure's factor structure, the Turkish adaptation can be also characterized as one-factor measure with 25 items.

Figure 3.2

Distribution of the Participants' CEQ Scores (n = 310)



Tabachnick and Fidell (2007) suggested significance level for factor loading to be .32 with an over 300 respondents' data. A factor loading of .32 accounts for roughly 10 % of the overlapped variance (Yong & Pearce, 2013). Few item cross-loadings (i.e., split loadings) should exist so that each factor can uniquely identify a cluster of connected variables (Yong & Pearce, 2013). In the rotational component matrix, variables loaded on each factor with a value more than .32 and a variance of at least .43 were presented (see Item 3, Table 3.2). In addition, twenty-one items had split-loadings, whereas only four had cross-loadings; however, two of them had .10 or more loading discrepancy.

Table 3.2

Factor Loadings and Communalities per Item as the Result of Principal Component Analysis (PCA)

	Component								Communalities	
	1	2	3	4	5	6	7	8	Initial	Extraction
Item 1			.709						1.000	.560
Item 2			.675						1.000	.559
Item 3				.434			.339		1.000	.455
Item 4		.490							1.000	.473
Item 5			.551						1.000	.526
Item 6		.710							1.000	.545
Item 7				.739					1.000	.701
Item 8		.538							1.000	.381
Item 9	.416			.482					1.000	.545
Item 10				.626					1.000	.583
Item 11	.571	.335							1.000	.498
Item 12	.476	.472							1.000	.620
Item 13	.536								1.000	.450
Item 14	.465								1.000	.458
Item 15	.645								1.000	.514
Item 16						.801			1.000	.709
Item 17						.743			1.000	.601
Item 18					.694				1.000	.569
Item 19					.715				1.000	.579
Item 20					.676				1.000	.511
Item 21							.728		1.000	.648
Item 22							.743		1.000	.620
Item 23	.615								1.000	.500
Item 24								.605	1.000	.623
Item 25								.696	1.000	.586

Notes. Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 13 iterations.

In addition to the rotational component matrix table, “communalities table” which is the total of the squares of the loads of each variable on the components is one of the most crucial to be checked (Yaşlıoğlu, 2017). The numbers in the “extract” section of this table indicate the variances shared by the associated variable and the factor structure. All of these values being more than .50 signifies that more than fifty percent of the variances of the expressions are shared with the factor structure, which is a noteworthy value (Yaşlıoğlu, 2017). Majority of the values in this structure are greater than .50, while others are near to it (see Table 3.3).

However, it was also questioned how the values of the questionnaire would be shaped in a multiple-factor structure to clarify whether the single factor solution that is suggested by scree-plot test is the best option. Two distinct analyses were conducted by reducing the component number to five and then to two, disregarding the eigenvalue.

Proportion of the total variance have been considered as an additional criterion for calculating the number of components (Yaşlıoğlu, 2017). In accordance with this criterion, the maximum number of factors was achieved when the contribution of each new component to the explanation of the total variance falls below 5% (Yaşlıoğlu, 2017). Upon examining the results of the eight factors, it was determined that the sixth, seventh, and eighth components contributed less than five percent each (see Table 3.1). The five-factor structure was observed to account for 41.8% of the total variance. Despite the fact that nearly all factor loadings remained above .32 loading, communality values were low in comparison to the single-factor solution. More than fifty percent of the values fell below .50 (see Table 3.3).

Table 3.3

Factor Loadings and Communalities per Item for Five-Factor Solution

	Component					Communalities	
	1	2	3	4	5	Initial	Extraction
Item 1	.534					1.000	.353
Item 2	.530					1.000	.417
Item 3	.384					1.000	.169
Item 4	.373		.431			1.000	.461
Item 5	.663					1.000	.471
Item 6			.711			1.000	.524
Item 7	.447		- .334			1.000	.363
Item 8			.540			1.000	.331
Item 9	.604	.322				1.000	.539
Item 10	.622					1.000	.509
Item 11		.532	.357			1.000	.487
Item 12	.426	.446	.460			1.000	.597
Item 13		.557				1.000	.323
Item 14	.397					1.000	.374
Item 15		.656				1.000	.471
Item 16					.767	1.000	.657
Item 17					.699	1.000	.508
Item 18				.689		1.000	.525
Item 19				.690		1.000	.529
Item 20				.622		1.000	.422
Item 21		.388				1.000	.291
Item 22		.358				1.000	.307
Item 23		.470				1.000	.304
Item 24		.546				1.000	.351
Item 25					.326	1.000	.174

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 8 iterations.

In two-factor structure, four items loaded lower than 0.32 on the components (see Table 3.4). It was also observed that the first factor explained 17.28% and two factors met 24.30% of the cumulative variance, which would not differ much from the one-factor solution. Moreover, the extraction values in the communalities table were below .50 for all the items, except one (i.e. Item 12).

Tablo 3.4

Factor Loadings and Communalities per Item for Two Factor Solution

	Component		Communalities	
	1	2	Initial	Extraction
Item 1	.697		1.000	.232
Item 2	.635		1.000	.228
Item 3	.576		1.000	.095
Item 4	.576		1.000	.228
Item 5	.562		1.000	.270
Item 6	.485		1.000	.179
Item 7	.475		1.000	.216
Item 8	.471		1.000	.188
Item 9	.447		1.000	.490
Item 10	.428		1.000	.341
Item 11	.406		1.000	.377
Item 12	.375		1.000	.500
Item 13	.336		1.000	.175
Item 14			1.000	.285
Item 15		.602	1.000	.334

Item 16	.509	1.000	.411
Item 17	.497	1.000	.258
Item 18	.432	1.000	.265
Item 19	.430	1.000	.201
Item 20	.421	1.000	.205
Item 21	.419	1.000	.109
Item 22	.416	1.000	.080
Item 23		1.000	.225
Item 24		1.000	.142
Item 25		1.000	.044

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 3 iterations.

Overall, the path that was taken while discovering the construct of the original questionnaire was majorly followed, and highly similar results were reported with the adapted questionnaire on Turkish sample. Although the EFA conducted through PCA varimax rotation has suggested eight factors, amount of the components that are suggested based on eigenvalue 1 criteria (Kaiser, 1960) was contradicted by some authors which they argued that the number of components that are extracted might be exaggerated (e.g. Costello & Osborne, 2005; see also, Field, 2009). Therefore, two factors and five factor structures were explored, and it was observed that factor loadings and communality values were not reported as good as the initial PCA results that suggested eight components where scree plot suggested a single factor solution. Although scree plot test suggested a single factor with 17.35% variance, item-to-total scores and/or endorsement rates of each item were adequate and Cronbach's Alpha and also McDonald's Omega values were acceptable, therefore, any item not needed to be removed from the questionnaire. Based on the results, the adapted version of the CEQ was concluded as a single factor construct with 25 item, and further analysis was conducted based on this conclusion.

3.2. DESCRIPTIVE STATISTICS OF STUDY VARIABLES

Upon initial screening after exploratory factor analysis, significant outliers on for each variable were identified. Descriptive statistics for the main variables were calculated. It was found that DES-II scores were non-normally distributed with kurtosis of 1.61 (*SE* = 0.226) that exceeds +1.5 (see Tabachnick & Fidell, 2013). Outliers were controlled through vertical boxplot. SPSS can identify two different types of outliers, based on two different inter-quartile range rule multipliers. There were several values between the 1.5 IQR (interquartile range) and 3.0 IQR. Hoaglin and Iglewicz (1987) argued that 1.5 multiplier was inaccurate approximately 50% of the time. Therefore, values which are above 3.0 signed with asterisk (*) are seen extreme. These values were observed for the current study, and there was only one which scored 63.6. The participant who reported an extreme score in DES-II scored 16 on CEQ, 20 on MIS and 80 on SDS. The participant was a non-heterosexual man, aged in the range of 26-30 with middle-high SES, diagnosed depression and anxiety related disorders and got psychological help in the past. This participant's survey was decided to be removed from the data. Skewness of the DES-II scores were found as 1.32 (*SE* = 0.113) and kurtosis was found 1.43 (*SE* = 0.226). Because both the skewness and the kurtosis of the sample found below +1.5, no more survey was thought to be removed from the data. Therefore, the remaining 464 participants constituted the sample of the study. Descriptive statistics of the scales with means and standard deviations for all study variables were listed in Table 3.5.

Skewness and kurtosis of the other measures were already observed to be approximately normally distributed and this did not change after the extraction of the outlier. The total score of fantasy proneness for 464 participants, which was assessed by the Creative Experiences Questionnaire (CEQ) ranged between 0 and 22 in a possible range of 0 to 25, (*M* = 8.81, *SD* = 4.46). The mean score of dissociation

assessed by Dissociative Experiences Scale-II (DES-II) was 16.3 (*SD* = 11.95), ranging from a minimum of 0.00 and a maximum of 62.50 in a possible range between 0 and 100. The mean score of magical ideation assessed by Magical Ideation Scale (MIS) was 8.82 (*SD* = 4.305) with a minimum of 2 and a maximum of 25 in a possible range between 0 and 30. The mean score of social desirability assessed by Social Desirability Scale (SDS) was 93.15 (*SD* = 15.02) with a minimum of 52 and a maximum of 138 in a possible range between 29 and 145.

Table 3.5

Descriptive Statistics of All Variables

						Skewness		Kurtosis	
	N	Min.	Max.	Mean	SD	Statistic	SE	Statistic	SE
CEQ	464	0	22	8.81	4.46	0.520	0.113	- 0.214	0.226
MIS	464	2	25	8.82	4.31	0.649	0.113	0.046	0.226
DES	464	0.00	62.50	16.3	11.95	1.278	0.113	1.42	0.226
SDS	464	52.00	138.00	93.2	15.02	- 0.039	0.113	- 0.016	0.226

3.2.1. Demographic Characteristics and Fantasy Proneness

Women (*M* = 8.81, *SD* = 4.35) had slightly higher total CEQ scores than men (*M* = 8.65, *SD* = 4.77). The scores of the participants from "other" gender category (*n* = 4) was reported as *M* = 13.0, *SD* = 4.69. An independent samples t-test was conducted to check if the difference between women and men in the CEQ total scores was significantly different. Levene's test for homogeneity of variances revealed that equal variances are assumed (*F* = 1.76, *p* = .185). There was not a significant difference in CEQ scores between women and men, *t* (458) = 0.320, *p* = 0.374. Based on some researchers' results that indicate significant differences between males and females in young adults, mean scores of the sample aged 18 to 25 compared through an

independent samples t-test. Although a significant difference was not reported between women and men, t (128) = - 1.24, p = .109; however, mean score of men (M = 11.1, SD = 4.45) was higher than women's (M = 9.9, SD = 4.32).

Table 3.6

Minimum-Maximum Values, Means, and Standard Deviations for Participants

Gender	n	Min.	Max.	Mean	SD
Female	360	0	21	8.81	4.35
Male	100	0	22	8.65	4.77
Other	4	7	18	13.0	4.69
Total	464	0	22	8.81	4.46

Pearson product-moment correlation coefficient was conducted to understand the relationship between age and participants' CEQ scores, it was observed that these two variables were negatively correlated r (464) = - .198, $p < .001$. To understand better the relationship between age and the CEQ scores, one-way ANOVA was conducted to compare the differences between different age groups' mean CEQ scores. Data were checked for homogeneity of variance and the variances were homogenous. One-way ANOVA results revealed that the groups were significantly different, F (5, 458) = 5.35, $p < .001$. This means that at least one difference in means is statistically significant. To discover which means significantly differ from each other, Tukey's test was conducted as the groups differed in sample sizes (Smith, 1971). It was observed that the 18-25 age group scored significantly higher than the group 26-30 with 1.65 ($p < .05$) mean difference, scored higher than the group 31-35 with 2.51 ($p < .001$) mean difference and the group 45+ with 3.52 ($p < .05$) mean difference. Interestingly, the group 18-25 was not significantly differed from 36-40 as the mean difference was 1.86 (p = .161) and was not significantly different from the group 41-45 with 2.46 (p = .054) mean difference. The mean score of the group 31-35 seemed tended to break linear

trend as the highest mean score belonged to the group 18-25 (M = 10.3, SD = 4.47) showed a decrease in mean scores to the age group 45+ (M = 6.78, SD = 3.69) which had the lowest score. However, the difference between the group 31-35 was not significantly different from 36-40 and 41-45 age groups which can be interpreted as the trend has not been interrupted. However, the significant difference between the 18-25 and 45+ groups may be caused by the fact that the group aged 45+ was more diverse while being consisted of 23 participants which is the smallest compared to the other groups. Therefore, this may not be a reliable conclusion about the difference between participants aged 46-60 and those in younger age groups (see Table 3.7).

Table 3.7

CEQ Scores of Participants

Age Range	n	Range	Min.	Max.	Mean	SD	Skewness	Kurtosis
18 - 25	132	20	2	22	10.30	4.47	0.528	- 0.402
26 - 30	159	20	0	20	8.65	4.30	0.420	- 0.278
31 - 35	78	21	0	21	7.79	4.64	0.665	- 0.094
36 - 40	41	19	1	20	8.44	4.47	0.602	- 0.034
41 - 45	31	15	2	17	7.84	3.61	0.860	0.622
45+	23	12	1	13	6.78	3.69	0.260	- 1.12
Total	464	22	0	22	8.81	4.46	0.520	- 0.214

Lastly, participants were asked to rate their interest in creative activities such as art and design (see Table 3.8). One way ANOVA revealed that there was a significant difference between groups as F (4, 459) = 7.665, $p < .001$. Tukey's test showed that individuals who indicated that they have no affiliation had significantly lower fantasy proneness scores from participants who professionally involved in such activities with - 2.56 ($p < .042$) mean difference. Participants who indicated that they follow such activities as hobby had significantly lower fantasy proneness scores from

participants who continue such activities as hobby but aim to professionally be involved with - 2.49 mean difference ($p < .001$) and have significantly lower scores from participants who are professionally involved in such activities with - 3.12 ($p < .001$) mean difference. Similarly, participants who indicated that they do such activities as hobby have significantly lower scores than both from participants who continue such activities as a hobby but aim to professionally be involved with - 2.42 ($p < .05$) mean difference and participants who are professionally involved in such activities with - 2.83 ($p < .001$) mean difference. A trend of increase in participants' fantasy proneness scores can be observed from the means that are reported for each option; however, the significance analysis suggested an existence of two groups. A significant difference between the fantasy proneness scores of 'participants who are not interested in such activities in a professional level' (first three responses; I have no affiliation with such activities, I follow such activities as a hobby, I do these activities as a hobby) and 'participants interested or involved in in a professional level' (last two responses; I continue such activities as a hobby and aim to professionally involved, I am professionally involved in such activities) was observed. An independent t-test analysis was conducted as these options are graded from 1 to 5. First group consisted of 354 participants and the second group consisted of 110 participants, and Levene's test indicated equal variances ($F = 3.675$, $p < .056$). Participants interested or involved in a professional level were found to have significantly higher fantasy proneness scores ($M = 10.8$, $SD = 4.78$) from the participants who are not interested in such activities in a professional level ($M = 8.21$, $SD = 4.18$).

Table 3.8

CEQ Scores Regarding the Interest in Creative Activities

	n	Min.	Max.	Mean	SD	SE
1) I have no affiliation with such activities.	48	2	21	8.63	4.00	0.578
2) I follow such activities as a hobby.	168	0	19	8.01	4.11	0.317
3) I do these activities as a hobby.	138	1	20	8.30	4.33	0.369
4) I continue such activities as a hobby and aim to be professionally involved.	64	0	20	10.50	5.18	0.647
5) I am professionally involved in such activities.	46	3	22	11.13	4.19	0.617
Total	464	0	22	8.81	4.46	0.207

3.3. RELIABILITY

3.3.1. Internal Reliability

Cronbach's Alpha of the overall CEQ was computed to be .78. Cronbach's alpha when an item is deleted was ranged between .76 to .78. Moreover. McDonald's Omega for the measurement of the internal consistency also calculated and found to be .77. Split-half reliability test was also conducted by comparing odd and even numbered items with each other. As a result of the analysis, the reliability coefficient of the first half of the test was 0.68; the reliability coefficient of the second half was found to be .62. The Spearman-Brown coefficient and the Guttman Split Half Coefficient have been reported as equal to .76 which is fairly close to Cronbach's Alpha value.

Item total correlations ranged between .16 to .53 and can be seen together with the endorsement rates on the Table 3.9. As the Item-16 found to be above .15 which was .13 in the EFA and preferred to remain in the scale, its item-total correlation increased when the sample size got larger. Overall, the results showed that the internal consistency of the CEQ was high.

Table 3.9

Percentage Endorsement and Corrected Item-Total Correlations (N = 464)

			Merckelbach, Horselenberg, and Muris (2001)	
	Yes (%)	Corrected item-total r	Yes (%)	Corrected item-total r
Item 1	21	.34	34	.38
Item 2	43	.32	45	.35
Item 3	19	.24	29	.26
Item 4	80	.29	83	.17
Item 5	32	.38	42	.39
Item 6	17	.18	28	.23
Item 7	49	.22	20	.27
Item 8	56	.19	69	.21
Item 9	32	.47	23	.36
Item 10	59	.45	36	.31
Item 11	33	.50	53	.31
Item 12	42	.53	48	.37
Item 13	12	.27	14	.16
Item 14	28	.43	43	.43
Item 15	23	.42	24	.41
Item 16	43	.16	58	.22
Item 17	12	.18	12	.24

Item 18	57	.30	26	.20
Item 19	28	.35	35	.19
Item 20	46	.31	38	.18
Item 21	32	.29	30	.37
Item 22	59	.16	60	.36
Item 23	25	.32	19	.35
Item 24	17	.32	14	.29
Item 25	18	.17	11	.25

3.3.2. Test-Retest Reliability

Of the 465 participants, 110 completed the scale twice. Test-retest interval was 28 to 45 days. Test–retest reliability was calculated through Pearson product-moment correlation coefficient. Acceptable test–retest stability was reported as $r = .72$.

3.4. VALIDITY

3.4.1. Face Validity

During pilot study participants were asked to think about what this scale might be measuring. Out of 15 answers six answers were related to fantasies (ie. “fantasy”, “fantasies”, “fantasy world”, “the link between the fantasies in childhood and adulthood”, “It may be measuring how childhood experiences and fantasies affect the perception of reality in adult life”, “The relationship between fantasy and reality perception and creativity in childhood”). Three answers were related to dissociation and two answers were related to imagination. One participant did not answer the question and the other three answers were associated with the concepts of memory, emotion and thoughts. Participants were also asked what they would name the measure

and again six answers involved the terms fantasy and/or imagination. These responses suggested that the measure has a face validity.

3.4.2. Criterion Validity

3.4.2.1. Convergent Validity

DES-II and MIS was used to examine the convergent validity of the adaptation. Positive correlation was expected between CEQ scores and scores of DES-II and scores of MIS. Internal consistency of the overall DES-II was reported as very good as Cronbach's Alpha was .92 and McDonald's Omega found to be .92. Cronbach's Alpha of overall MIS was computed to be .76 which indicated that the internal consistency of the scale was acceptable. However, McDonald's Omega was found as .99 which was a perfect. If the score to be obtained from a test is to be used for intergroup comparison, .80 is a sufficient reliability coefficient for reliability. However, .80 is not sufficient for decisions to be made on an individual basis. If an individual assessment is to be made considering a certain test score, .90 is a minimum for reliability, and .95 is a desired standard (Nunnally & Bernstein, 1994). According to these standards, the McDonald's Omega value of MIS showed that its reliability was high enough to be sufficient even for an individual evaluation. This may be because the MIS is a unitary scale that measures a specific aspect of the schizotypy.

DES-II scores and CEQ scores was positively correlated, r (464) = .51, p < .001. Magical ideation and fantasy proneness was also positively correlated, r (464) = .51, p < .001. Hence, fantasy proneness found to be strongly correlated with dissociative experiences and magical ideation. The results were very similar to the ones indicated in the literature as it was indicated that both concepts are among the highest correlates of fantasy proneness that the strength is above .50 (Merckelbach et al., 2022).

These significant relationships suggest that adapted CEQ questionnaire has convergent validity.

3.4.2.2. Discriminant Validity

In this study SDS was used to assess the discriminant validity of the adapted CEQ. Cronbach's Alpha of SDS computed to be .87 and McDonald's Omega found to be .87 that suggests SDS is an internally consistent scale. SDS scores and CEQ scores were found negatively correlated when $p < .05$. However, the relationship between the total scores of these two scales were weak as $r = -0.10$. This result suggests that adaptation of the CEQ has a discriminant validity as social desirability and fantasy proneness was not seen as related concepts. Social desirability and fantasy proneness were previously reported as not significantly correlated (Horselenberg et al., 2000; Merckelbach, Horselenberg, et al., 2001). To understand better the relationship between these two variables, CEQ scores were compared with the scores of the two subscales of SDS: impression management and self-deception. It was found that fantasy proneness and self-deception does not have a significant relationship, r (464) = - 0.04, p = 405. However, fantasy proneness was found to be negatively correlated with impression management, r (464) = - 0.12, $p < .05$.

3.4.3. Predictive Validity

In previous research, it was indicated that CEQ has predictive validity because in that specific types of persons who are known to show fantasy prone features (e.g., amateur actors) have higher scores on this scale than do control individuals (see also Sánchez-Bernardos & Avia, 2004). Therefore, participants relationship with creative activities were assessed with two questions. As it was previously indicated, there is a significant difference between the mean scores of participants who are interested in

creative activities professionally and participants who are not interested in such activities or interested in a hobby level. To understand better the relationship the level of interest was also assessed with a question that asked participants to indicate their level of interest on a 5-point Likert scale which 1 indicated “I'm not interested at all” and 5 indicated “I am very interested”. It was shown that there is a positive relationship between the level of interest in creative activities and fantasy proneness, $r = .21$, $p < .001$. Thus, adapted questionnaire has the predictive validity as fantasy proneness was distinctively observed in individuals that are occupied with creative activities.

CHAPTER 4

DISCUSSION

The present study aimed to adapt the Creative Experiences Questionnaire (CEQ) to the Turkish language and culture. The Turkish version of the CEQ was prepared carefully by following a cross-cultural adaptation guide (Beaton et al., 2000). In the pilot study, it was seen that there was no problem with the intelligibility of the items, so the adapted version was deemed adequate for data collection. An EFA was conducted through PCA with varimax rotation with two/thirds of the eligible surveys. The results suggested a single-factor solution, and none of the items needed to be removed due to the criteria that were obtained from the original CEQ's study (Merckelbach, Horselenberg, et al., 2001). Because a single factor solution was determined, confirmatory factor analysis was seen as not necessary. Reliability and validity of the CEQ were assessed with all the eligible surveys, and it was demonstrated that the Turkish version has criterion validity as well as predictive validity. Moreover, responses that were received earlier in the pilot study provided evidence that the Turkish version has face validity. As a result, a reliable and valid 25-item single-factor solution self-report measure of fantasy proneness was developed for use in research in Turkey. Hence, fantasy proneness scores of the Turkish population and correlations of the fantasy proneness scores with dissociation, magical ideation, and social desirability were investigated, as well as the relationship between fantasy proneness scores and demographic characteristics. The first data on fantasy proneness has been obtained for this population.

In this chapter, first, the decision behind the single factor solution will be discussed by comparing it with the results of the original CEQ and the results of the CEQ's adaptation that was developed for Spanish adolescents (Sánchez-Bernardos & Avia, 2004). Second, the results of the correlational analysis that was conducted for

reliability and validity testing will be paid attention to; thus, the meanings of the relationships between fantasy proneness with dissociation, magical ideation, and social desirability will be interpreted. Third, the relationship between fantasy proneness and demographic variables of gender, age, and occupation will be discussed. Finally, clinical implications will be discussed, limitations encountered during the study will be provided, and suggestions for future research will be shared.

Factor analysis is one of the methods most often employed in the social sciences. The analysis must be conducted with the utmost precision since it also affects the validity of the following analyses. Since all factor analyses are susceptible to subjective interpretations, so are the values chosen within limitations. Therefore, adherence to the guidelines is an agent that contributes to the validity of the analysis. As indicated before, for analysis, the method and criteria determined for the original CEQ (Merckelbach, Horselenberg, et al., 2001) were adopted for the present study, primarily to facilitate the comparison of the results. This decision was also encouraged by the fact that Sánchez-Bernardos & Avia (2004) also followed the same method and adopted the same criteria while adapting the CEQ to the Spanish language and culture for the adolescent population.

In this study, the result of the PCA with varimax rotation was surprisingly similar to that obtained for the original CEQ (Merckelbach, Horselenberg, et al., 2001) in terms of the number of components, their cumulative variance, the first component's variance, and the scree test. However, factor loadings of each item could not be compared because in the original CEQ's study this information was not provided. Item-to-total correlation outcomes and endorsement percentages were adequate for each item (see Raine, 1991). In addition, Cronbach's Alpha (.78) and McDonald's Omega (.77) showed that the adapted measure shows internal consistency. Based on the original CEQ's study (Merckelbach, Horselenberg, et al., 2001), the number of factors was determined according to the scree test, and none of the items were excluded (see also Raine, 1991).

For the Spanish adaptation of the CEQ, which has been developed for the adolescent population (Sánchez-Bernardos & Avia, 2004), researchers adopted the same method and criteria determined in the original CEQ's study (Merckelbach, Horselenberg, et al., 2001). However, five items were excluded as their item-to-total values were lower than the criterion (see also Raine, 1991). Both the original CEQ and the Turkish version concluded with 25 items, while the Spanish version involved 20. Factor numbers were determined based on the scree test in all three studies. Compared to the original CEQ (Cronbach's Alpha = .76) and the Spanish version of the CEQ (Cronbach's Alpha = 0.72), the Turkish version reported slightly higher scores for internal consistency. The major difference between the three CEQ versions was the dimensionality. Both the original CEQ and the Turkish version were concluded with a single factor structure, while the Spanish version was found to have three factors. Factor numbers were determined based on a scree test in all three studies, meaning that the difference between variances and the eigenvalues was minimal between the first three components with the highest rate. As it was reported earlier, the first factor had a distinctively higher eigenvalue and variance than the second component and the others. Relative information cannot be provided for the original CEQ as details were not given by the authors (Merckelbach, Horselenberg, et al., 2001). However, it can be said that the results were probably very similar to the current results because of the nature of the scree plot and the resemblances of the similarity of cumulative variance obtained and the component numbers suggested by the PCA.

The difference in dimensionality between the measures can be explained by the samples' characteristics. The Spanish version's factor structure was discovered with adolescents, participants aged between 14 and 18. In contrast, the current study's factor analysis was conducted with adults, with participants aged between 18 and 60, and the participants of the original CEQ were also majorly adults (people aged between 16 and 60). By comparing their results with Merckelbach et al.'s (2001), Sánchez-Bernardos and Avia (2004) concluded that age-related variations in the structure of fantasy

activities point to a more varied character of fantasy at younger ages. The current study provides further evidence for this argument as it shows that two studies that were conducted with adults present almost the same results regarding the structure of the CEQ. Therefore, replicating the Turkish version of the CEQ on the adolescent population in Turkey is strongly encouraged. Such a study may provide support regarding Sánchez-Bernardos and Avia's (2004) argument and further information regarding the differences in fantasy proneness characteristics of different age groups. Further investigations are needed regarding this issue, as this argument raises the question of whether age-related variations in the structure of fantasy activities point to a more varied character of fantasy at older ages, such as people over 60 years of age. Individuals aged over 60 were involved in none of the three studies. Moreover, it was observed that fantasy proneness studies were not widely conducted with this population (cf. Weibel et al., 2018). This might be because reaching out to and collecting data from older participants is more challenging than reaching younger groups. It was the case for this study as the number of participants between the ages of 46 and 60 was very low.

For the current study, the reasoning for adopting the scree test as a factor extraction method was more expansive than in the original CEQ and the Spanish version's study. Both Merckelbach, Horselenberg, and Muris (2001) and Sánchez-Bernardos & Avia (2004) mainly used the scree plot graphic as a reference to facilitate the interpretability of the factors. However, this reasoning was called into question, and a literature review and analysis were performed to determine whether the single-factor solution suggested by the scree test is the best structure for the CEQ. Costello and Osborne's (2005) statement that factor extraction criteria based on eigenvalue (see Kaiser, 1960; also see Joliffe, 1986) exaggerates the number of components was recognized. The result that the initial PCA reported supported this argument as the last three components explained variance even below 5%.

Further analysis was conducted by reducing the number of components. First, as the last three components' variances were lower than 5% in the initial PCA, which is very low and not recommended to be involved in any structure (Yaşlıoğlu, 2017), the number of factors was reduced to five. Later, the number of factors was reduced to two as a matter of exploration. The results of the reduced factor structures were compared with the results of the initial PCA where a single factor solution was suggested by scree-test. Factor loadings and the communalities of each item for each of the three solutions were compared based on the cumulative variance explained and factor loadings and communalities of items. Hence, it was observed that both factor loadings and communalities of the items in the two-factor solution, as well as the communalities of the items in the five-factor solution, were not as good as the initial results.

In addition to the reasons that were indicated before, different sources were found to support the conclusion that the single factor solution was better than the other two solutions. Osborne (2014) stated that the larger numbers of strongly loaded variables per factor contribute to the precision and the generalizability of results. Although factor loadings of the reduced five-factor solution presented good factor loadings for each item, the fourth and fifth factors involved only three variables. Keeping in mind that the CEQ is an instrument with 25 items, a five-factor solution could not have been very efficient. Osborne (2014) adds that the most valuable results are the ones that are precise and generalizable. Therefore, the results should be replicable in different samples. The results of the EFA support the precision and the generalizability of the results obtained by Merckelbach, Horselenberg, and Muris (2001), as they greatly resemble them. It should be noted that samples in both studies differed in culture. Therefore, this study proved that the quality of the Turkish version is as good as the original CEQ, and that culture-related-variations may not point to a more varied character of fantasy in adults.

Overall, a 25-item single-factor CEQ was obtained. One/ third of participants' data were not involved in the EFA in case of a need for confirmatory factor analysis.

However, no further analysis was needed to confirm the factor structure. Thus, the further analysis continued with the concluded instrument.

For the reliability and validity analysis, all of the participants' data were used; however, a participant's data was excluded as it was causing a non-normal distribution among one of the scales used for validity analysis, DES-II. Hence, further analyses were conducted with 464 surveys. The results of these analyses are further discussed below.

The adapted CEQ had good psychometric properties; its overall internal reliability was adequate as Cronbach's Alpha was found to be .78, and McDonald's Omega was .77. which were observed to be the same values that were obtained with the EFA sample. While the original version's test-retest reliability was very high (r = .95), the adapted CEQ's was acceptable (r = .72). The sample size can explain the difference between the test-retest reliability values of the two studies. Merckelbach, Horselenberg, and Muris (2001) retested the measure with 17 participants, while the test-retest reliability analysis was conducted with 110 participants for the Turkish version. Sánchez-Bernardos & Avia (2004) did not retest their Spanish adaptation. Split-half reliability was not tested in both studies, while this study supported the reliability of the CEQ further by using this method for reliability analysis. Therefore, the current study presented further and stronger evidence regarding the reliability of the CEQ.

While deciding on the scales to be used to measure the validity of the adaptation, the original CEQ's study was the first one to be looked at (Merckelbach, Horselenberg, et al., 2001). The study was conducted in 2001 and has been mentioned as the "original study" of the CEQ in numerous studies; it is actually the original study's (Merckelbach et al., 1998) English version that was published approximately three years after. The English version and the original study (in Dutch) are not identical, as the authors involved studies that were published during the three years in between. These studies were majorly cited as evidence regarding the CEQ's psychometric

qualities. Therefore, evidence regarding the concurrent validity, convergent validity, and discriminant validity that the English original article provided was not studied and obtained through the same study. For example, the evidence provided for the concurrent validity of the CEQ in Merckelbach, Horselenberg, and Muris (2001) was obtained through the study of Merckelbach, Wiers, Horselenberg, and Wessel (2001). Accordingly, a significant relationship (r = .77) between the CEQ and Myers' (1983) version of ICMI exists. Evidence regarding convergent validity (e.g., Merckelbach, Muris, et al., 2000) and discriminant validity (Horselenberg et al., 2000) was also provided in the same way. However, the English version (Merckelbach, Horselenberg, et al., 2001) presents original evidence regarding the CEQ's predictive validity as authors found that actors, actresses, paranormal visitors, and fantasy role players obtained significantly higher fantasy proneness scores than undergraduate students.

Concurrent validity could not be measured in this study, since there is no measurement tool related to fantasy or fantasy proneness in Turkish. Based on the original CEQ's study and the aforementioned studies of fantasy proneness, the convergent validity of the CEQ was tested with the measures of dissociation and schizotypy. Dissociation was assessed using the Dissociative Experiences Scale-II (Carlson & Putnam, 1993; ar et al., 1997), an updated version of the DES (Bernstein & Putnam, 1986).As for schizotypy, Magical Ideation Scale (MIS; Atbaşoğlu et al. 2003; Eckbald & Chapman, 1983) was decided to be used. However, at first, the Claridge Schizotypal Personality Scale (STA; Claridge & Broks, 1984) was considered as it was cited by the original CEQ's study (Merckelbach, Horselenberg, et al., 2001; see also Merckelbach, Rassin, et al., 2000), but it was discovered that STA primarily focuses on the cognitive and social anxiety aspects of schizotypy. As MIS measures magical ideation/ thinking, which is a component of schizotypy that is more relevant to fantasy proneness, it was seen as a more ideal measure.

As the CEQ had a significant positive correlation with DES-II (r = .51), and a significant positive correlation with MIS (r = .51) it was concluded that the Turkish

version of the CEQ has the convergent validity. Moreover, findings from a sample from Turkey context replicated the literature as it was indicated in the meta-analysis that both dissociative experiences and magical ideation are among the highest correlates of fantasy proneness, with the average correlation coefficient being above .50 (Merckelbach et al., 2022).

Both dissociative experiences and psychotic-like experiences (PLEs) are poorly understood phenomena that vary in the population, ranging from normality through eccentricity (see C. A. Ross et al., 1991; Soffer-Dudek, 2014; see also Johns & van Os, 2001; Lee et al., 2016). They are multi-dimensional and their benign versions deserves to be paid attention to as much as their psychopathological versions. However, they were viewed as essential fields of research, notably in the early identification and prevention of psychopathology. Although researchers are frequently inclined to regard dissociative phenomena and PLEs to daily occurrence, existing literature seems to be dominated by the focus on pathology and its prevention rather than their role on resilience and adaptivity. Hence, their proposed phenomenological continuity was emphasized through eccentric polars. As aforementioned, this is also the case for fantasy proneness.

As for dissociation, fantasy and daydreaming together with absorption are prevalent concepts associated with nonpathological dissociation (Eisen & Lynn, 2001). Absorption, which has been viewed as a common domain between fantasy proneness and dissociative experiences by numerous researchers, has also been referred as non-clinical dissociation. Although concepts like fantasy proneness and absorption were seen as on the benign side of the dissociative phenomena, the significant associations with the more pathological components of dissociation, amnesia and depersonalization/derealization, have caused the attention to be shifted to significant association between "normal" dissociation and psychopathological distress (Soffer-Dudek, 2014). More specifically, subclinical dissociative experiences are thought to be associated with maladaptive functioning and symptom severity in some disorders,

including neuropsychological performance in depression, anxiety, and depression in OCD, the number of binge episodes in eating disorders, executive functioning in borderline personality disorder, and alexithymia in panic disorders (Lyssenko et al., 2018).For instance, in a study conducted with Turkish women who were evaluated for present severe depression and a dissociative illness (Şar et al., 2013), 40% of depressed women suffered from "dissociative depression", with more severe depressive symptoms compared to non-dissociative women. It was stated that dissociative depression was characterized by reports of childhood trauma (abuse or neglect), feelings of guilt and worthlessness, feelings of emptiness, changes in appetite and weight, indecisiveness, a decrease in attention, mood swings, self-mutilation, and increased suicidality.

Despite the emphasis placed on the pathological aspect of dissociative experiences, the exact impact of dissociative experiences on many illnesses remains unclear. In psychiatry and psychology, dissociative disorders rank among the poorly understood and most controversial conditions, and they have sparked a lengthy discussion, such as whether dissociation has been linked to traumatic stress, and it is thought of as a maladaptive coping mechanism that enables emotional detachment from unpleasant experiences (see Dalenberg et al., 2012). A number of researchers explain dissociation through its cognitive factors (e.g., Giesbrecht et al., 2008). From this perspective, some cognitive phenomena connected to dissociation (e.g., reduced cognitive inhibition) seem to be influenced by the attentional or emotional context (Giesbrecht et al., 2008). Dissociation does not seem to be associated with avoidant information processing as it is frequently assumed in the clinical literature. Instead, it is associated with a greater tendency toward pseudo-memories, which may be mediated by increased interrogative suggestibility, cognitive failures, and fantasy proneness. However, it can be said that research that has been conducted in Turkey has not focused on this perspective that emphasizes the cognitive aspects. Existing research is more focused on the perspective that relates dissociation with traumatic stress (e.g.,

Özgündüz et al., 2019). As this study, in parallel with the global data, showed that fantasy proneness is a strong correlate of dissociative phenomena, involving fantasy proneness and the other cognitive factors into the research would greatly contribute to understanding the condition in a more comprehensive way.

As for PLEs, they were viewed as an essential field of research, notably in the early identification and prevention of psychosis. It has been indicated that people who experience PLEs are more likely to acquire clinical psychosis (Garzitto et al., 2016; Karcher & Shean, 2012; Lee et al., 2016). As aforementioned, the temperament-based approaches recognize the presence of benign qualities which may only become pathological in excess, which is especially true for positive schizotypy. Among other expressions, positive schizotypy involves spiritual experiences, personal enlightenment, and feelings of connectivity with other people and/or the environment (Schultze-Lutter et al., 2019). Increased positive schizotypy is associated with personal well-being, flexible and nontraditional thinking (including creativity), and positive personality traits and psychosocial factors (e.g., spirituality, openness to experience, and fantasy proneness) (Mohr & Claridge, 2015). Its components (ie., magical ideation, odd beliefs, and unusual perceptual experiences) were strongly associated with happiness, feelings of competence, positive affect, and personal development (Fumero et al., 2018). On the other hand, experiences such as reference concepts and suspicion were significantly associated with poor environmental mastery, negative affect, and poor autonomy (Fumero et al., 2018). Hence, although it was assumed that the positive dimension is the one that is least (inherently) associated with vulnerability to schizophrenia, it was given more attention in the discussion of a continuum hypothesis of psychosis (Pedrero & Debbané, 2017).

Schizotypal traits were associated with a range of deficits, including working memory, recognition memory, attention, cognitive inhibition, and abstract reasoning (Cadenhead et al., 1999). Similarly, emotions can impair basic cognitive skills, including memory, attention, and decision-making efficiency (Le Pelley et al., 2010).

Multiple studies have found that schizotypal individuals underperform tasks requiring appropriate emotion identification and regulation (e.g., Brewer, 2008). According to Kerns (2005), low levels of emotional clarity are related to greater levels of magical thinking (Kerns, 2005). He discovered that those with high levels of magical thinking made more mistakes when analyzing words in the presence of emotional conflict due to difficulties understanding their emotions. Karcher and Shean (2012) found that magical ideation is associated with lower arousal thresholds and a greater sensitivity to cognitive disturbances caused by events that trigger intense emotions. Furthermore, MIS-measured endorsement of unusual beliefs was found to be linked with the disruptive impact of emotional stimuli associated with poor interpersonal skills (Shean & Wais, 2000).

Kállai et al. (2021) observed a negative correlation between magical ideation with self-coherence and self-esteem. Moreover, it was linked to poor self-integration capabilities as well as increased responsiveness to social avoidance and fears. Magical ideation has been associated with prosocial adjustment, meaning-making capacity, and creativity (Fink et al., 2014). As a result, individuals with high magical ideation may be heavily involved in both self-regulation instability and prosocial adaptation (Yorulmaz, 2016). The concept of magical ideation is strongly related to absorption, which is another top correlate of fantasy proneness and contains both adaptive and non-adaptive components. Absorption is engaged in creativity and the manifestation of flow experiences, but it also has a significant impact on the intensity of psychopathological symptoms (Léger et al., 2014). Cicero et al. (2016) indicated that absorption is a strong predictor of the intensity of both negative and positive symptoms in people with schizophrenia-spectrum disorder. Both magical ideation and absorption are adaptive when an individual engages in social/physical reality (Léger et al., 2014).

The fact that fantasy converges with magical ideation but diverges from the interpersonal elements of schizotypy (Sánchez-Bernardos & Avia's (2004) may imply that fantasy proneness plays a moderating role between schizotypy components like

magical ideation and psychosis. It might be playing an adaptive role by bypassing certain features from reaching the extremes of the continuum and even leading them in a way to improve the quality of life. For example, the belief that extraterrestrials are controlling one's behavior and movement might be daunting if a person believes this formed association. However, fantasy-prone individuals may be more likely to enjoy these types of scenarios (see Dasse et al., 2015; Tan et al., 2018). This approach may also help explain the high fantasy proneness scores of people who are involved in professions demanding creativity (e.g., children's book authors).

Initial data regarding the two of the highest correlates of fantasy proneness has been provided while testing the convergent validity of the adapted measure. The results were in parallel with the existing literature as strong correlations were found and their importance was discussed. There are many points that emphasize the importance of the inclusion of fantasy proneness in psychotic-like experiences/psychosis research. It cannot be said that these phenomena are well studied if fantasy proneness is ignored. The fact that fantasy proneness has not been included in existing psychiatric and psychological research in Turkey points out a significant deficiency.

The convergence validity of the Turkish adaptation has been proved. For discriminant validity testing, an insignificant relationship was estimated with social desirability as this case has been pointed out previously as evidence of the CEQ's discriminant validity (Merckelbach, Horselenberg, et al., 2001). However, the current study reported a weak negative correlation (r = - 0.10, p < .05) between social desirability (SD) and fantasy proneness. The Turkish version's discriminant validity was supported but using a social desirability index, and finding a negative correlation tells a lot more than the discriminant validity of a fantasy proneness index. SD is one of the most significant response distortions, that is, the degree to which respondents portray an overly positive or negative image of themselves (Danioni & Barni, 2021; de Vries et al., 2014). Therefore, socially desirable responses influence the validity of responses in self-report of all kinds of constructs related to personality, behaviors, and

attitudes (Danioni & Barni, 2021; de Vries et al., 2014). Therefore, Weibel et al. (2018) questioned their findings of artists scoring significantly higher than non-artists, and they doubted that their sample might have been affected by a bias toward SD. Results of two studies that indicated a significant relationship between symptom overreporting and CEQ scores support this assumption (Kunst et al., 2011; Merckelbach & Smith, 2003**).** However, in this study, the negative relationship between fantasy proneness and SD made it possible not to bear this doubt. Moreover, these results support the implication that CEQ items do not allude to deceiving or lying (Schelleman-Offermans & Merckelbach, 2010). Otherwise, the measure would simply study the made-up stories of highly fantasy-prone individuals.

As it was indicated before, Merckelbach, Horselenberg, and Muris (2001) avoided using the term "fantasy" as the term might have led to negative associations for some people. This case was considered valid for the Turkey context too, so the exact translation of the measure's name was used. There is no doubt that the term "creative" has positive connotations. Although the name of the instrument could predispose participants to give answers that would contribute to an increase in impression management scores, the negative correlation provides (r = - 0.12, p < .05) further support regarding the quality of the items.

From the scope of the Big Five or Five-Factor Model (FFM) of personality, self-deception was found to be associated with emotional stability, conscientiousness, and extraversion; and impression management was found to be associated with conscientiousness, agreeableness, and emotional stability (Li & Bagger, 2006; see also Holden & Passey, 2010). Hence, neither self-deception nor impression management was reported to be related with openness to experience dimension or negatively correlated with emotional stability. In contrast, Reyes et al., (2017) reported that fantasy proneness was positively correlated with openness to experience, together with neuroticism (reverse of emotional stability) (see also Weibel et al., 2018) but not with other traits. Based on the association between fantasy proneness and social desirability

with five-factor personality traits, some interpretations were made regarding the weak negative relationship that was found between fantasy proneness and SD. Before moving on to the discussion, it is important to note that this part of the study aims to give an overall idea regarding the meaning of the found association and encourage replications as the strength of the association between fantasy proneness and SD was weak, and further investigations as only one study that addressed the relationship between the two variables exists (see Merckelbach, Horselenberg, et al., 2001).

It was argued that poor emotional differentiation (Fukunishi, 1994) and/or a level of emotional distress such as neuroticism (Messina et al., 2010) might cause a lack of capability and interest in social desirability, and that these might be the forces behind the negative relationship between SD and fantasy proneness. In their scoping review, van Helvoort et al. (2022) showed that several studies indicated dissociation (e.g., Callahan et al., 2003) was usually correlated with SD negatively, and their strength were weak to moderate. Dissociation is the unusual integration of feelings and experiences into the stream of consciousness and memory (Bernstein & Putnam, 1986), and there is also a positive correlation between neuroticism and dissociation (Reyes et al., 2017).Therefore, negative relationship with social desirability of both concepts (fantasy proneness and dissociation) might be mediated by neuroticism and/or emotional distress, and individuals who shows higher dissociation and/or fantasy proneness may not be interested in social desirability.

An alternative suggestion was made by Merckelbach et al. (2017). They suggested that fantasy prone individuals might be careless or inattentive while responding self-report instruments, and this might be the reason for overreporting of symptom scales. Accordingly, the overlap between fantasy proneness and cognitive dysregulations and schizotypal features might be the reason behind this predisposition. It has been explained earlier that schizotypal traits, more specifically magical ideation, are associated with impairments in basic cognitive processes such as attention and

interpersonal skills (Cadenhead et al., 1999) and intense emotional experiences may mediate this association (Karcher & Shean, 2012).

To the author's knowledge, this study is the only one that reported a significant link between fantasy proneness and social desirability. While no significant link with its unconscious dimension of self-deception was found, a significant relationship was reported with its conscious dimension of impression management, which is a disposition to convey a favorable self-image. However, this weak relationship between SD and fantasy proneness might be difficult to replicate. While neuroticism might be a common domain where fantasy proneness and dissociation constituted might have led to a negative relationship with SD, the knowledge is not sufficient to make a causal interpretation. Different routes are possible, such as fantasy prone individuals may have given inattentive responses to self-report measures that were mediated by schizotypal features. On the other hand, besides neuroticism, fantasy proneness also differs from SD through openness to experience a dimension of personality, which has not been as widely discussed. This difference points out the possible meanings of the negative relationship from a psychological resilience and adaptivity perspective. The association between fantasy proneness and SD needs more investigation. Expanding knowledge with a possible causal relationship would aid in understanding how individuals who carry the trait or lack the trait interact with others and society. Overall, convergent and discriminant validity of the CEQ have been investigated. Whether it can predict certain behaviors such as participating in creative activities in the future has also been studied. It was shown that there is a positive relationship between the level of interest in creative activities and fantasy proneness ($r = .21$, $p < .001$) which means that the adapted questionnaire has predictive validity. Besides presenting the predictive validity of the adapted CEQ, this study provided further evidence that people who are involved in or aspire to be involved in creative activities at a professional level score significantly higher than people who are not involved in creative activities professionally. These findings are in line with the attempts to link the concept of fantasy proneness with the

creativity phenomenon (see Lynn & Rhue, 1986). Some evidence was also provided by the researchers that fantasy proneness negatively correlates with alexithymia (Fuchs et al., 2007) which is a trait related to limited imagination and a lack of creativity. However, the link between creativity and fantasy proneness seems to be given less attention by researchers compared to other correlates of fantasy proneness (Weibel et al., 2018). This might be that assessing creativity is difficult and has been a troublesome subject for decades, in part because a creativity study seeks to observe and measure unconventional, original, inventive, and unexpected things (Silvia et al., 2011).

Being involved in creative activities professionally is not the only demographic variable that correlates with the CEQ scores. The CEQ did decrease linearly with age. This means that fantasy proneness scores were found to decrease as the age of the participants increased. Weibel et al. (2018) gave the most extensive data about the link between fantasy proneness and age using the Fantasy Questionnaire that was developed in the same study that involves two dimensions. The correlation between age and imaginative fantasy ($r = - 0.10$, $p < .05$) and age and creative fantasy ($r = - 0.08$, $p < 0.05$) was weakly negative. Similarly, a weak negative relationship was found between fantasy proneness and age in the current study ($r = - 0.198$, $p < .001$). The strength of the correlation was found higher and also the value of probability was smaller compared to Weibel et al.'s (2017). Moreover, they examined the mean scores of the participants between the ages of 20 and 60 by dividing them into groups ranging by 10 years. Accordingly, the scores between these age groups decreased as estimated by correlational analysis.

Smaller ranges were determined for the current study to examine how the mean scores differ between age groups. Young adults (18–25 age group) obtained the greatest mean score among other age groups and scored significantly higher than all other groups except the group 36–40 and the group 41–45. Although this study could not provide information regarding the fantasy proneness scores of people aged older than 45 as reliable as Weibel et al. (2018), it provided more detailed information regarding

the difference between fantasy scores of people aged 18 to 45. The significant difference between the 18–25 and 45+ groups might be caused by the fact that the group aged 45+ was more diverse while consisting of 23 participants. Hence, this might not give a reliable result about the difference between participants aged 46–60 and participants involved in younger age groups (see Table 3.7). A larger scale of research that involves an adequate number of participants for the age ranges over 45 years of age may contribute to the literature by providing information regarding the effect of age on fantasy proneness. The significant attention to the relationship between age and fantasy proneness construct has not been paid till today. It seems like it is an important demographic correlate of the fantasy proneness construct in the context of Turkey. This argument has been further supported while discussing the role of gender in fantasy proneness.

In the current study, women scored slightly higher than men. However, the difference was not statistically significant. Although existing studies provide inconsistent results regarding the significance of gender on fantasy proneness scores, the dominant opinion is that sex/gender is not a significant predictor of fantasy proneness. Therefore, the differences between genders are mostly unchecked in most of the studies. Only a few studies were found to provide such data. There are a small number of studies conducted with young adults that provide significant differences between females and males, with females scoring higher than males (Green & Lynn, 2008, 2011). In contrast, Merckelbach, Horselenberg, and Muris (2001) reported no significant difference between the scores of the two genders. There are some other studies that support the insignificance; however, their sample was not representative of the general population and/or the sample size was very small (e.g., a study with depersonalization disorder outpatients; Levin et al., 2004). Studies that were conducted with adolescents and children seem to be more consistent than studies conducted with adults in this regard. Adolescent females scored higher than males (Muris et al., 2003; Myers et al.; 1983; Sánchez-Bernardos & Avia, 2004); similar results were also

obtained for children (Myers et al., 1983). When these studies that were encountered are compared, some conclusions can be drawn regarding the inconsistency. Because sex/gender differences were mostly recorded when the samples were generated from younger populations, and in contrast, the non-significant differences were reported when the age range was kept wider, it can be suggested that the role of gender should be considered along with the role of age on fantasy proneness scores.

The result of the current study presents evidence for the opinion that sex/gender is not a significant predictor of fantasy proneness (Merckelbach et al., 2022) for adults (see also Merckelbach, Horselenberg, et al., 2001) as the sample size and the characteristics of the participants were adequate and representative. However, the results have been obtained from children and adolescents from different cultures (ie. Dutch, American, and Spanish) and deserve attention. Myers' (1983) conclusion on the significance of age and gender was drawn from a very large sample. However, almost 40 years have passed since this study was conducted, but the relationship that was reported has been cited numerous times. Hence, an up-to-date large-scale study that reports the relationship between fantasy proneness with gender and age is necessary.

Overall, an adaptation of the CEQ was created that can assess the fantasy proneness trait of individuals who speak Turkish to be applied in various research domains. It cannot be used for clinical decisions to be made on an individual basis, but it can be used for intergroup comparisons in various domains such as psychopathology, psychological resilience, and social behavior. The study was mainly conducted with a total of 464 participants from different age groups, genders, sexual orientation, marital status, level of education, occupation, socio-economic status, living situation, and psychological/psychiatric history. It can be said that the sample was heterogeneous and diverse. Now that the CEQ has been adapted to Turkish, it is possible to compare international data with the data obtained from Turkish speakers. The first data on the relationship between demographic variables of the Turkish population and their fantasy proneness scores was reported. In parallel with the existing literature, the fantasy

proneness scores of women and men do not differ, and people who are involved or willing to be involved in creative activities professionally are found more fantasy prone than people who are not involved at a professional level. Besides, initial data regarding the relationship between fantasy proneness with dissociation and magical ideation was also provided. A significant negative correlation with age was found, as well as social desirability, which are the findings that mainly differentiate this study from other fantasy proneness studies. However, as this study is the first research regarding the fantasy proneness trait of the Turkey population, further observations are needed regarding their replicability.

4.1. CLINICAL IMPLICATIONS

The strength of the correlations between fantasy proneness with dissociation and magical ideation point out that fantasy proneness should be involved in psychopathology research as well as the research regarding their prevention. Fantasy proneness also should be involved in psychological health and psychological resilience research as it is thought to be related to adaptivity as well as psychological distortions as a trait that has been playing an essential role in shaping human mind or in other words psyche. Dissociation, schizotypy, and fantasy proneness has been viewed as traits ranging on continuums graded across all people, with excess or absence of symptoms may manifest illnesses. Hence, they all obtain ranges that would contribute pathology or healthiness. As dissociation, schizotypy, and fantasy proneness are closely related constructs that are also related with many others, every discovery regarding their paths of relating each other can contribute to clinical research as well as clinical practice.

As of psychopathological versions of dissociation, besides the enhanced burden of illness, patients may also gain less from psychotherapeutic treatments. A number of studies have found that dissociative symptoms may be used to predict nonresponse in

psychotherapeutic interventions for a variety of psychological disorders, including panic disorders and PTSD (Lyssenko et al., 2018; Soffer-Dudek, 2014). It has been proposed that dissociating (and hence shifting attention) in the face of negative emotion during therapy sessions is the mechanism that underlies why high dissociators do not progress as much as low dissociators in psychotherapy (Spitzer et al., 2007). Although highly dissociative people perform worse in treatment for depression, anxiety, or obsessive-compulsive disorder (OCD) (Beato et al., 2003; Spitzer et al., 2007), identifying at-risk for dissociation and acknowledging it in treatment is frequently ignored. This neglect might be due to a general underestimation of dissociative symptoms, or it could be due to a lack of understanding of the links between dissociative symptoms with depression, anxiety, and OCD. Both scenarios underline the need for more studies.

As of psychopathological versions of PLEs, from a practical and therapeutic standpoint, there is a possible role for magical ideation and absorption, which are top correlates of fantasy proneness, in the recovery of regressive cognitive processes mediated by art therapy (e.g., dance, movement, and creativity-based therapeutic rehabilitation programs) in patients with schizophrenia-spectrum disorder (Kállai et al., 2021). Therefore, in order to improve self-integration abilities, there might be a need for expanded awareness when patients absorb in art therapy experiences or when they participate in thought and action compatibility training (Kállai et al., 2021).

A vast amount of research has been conducted in Turkey regarding psychotic disorders and schizotypal personality disorders, as it is the case for dissociative disorders. However, fantasy proneness has not been involved in the research since it could not be measured, and its correlates have been approached from a psychopathology perspective while adaptive aspects of the dissociative phenomena and PLEs and other related concepts have been ignored.

Although adaptive (e.g., Hartmann, 1958) and maladaptive role (e.g., Winnicott, 1971) of fantasy has been initially pointed out by psychoanalytical theorists,

and addressed by researchers through fantasy proneness construct recently, its theoretical significance still far from clear (Merckelbach et al., 2022) and need more investigation for more efficient clinical practices. In other words, regarding psychoanalytic psychotherapies, clinicians accompany patients chasing white rabbits (e.g., fantasies, defenses etc. as reflections of phantasies) down the rabbit hole (e.g., dream as fantasy in a deeper state; or a dissociative state that takes place in the session room; transference, etc.) to better understand characters, places, experiences (phantasies, components of unconscious) to map Wonderland (unconscious, psyche) and create a guide. Nonetheless, why some patients are more prone to seeing the white rabbit while others are less prone, and why it turns into psychopathology in some and an adaptive trait in others are issues that are not resolved yet empirically or theoretically in favor of clinical practice.

4.2. LIMITATIONS AND FUTURE DIRECTIONS

Although this study revealed many strengths, it also had some limitations. Some statistical comparison regarding factor loadings of each item could not be made with the original CEQ because such details were not provided by the authors (Merckelbach, Horselenberg, et al., 2001) and it was also not provided for the Spanish version either (Sánchez-Bernardos & Avia, 2004). However, why the one factor solution suggested by the scree test is the most ideal solution for the Turkish adaptation was further reasoned by comparing it with its two-factors and five-factor solutions. The other limitation was that the participation of individuals aged 46-60 years was lower compared to those involved in younger age groups. Although the number reached was not sufficient to generalize the findings for the three age groups in 46-60 range, a general idea was obtained by grouping them as 45+.

The survey battery consisted of more than 100 questions, including the information form. However, the results show that the battery length did not constitute

a limitation as expected. The rate of leaving the survey unfinished was very low. Error caused by carelessness or random response rate was prevented by the attention questions added to the questionnaire. Rate of that participants that did not pass the attention questions was 4.9%. As a result, the data of more than half of the participants were included to the study. Despite the length of the survey battery, the biggest reason why the filling rate was so high is understood from the feedback given by the participants. Many participants stated that the questions were interesting to answer, and they did not get bored. As a matter of fact, the high number of requests to participate in the second phase, retest, was an indication that the questions were answered with interest.

A reliability and validity study of the CEQ for adolescent population in Turkey is highly recommended. Sánchez-Bernardos & Avia (2004) concluded that age-related variations in the structure of fantasy activities indicates a more varied character of fantasy. Therefore, the factors should be rediscovered for younger age groups. Moreover, as this study did not involve individuals older than 60, considering this argument for older age groups can also be recommended. As the number of participants between 46-60 were not as representative as other age groups, a reliability and validity study for this age group can be repeated and again factor structure can be checked based on the previous argument.

This study provided initial data regarding the relationship between fantasy proneness and its two correlates: dissociation and magical ideation. Although found relationships were parallel with the existing literature, they need further investigations. The constructs should be viewed as continuums graded across all people, and their different dimensions should be equally emphasized.

It was already recommended by Merckelbach et al. (2022) that more complex forms of mediator and moderator analysis should be conducted in order to arrive causal interpretations. This study presents a starting point as it provided unique evidence regarding the relationship between fantasy proneness and social desirability, more

specifically impression management. As it was indicated in discussion, the negative relationship found between fantasy proneness and SD might be explained through dissociation and schizotypal traits as well as neuroticism and openness to experience personality traits. Hence, social behavior of people with different levels of fantasy proneness can be further explained. However, the relationship between fantasy proneness and social desirability was weak and it should be confirmed whether this relationship is replicable among adults. This investigation can also be made with adolescents as the concept of social desirability is very related with the nature of this developmental stage.

The relationship between demographic variables and fantasy proneness also needs further investigations. The result of this study points out a negative correlation between age and fantasy proneness. One way to broaden the knowledge regarding this relationship is again conducting research with older adults and younger populations. In contrast to adult population, a stronger negative correlation among adolescents have been reported in earlier research. Hence, extending research to more diverse age groups can provide better information regarding fantasy proneness and its place in developmental trajectory. Regarding gender, most of the studies have pointed out differences in fantasy scores between women and men but fantasy scores of people from other genders were not reported. It should also be noted that significant differences between fantasy scores of different genders have been reported more consistently for child and adolescent populations. Therefore, studies that further investigate gender differences can be recommended especially with younger age groups. However, approaching gender differences with categorical variables might not be a good standpoint to approach the fantasy proneness construct. Rather than involving categorical variables, like gender or sexual orientation, investigating the construct through continuous variables related to gender concept, such as masculinity-femininity continuum, might make more sense.

CONCLUSION

The Creative Experiences Questionnaire (CEQ) was adapted into Turkish language and culture as a measure with a single factor solution that contains 25-items. Evidence regarding its internal reliability, test-retest stability was provided. Through McDonald's Omega analysis technique and split-data analysis methods, more extensive knowledge regarding the CEQ's reliability was obtained. Data regarding the measure's face validity, convergent validity, discriminant validity and predictive validity was presented. The measure that was used to test the discriminant validity of the questionnaire solidified the validity findings as a negative relationship between fantasy proneness and socially desirable responses was found. Furthermore, through the instruments that were used to test the convergent validity of the Turkish adaptation, it was shown that the correlation between fantasy proneness and dissociative experiences and magical ideation was parallel with the existing literature that were obtained in different cultures. The findings obtained regarding the relationship between fantasy proneness with dissociation, magical ideation and social desirability provided first data regarding the fantasy proneness construct in the context of Turkey. Clinical implications regarding these relationships were discussed and recommendations were made for future studies.

This research pointed out a significant negative relationship between social desirability and fantasy proneness which has not been reported before and through the existing evidence it was pointed out that magical ideation and dissociation might be playing a mediator/moderator role. As vast amount of gap exists in fantasy proneness literature and studies focusing on causality between fantasy proneness and its correlates were recommended earlier (Merckelbach et al., 2022), these findings can be seen as a starting point for scholars in Turkey. In line with the existing literature, it was found that fantasy prone individuals are more likely to be involved in creative activities. As well as this finding was supported by correlational analysis, an important distinction

was made as people who are involved or interested in creative activities are more prone to fantasy compared to others who indicated that they are not involved or interested in creative activities in a professional level. This study also underlined the role of other demographic variables in fantasy proneness as they have been ignored by the researchers.

A significant negative correlation was found between age and fantasy proneness scores, and it has been acknowledged through this study that it can be utilized as a variable to better understand the place of fantasy proneness in the developmental trajectory. Age might also be an important variable that needs to be considered while evaluating the scoring differences of different genders. Although main aim of the current study was to bring a brief, reliable and valid fantasy proneness measure that can be involved in research domains has been studied in Turkey, and to contribute filling the vast gap in the existing fantasy proneness literature, it provided further evidence regarding the questionnaire's psychometric qualities, further evidence regarding the strength of the relationship between fantasy proneness and its known correlates. It also brought up further questions that need to be addressed.

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APPENDICES

Appendix A: Informed Consent Form

Sayın Katılımcı,

Bu araştırma İstanbul Bilgi Üniversitesi Klinik Psikoloji Yüksek Lisans Programı tez çalışması kapsamında Psikolog Musa Çekmez tarafından Dr. Öğr. Üyesi Zeynep Maçkalı danışmanlığında yürütülmektedir.

Yurtdışında geliştirilmiş ve özellikle klinik psikoloji ve psikoterapi ile ilgili araştırmalarda bizlere çok yardımcı olacak bir ölçeği Türkçe'ye uyarlamak ile ilgili bir araştırma yapmaktayız. Sizin de bu araştırmaya katılmanızı rica ederiz. Çalışmaya katılım gönüllülük esasına dayanmaktadır, yani bu araştırmaya katılıp katılmamakta serbestsiniz. Kararınızdan önce araştırma hakkında sizi bilgilendirmek isteriz.

Bu araştırma, yaratıcı deneyimlerle ilgili soruları içeren bir ölçeği Türkçe'ye kazandırmayı amaçlamaktadır ve iki aşamadan oluşmaktadır. Araştırmanın bu ilk aşamasında araştırmayla ilgili bazı formları doldurmanız istenecektir. Bu konudaki katılımınız araştırma için değerlidir. Soruları yanıtlamak yaklaşık 20 dakika sürmektedir. Formların hepsini doldurduktan sonra ikinci aşamaya katılmak isteyip istemediğinizi belirtmeniz istenecektir. Ardından araştırma sonlanacaktır. İkinci aşamaya katılmak için gönüllü olan katılımcılarla yaklaşık bir ay sonra tekrar iletişime geçilecektir. İkinci aşama yaklaşık 5-10 dakika sürecektir.

Araştırma süresince sizden beklenen size verilen formlardaki soruları kendi görüş ve yaşantılarınıza göre doldurmanızdır. Sizden samimi yanıtlar vermeniz ve hiçbir soruyu boş bırakmamanız beklenmektedir.

Dolduracağınız formda kimliğinizi belirleyecek herhangi bir soru (ad, soyad, kimlik numarası, doğum yeri, vs.) bulunmamaktadır. Yalnızca ikinci aşamaya katılmaya gönüllü olan katılımcılardan email adreslerini paylaşmaları istenecektir.

Verdiğiniz tüm bilgiler saklı tutulacaktır. Formlarda elde edilecek bilgiler bilimsel nitelikli yayınlarda kullanılabilir. Herkesin doldurduğu formlar birleştirilip, toplu olarak değerlendirileceği için size özel sonuçlar elde etmek ve paylaşmak söz konusu değildir. Bu amaçların dışında formlar kullanılmayacak ve başkalarına verilmeyecektir.

Araştırmaya katılmak tamamen gönüllülük esasına dayanmaktadır. Soruların herhangi bir olumsuz duruma neden olması beklenmemektedir. Bu çalışmaya katılmaya karar verdikten sonra sorulardan ötürü ya da başka bir nedenle kendinizi rahatsız hissederseniz, istediğiniz zaman sonlandırarak çalışmadan ayrılabilirsiniz. Bu durumda verilerinizin araştırmada kullanılamayacağını belirtmek isteriz.

Araştırma ile ilgili soru sormak isterseniz araştırmacı ile her zaman iletişime geçebilirsiniz.

Araştırmaya vakit ayırdığınız için teşekkür ederiz.

Musa Çekmez
(e-posta)

Yukarıda verilen bilgiler doğrultusunda araştırmaya katılmayı kabul ediyorum.

○ Evet

○ Hayır

Appendix B: Demographic Information Form

1. Yaşınız: _____

2. Cinsiyetiniz: _____

3. Cinsel yöneliminiz: _____

4. Medeni durumunuz:
    a. Bekar - ilişkisi yok
    b. Bekar - ilişkisi var - birlikte yaşıyor
    c. Evli
    d. Dul
    e. Boşanmış

5. Eğitim düzeyiniz (lütfen en son bitirdiğiniz eğitim kurumunu işaretleyiniz):
    a. İlkokul terk veya okur-yazar
    b. İlkokul
    c. Ortaokul
    d. Lise
    e. Ön Lisans
    f. Üniversite
    g. Yüksek Lisans
    h. Doktora

6. Çalışma Durumu:
    a. İşsiz
    b. Ev hanımı

c. Memur/İşçi
d. Serbest
e. Emekli
f. Öğrenci

7. Sanat, tasarım vb. yaratıcılığa yönelik/yaratıcılıkla ilgili faaliyetlere olan ilginizi nasıl tanımlarsınız?
    a. Bu tür faaliyetlerle ilişkim yoktur.
    b. Bu tür faaliyetleri hobi olarak takip ederim.
    c. Bu tür faaliyetleri hobi olarak yaparım.
    d. Bu tür faaliyetlere hobi olarak devam ediyorum ve profesyonel olarak ilgilenmeyi hedefliyorum.
    e. Bu tür faaliyetlerle profesyonel olarak ilgileniyorum.

8. Sanat, tasarım vb. yaratıcılığa yönelik/yaratıcılıkla ilgili faaliyetlere olan ilginizin ne düzeyde olduğunu düşünüyorsunuz?
    a. Hiç ilgilenmiyorum.
    b. İlgilenmiyorum
    c. Ne ilgileniyorum ne ilgilenmiyorum.
    d. İlgileniyorum
    e. Çok ilgileniyorum.

9. Şu anda kiminle yaşıyorsunuz?
    a. Ailemle
    b. Annemle
    c. Babamla
    d. Akraba yanında
    e. Evde tek başıma

f. Evde arkadaşlarla
g. Yurtta
h. Diğer: _____

10. Siz hariç kaç kardeşiniz var? _____

11. Aylık gelirinizin ne düzeyde olduğunu düşünüyorsunuz?
    a. Alt
    b. Orta-alt
    c. Orta
    d. Orta-üst
    e. Üst

12. Tanı aldığınız bir psikolojik rahatsızlığınız var mı?
    a. Evet
    b. Hayır

13. Eğer bir önceki soruyu "evet" olarak cevapladıysanız lütfen tanınızı yazınız:

    _____

14. Daha önce ya da şu anda psikolojik yardım aldınız mı/ almakta mısınız?
    a. Hayır
    b. Evet, geçmişte.
    c. Evet, devam etmekte.

15. Eğer bir önceki soruyu "evet" olarak yanıtladıysanız lütfen aşağıda belirtiniz. Birden fazla şık işaretleyebilirsiniz.
    a. Cevabım "hayır" idi

b. Psikolojik danışmanlık
c. Psikoterapi
d. İlaç tedavisi
e. Diğer: _____

Appendix C: The Creative Experiences Questionnaire (CEQ)

	Yes	No
1. As a child, I thought that the dolls, teddy bears, and stuffed animals that I played with were living creatures.	Y	N
2. As a child, I strongly believed in the existence of dwarfs, elves, and other fairy tale figures.	Y	N
3. As a child, I had my own make believe friend or animal.	Y	N
4. As a child, I could very easily identify with the main character of a story and/or movie.	Y	N
5. As a child, I sometimes had the feeling that I was someone else (e.g., princess, an orphan, etc.).	Y	N
6. As a child, I was encouraged by adults (parents, grandparents, brothers, sisters) to fully indulge myself in my fantasies and daydreams.	Y	N
7. As a child, I felt often lonely.	Y	N
8. As a child, I devoted my time to playing a musical instrument, dancing, acting, and/or drawing.	Y	N
9. I spend more than half the day (daytime) fantasizing or daydreaming.	Y	N
10. Many of my friends and/or relatives do not know that I have such detailed fantasies.	Y	N
11. Many of my fantasies have a realistic intensity.	Y	N
12. Many of my fantasies are often just as lively as a good movie.	Y	N
13. I often confuse fantasies with real memories.	Y	N

14. I am never bored because I start fantasizing when things get boring.	Y	N
15. Sometimes I act as if I am somebody else and I completely identify myself with that role.	Y	N
16. When I recall my childhood, I have very vivid and lively memories.	Y	N
17. I can recall many occurrences before the age of three.	Y	N
18. When I perceive violence on television, I get so into it that I get really upset.	Y	N
19. When I think of something cold, I actually get cold.	Y	N
20. When I imagine I have eaten rotten food, I get really nauseous.	Y	N
21. I often have the feeling that I can predict things that are bound to happen in the future.	Y	N
22. I often have the experience of thinking of someone and soon afterwards that particular person calls or shows up.	Y	N
23. I sometimes feel that I have had an out of body experience.	Y	N
24. When I sing or write something, I sometimes have the feeling that someone or something outside myself directs me.	Y	N
25. During my life, I have had intense religious experiences which influenced me in a very strong manner.	Y	N

Appendix D: Yaratıcı Deneyimler Anketi (YDA)

Lütfen aşağıdaki soruları size en çok uyan seçeneği işaretleyerek cevaplayınız.	Evet	Hayır
1. Çocukken oynadığım oyuncak bebeklerin, oyuncak ayıların, ve peluş hayvanların canlı varlıklar olduğunu düşünürdüm.	E	H
2. Çocukken cücelerin, cinlerin ve diğer peri masalı karakterlerinin gerçek olduğuna kuvvetle inanırdım.	E	H
3. Çocukken, olduğuna inandığım bir arkadaşım veya hayvanım vardı.	E	H
4. Çocukken, bir hikayenin ve/veya filmin ana karakteriyle çok kolay özdeşim kurardım.	E	H
5. Çocukken bazen başka biri olduğum hissine kapılırdım (örneğin; prenses, yetim vb.).	E	H
6. Çocukken, yetişkinler (ebeveynlerim, büyükanne ve büyükbabalarım, abilerim ve ablalarım) tarafından kendimi tamamen fantezi ve hayallerime bırakmaya cesaretlendirildim.	E	H
7. Çocukken sık sık yalnız hissederdim.	E	H
8. Çocukken zamanımı bir müzik aleti çalmaya, dans etmeye, rol yapmaya ve/veya çizim yapmaya harcardım.	E	H
9. Günün yarısından fazlasını (gündüz) fantezi kurarak ya da hayallere dalarak geçiririm.	E	H
10. Birçok arkadaşım ve/veya akrabam bu kadar detaylı fantezilerim olduğunu bilmez.	E	H
11. Fantezilerimin çoğu gerçek gibidir.	E	H
12. Fantezilerimin çoğu genellikle iyi bir film kadar canlıdır.	E	H
13. Genellikle fantezileri anılarla karıştırırım.	E	H

14. Ben hiç sıkılmam çünkü işler sıkıcı olmaya başladığında fantezi kurmaya başlarım.	E	H
15. Bazen başka biriymişim gibi davranırım ve kendimi tamamen bu rolle özdeşleştiririm.	E	H
16. Çocukluğumu hatırladığımda, anılarım çok berrak ve canlı olur.	E	H
17. Üç yaşımdan önceki birçok olayı hatırlayabiliyorum.	E	H
18. Televizyonda şiddet içeren bir durum/sahne gördüğümde, o kadar içine giriyorum ki gerçekten üzülüyorum.	E	H
19. Soğuk bir şey düşündüğümde gerçekten üşürüm.	E	H
20. Bozulmuş yemek yediğimi hayal ettiğimde gerçekten midem bulanır.	E	H
21. Sık sık gelecekte kesin olarak gerçekleşecek şeyleri tahmin edebileceğim hissine kapılırım.	E	H
22. Düşündüğüm birinin kısa bir süre sonra beni aradığı ya da onunla karşılaştığımız çok sık olur.	E	H
23. Bazen bedenimin dışındaymışım gibi bir deneyim yaşadığımı hissederim.	E	H
24. Bir şeyler yazarken veya şarkı söylerken, bazen kendim dışında birinin veya bir şeyin beni yönlendirdiği hissine kapılırım.	E	H
25. Hayatım boyunca, beni çok güçlü bir şekilde etkileyen yoğun dini deneyimler yaşadım.	E	H

Appendix E: Dissociative Experiences Scale II (DES-II)

Bu test günlük hayatmızda başmızdan geçmiş olabilecek yaşantıları konu alan 28 sorudan meydana gelmektedir. Sizde bu yasantıların ne sıklıkta olduğunu anlamak istiyoruz. Yanıt verirken, alkol ya da ilaç etkisi altında meydana gelen yaşantıları değerlendirmeye katmayınız. Lütfen her soruda, anlatılan durumun sizdekine ne ölcüde uyduğunu 100 üzerinden degerlendiriniz *ve* uygun olan rakamı işaretleyiniz.

1. Bazı insanlar, yolculuk yaparken yol boyunca ya da yolun bir bölümünde neler olduğunu hatırlamadıklarını birden fark ederler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

2. Bazı insanlar zaman zaman, birisini dinlerken, söylenenlerin bir kısmını ya da tamamını duymamış olduklarını birden fark ederler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

3. Bazı insanlar kimi zaman, kendilerini nasıl geldiklerini bilmedikleri bir yerde bulurlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

4. Bazı insanlar zaman zaman kendilerini, giydiklerini hatırlamadıkları elbiseler içinde bulurlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

5. Bazı insanlar zaman zaman eşyaları arasında satın aldıklarını hatırlamadıkları yeni şeyler bulurlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

6. Bazı insanlar, zaman zaman, yanlarına gelerek başka bir isimle hitab eden ya da önceden tanıştıklarında ısrar eden, tanımadıkları kişilerle karşılaşırlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

7. Bazı insanlar, zaman zaman, kendilerinin yanı başında duruyor ya da kendilerini bir şey yaparken seyrediyor ve sanki kendi kendilerine karşıdan bakıyormuş gibi bir his duyarlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

8. Bazı insanlara, arkadaşlarını ya da aile bireylerini, zaman zaman tanımadıklarının söylendiği olur. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

9. Bazı insanlar, yaşamlarındaki kimi önemli olayları (örneğin; nikah ya da mezuniyet töreni) hiç hatırlamadıklarını fark ederler. Yaşamınızdaki bazı önemli olayları hiç hatırlamama durumunun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

10. Bazı insanlar zaman zaman, yalan söylemediklerini bildikleri bir konuda, başkaları tarafından, yalan söylemiş olmakla suçlanırlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

11. Bazı insanlar kimi zaman, aynaya baktıklarında kendilerini tanıyamazlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

12. Bazı insanlar kimi zaman, diğer insanların, eşyaların ve çevrelerindeki dünyanın gerçek olmadığı hissini duyarlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

13. Bazı insanlar, kimi zaman vücutlarının kendilerine ait olmadığı hissini duyarlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

14. Bazı insanlar, zaman zaman geçmişteki bir olayı o kadar canlı hatırlarlar ki, sanki o olayı yeniden yaşıyor gibi olurlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

15. Bazı insanlar kimi zaman, olduğunu hatırladıkları şeylerin, gerçekte mi yoksa rüyada mı olduğundan emin olamazlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

16. Bazı insanlar zaman zaman, bildikleri bir yerde oldukları halde orayı yabancı bulur ve tanıyamazlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

17. Bazı insanlar, televizyon ya da film seyrederken, kimi zaman kendilerini öyküye o kadar kaptırırlar ki çevrelerinde olan bitenin farkına varamazlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

18. Bazı insanlar kimi zaman kendilerini, kafalarında kurdukları bir fantezi ya da hayale o kadar kaptırırlar ki, sanki bunlar gerçekten baslarından geçiyormuş gibi hissederler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

19. Bazı insanlar, ağrı hissini duymamayı zaman zaman başarabildiklerini fark ederler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

20. Bazı insanlar kimi zaman, boşluğa bakıp hiç bir şey düşünmeden ve zamanın geçtiğini anlamaksızın oturduklarını fark ederler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

21. Bazı insanlar, yalnız olduklarında, zaman zaman sesli olarak kendi kendilerine konuştuklarını fark ederler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

22. Bazı insanlar kimi zaman iki ayrı durumda o kadar değişik davrandıklarını görürler ki, kendilerini neredeyse iki farklı insanmış gibi hissettikleri olur. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

23. Bazı insanlar, normalde güçlük çektikleri bir şeyi (örneğin spor türleri, iş, sosyal ortamlar vb.) belirli durumlarda son derece kolay ve akıcı biçimde yapabildiklerini fark ederler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

24. Bazı insanlar, zaman zaman, bir şeyi yaptıklarını mı yoksa yapmayı sadece akıllarından geçirmiş mi olduklarını (örneğin bir mektubu postaya attığını mı yoksa sadece atmayı düşündüğünü mü) hatırlayamazlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

25. Bazı insanlar kimi zaman, yatıklarını hatırlamadıkları şeyleri yapmış olduklarını gösteren kanıtlar bulurlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

26. Bazı insanlar, zaman zaman eşyaları arasında, kendilerinin yapmış olması gereken, fakat yaptıklarını hatırlamadıkları yazılar, çizimler ve notlar bulurlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

27. Bazı insanlar, zaman zaman kafalarının içerisinde, belli şeyleri yapmalarını isteyen ya da yaptıkları şeyler üzerine yorumda bulunan sesler duyarlar. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

28. Bazı insanlar, zaman zaman, dünyaya bir sis perdesi arkasından bakıyormuş gibi hissederler, öyle ki insanlar ve eşyalar çok uzakta ve belirsiz görünürler. Bu durumun sizde ne sıklıkta olduğunu yüz üzerinden değerlendirerek uygun olan rakamı işaretleyiniz.

%0 10 20 30 40 50 60 70 80 90 %100

Appendix F: Magical Ideation Scale (MIS)

Lütfen aşağıdaki soruları size en çok uyan seçeneği işaretleyerek cevaplayınız.	Doğru	Yanlış
1. Bazı insanlar beni düşündüklerinde o insanların farkına varabiliyorum.	D	Y
2. İnsan olmadığıma dair anlık duygulara kapılırım.	D	Y
3. Zaman zaman kaldırım çizgilerine basmaktan korkarım.	D	Y
4. Sanırım, eğer istersem başkalarının düşüncelerini okumayı öğrenebilirim.	D	Y
5. Yıldız falları ve burçlar rastlantısal olamayacak kadar sık doğru çıkıyor.	D	Y
6. Evde kimse olmadığı halde, bazen eve geldiğimde eşyaların yerini değişmiş buluyorum.	D	Y
7. 13 ve 3 gibi sayıların özel güçleri yoktur.	D	Y
8. Arasıra TV ya da radyo spikeri benim kendisini dinlediğimi biliyormuş gibi aptalca bir hisse kapılmışımdır.	D	Y
9. Başka gezegenlerde yaşayanların dünyadaki olayları etkileyebileceklerini düşündüğüm olmuştur.	D	Y
10. Bilim adamları bize UFO'lar konusundaki gerçeği açıklamıyorlar.	D	Y

11. Eşyaların düzenleniş şekliyle (örneğin bir vitrinde) bana mesajlar verildiği hissine kapılmışımdır.	D	Y
12. Rüyalarımın yalnızca benim aklımın ürünleri olduğundan asla şüphe etmedim.	D	Y
13. Uğur eşyaları iyi şans getirmez.	D	Y
14. Kasetlerimde bazen olan bazen olmayan sesler fark ettiğim olmuştur.	D	Y
15. Zaman zaman, tanımadığım insanların, ellerinin hareketleriyle uzaktan beni etkilediklerini hissetmişimdir.	D	Y
16. Olaylar olmadan önce hemen hemen hiç rüyalarını görmem.	D	Y
17. Bir kişinin yerini bir benzerinin aldığı hissine kapıldığım olmuştur.	D	Y
18. Sadece haklarında kötü düşünerek başkalarına zarar vermek mümkün değildir.	D	Y
19. Bazen, göremediğim halde etrafımda bir kötülüğün varlığını hissediyorum.	D	Y
20. Bazen, belli insanlar bana dokunduğunda ya da baktığında enerji kazandığımı ya da kaybettiğimi hissederim.	D	Y
21. Zaman zaman, tanımadığım insanların bana aşık olduğu düşüncesi aklımdan geçmiştir.	D	Y

22. Bazen, aklımdan geçenlerin gerçekte başka birinin düşüncesi olduğu hissine kapılmışımdır.	D	Y
23. Tanımadığım insanlarla tanıştırıldığımda, onları önceden tanımış olabileceğimi düşündüğüm çok seyrektir.	D	Y
24. Olağandışı bazı deneyimlerimi, reenkarnasyon (yeniden hayata dönme) teorisiyle açıklamak olası gözükmüyor.	D	Y
25. İnsanlar sıklıkla öyle garip davranıyorlar ki, insan onların bir deneyin parçası olduklarından şüphe ediyor.	D	Y
26. Zaman zaman, negatif etkileri uzaklaştırmak için belli batıl hareketler yaparım.	D	Y
27. Bir şeyi sadece çok fazla düşünerek, gerçekleşmesine neden olabileceğimi hissetmişimdir.	D	Y
28. Ölülerin ruhlarının yaşayanları etkileyip etkilemediğini merak etmişimdir.	D	Y
29. Bazen bir profesörün konferansının özellikle benim için hazırlandığını hissetmişimdir.	D	Y
30. Zaman zaman, tanımadığım kişilerin düşüncelerimi okuduklarını hissetmişimdir.	D	Y

Appendix G: Social Desirability Scale (SDS)

Lütfen aşağıdaki soruları size en çok uyan seçeneği işaretleyerek cevaplayınız. Her sorunun karşısında bulunan; (1) Hiç Katılmıyorum (2) Katılmıyorum (3) Kararsızım (4) Katılıyorum ve (5) Tamamen Katılıyorum anlamına gelmektedir.	Hiç Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Tamamen Katılıyorum
1. Verdiğim kararlardan dolayı asla pişmanlık duymam.	1	2	3	4	5
2. Birinin arkasından kesinlikle kötü şeyler konuşmam.	1	2	3	4	5
3. Bana yönelik eleştirileri her zaman dikkate alırım.	1	2	3	4	5
4. Hayatımda hiç hırsızlık yapmadım.	1	2	3	4	5
5. Bir şeyi kafama koyduğumda diğer insanlar nadiren fikrimi değiştirebilir.	1	2	3	4	5
6. Kendi kaderimi yazabileceğimi düşünürüm.	1	2	3	4	5
7. Bana ait olmayan şeyleri asla almam.	1	2	3	4	5
8. İş veya okuldan izin almak için hasta numarası yapmam.	1	2	3	4	5
9. Verdiğim kararlara çok güvenirim.	1	2	3	4	5
10. Kesinlikle sokağa çöp atmam.	1	2	3	4	5
11. Araç kullanırken hız limitini aşmam.	1	2	3	4	5
12. Diğer insanların benim hakkımda ne düşündüğünü dikkate almam.	1	2	3	4	5

13. Kendime karşı her zaman dürüst davranırım.	1	2	3	4	5
14. Suçlu duruma düşme ihtimalim olmasa bile her zaman yasalara uyarım.	1	2	3	4	5
15. Tamamen mantıklı bir insanım.	1	2	3	4	5
16. İnsanların özel bir şeyler konuştuğunu duyarsam dinlemekten kaçınırım.	1	2	3	4	5
17. Zihnimi dağıtan bir düşünceden uzaklaşmak benim için zor değildir.	1	2	3	4	5
18. Hatalarımı kesinlikle gizlemem.	1	2	3	4	5
19. Kötü alışkanlıklarımı terk etmek bana zor gelmez	1	2	3	4	5
20. Duygularımın yoğunlaşması düşüncelerimde önyargılı olmama neden olmaz.	1	2	3	4	5
21. Mağaza eşyalarına zarar verirsem kesinlikle bu durumu görevlilere bildiririm.	1	2	3	4	5
22. Diğer insanlar hakkında dedikodu yapmam.	1	2	3	4	5
23. İnsanlara yönelik ilk izlenimimde yanılmam.	1	2	3	4	5
24. Çok mecbur olsam bile yalan söylemem.	1	2	3	4	5
25. Hiçbir kötü alışkanlığım yoktur.	1	2	3	4	5
26. Yaptığım işlerde her zaman doğru adımlar atarım.	1	2	3	4	5
27. Asla cinsel içerikli kitap veya dergi okumam.	1	2	3	4	5

28. Kesinlikle küfür etmem.	1	2	3	4	5
29. Alışverişlerde para üstünü fazla aldığım durumlarda hemen geri veririm.	1	2	3	4	5

ETHICS BOARD APPROVAL

Ethics Board Approval is available in the printed version of this dissertation.