

AUTOTELIC PERSONALITY:  
LINKS WITH FLOW PROPENSITY, PERSONAL STRENGTHS,  
AND  
PSYCHOPATHOLOGY

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

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## **ABSTRACT**

### **AUTOTELIC PERSONALITY: LINKS WITH FLOW PROPENSITY, PERSONAL STRENGTHS, AND PSYCHOPATHOLOGY**

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The aim of the present doctoral dissertation is to infuse positive psychology research with clinical psychology for contributing to the development of a well balanced view of human psychic phenomenon, eventually leading to a shift in clinical research from disease models to a strength based one. For this purpose, life meaning, subjective happiness, curiosity, and flow propensity was investigated in terms of their associations with a newly developed positive constellation of autotelic personality traits. Besides, personal growth initiative as a set of strategies that lead to growth and transformation; and psychopathology as indicated by depression, trait anxiety, worry, and obsessions & compulsions were studied in terms of their associations with autotelic personality. Three sequential studies were carried out: (1) Swedish Flow Proneness Questionnaire, Subjective Happiness Scale, Meaning in Life Questionnaire, and Curiosity and Exploration Inventory- II were adapted to Turkish culture; (2) Autotelic personality inventory as a strength based personality inventory predicting flow and life engagement was developed; and (3) associations and conceptual models of personal strengths, autotelic personality, psychopathology, and personal growth initiative were tested. Three samples consisting of 652, 222, and 379 participants were recruited for the doctoral dissertation. The findings of the study proved the reliability and validity of four scales that are adapted to Turkish culture, besides the psychometric properties of the newly developed Autotelic Personality Inventory was found satisfactory. In terms of the associations between study variables, it was demonstrated that Autotelic personality was positively associated

with presence of life meaning, curiosity, flow proneness and subjective happiness. Besides, non-autotelic personality constellation was shown to be positively associated with elevated depression, worry, trait anxiety, and obsessive compulsive symptomatology. Overall, the study revealed that autotelic personality is a multifactorial construct and the presence of autotelic properties is of preventive importance and predicts a better life.

**Keywords:** autotelic personality, positive clinical psychology, meaning in life, curiosity, flow proneness, psychopathology, personal growth initiative

## ÖZ

### OTOTELİK KİŞİLİK: AKIŞ EĞİLİMİ, KİŞİLERİN GÜÇLÜ YÖNLERİ, VE PSİKOPATOLOJİYLE İLİŞKİSİ

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Bu doktora tezinin amacı, pozitif psikoloji ve klinik psikoloji çalışma alanlarını birleştirerek, insan psikolojisinin daha dengeli bir anlayış içerisinde ele alınmasına ve nihai olarak klinik araştırmaların tamamen hastalık modellerinde temellenen yaklaşımına ek olarak güçlü yönleri de ele alabilen bir temele oturmasına katkıda bulunmaktır. Bu amaçla, hayat anlamı, öznel mutluluk, merak ve akış eğilimi araştırma dâhilinde geliştirilen pozitif ototelik kişilik özellikleri ile olan ilişkileri bağlamında incelenmiştir. Buna ek olarak kişisel büyüme ve dönüşüme yol açan taktikler bütünü olarak kişisel gelişim yönelimi; depresyon, sürekli kaygı, endişe, takıntı ve kompulsif davranışlarla temsil edilen bir grup psikopatoloji değişkeni ototelik kişilikle olan ilişkileri bağlamında çalışılmıştır. Birbirini takip eden üç çalışma gerçekleştirilmiştir: (1) İsveç Akış Eğilim Ölçeği, Öznel Mutluluk Ölçeği, Hayatın Anlamı Ölçeği, Merak ve Keşif Envanteri-II Türk kültürüne uyarlanmıştır; (2) Akışı ve hayatla olan bağı yordayan ve güçlü kişisel özellikler üzerine temellenmiş bir kişilik envanteri olarak Ototelik Kişilik Envanteri geliştirilmiştir ve (3) kişisel güçlü yönler, ototelik kişilik, psikopatoloji, ve kişisel gelişim yönelimi arasındaki ilişkiler ve kavramsal modeller test edilmiştir. Doktora çalışması kapsamında 652, 222, ve 379 katılımcıdan oluşan 3 örneklem kullanılmıştır. Çalışma bulguları, Türk kültürüne uyarlanan 4 ölçeğin güvenilirlik ve geçerliliğini kanıtlamıştır. Buna ek olarak, çalışma dâhilinde geliştirilen ototelik kişilik envanterinin psikometrik özelliklerinin yeterliliği kanıtlanmıştır. Çalışmadaki temel değişkenler arasındaki ilişkilere bakıldığında, ototelik kişiliğin hayattaki anlam varlığı, merak, akış eğilimi, ve öznel mutlulukla pozitif ilişkili olduğu bulunmuştur.

Bunun ötesinde, ototelik olmayan kişilik yapısının yüksek seviyelerdeki depresyon, endişe, sürekli kaygı, ve obsesif kompulsif belirtilerle pozitif ilişkili olduğu gösterilmiştir. Araştırma bulguları, önceki çalışmaların bulguları ile birlikte tartışılmıştır ve bulguların klinik araştırmalar ve uygulamalar için doğurduğu sonuçlar belirtilmiştir.

**Anahtar kelimeler:** ototelik kişilik, pozitif klinik psikoloji, hayatın anlamı, merak, akış eğilimi, psikopatoloji, kişisel gelişim yönelimi

Dedicated to those who dare to work and explore to pay their rent in the tower of  
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## **CHAPTER 1.**

### **GENERAL INTRODUCTION**

As a part of my doctoral training in the clinical psychology graduate program at Middle East Technical University (METU), I was required to see clients under clinical supervision. The clinical application under supervision is a fundamental aspect of doctoral training in clinical psychology (Boulder Scientist & Practitioner Model, APA, 2000). It aims to assist and enhance several skills of trainee therapists for building rapport, understanding and conceptualizing problems of clients, and working on the roots of the problem. In addition to its core functions, supervised clinical practice complementarily aims to assist trainee therapists to discover features of their personality and foster their psychological maturation. At the end of every working semester in our clinic, trainee therapists are required to make a presentation to the department tenure members and fellow trainees that provides a systematic and brief summary of their professional experience including a description of clients' background history, a conceptualization of the problem and a proper treatment plan, identification of personal strengths and improvable characteristics of clients. During my preparations for the presentation, I recognized that the toughest part of the task was to identify personal strengths and improvable characteristics of my clients. Being specifically struggled by the difficulty to identify positive characteristics of the clients, I realized that I did not pay any particular attention to positive characteristics during the process of therapy; my mind was overly involved with the conceptualization of psychopathology and an appropriate treatment plan. Soon after, it became obvious that my fellow trainee therapists were also struggling on the same issue in varying degrees. During the course of clinical supervision process, I realized that I professionally, and personally benefited from the inclusion of humanistic features both in the supervisor –supervisee relationship and therapist–client relationship. My experience as a trainee clinical psychologist motivated me to study human strengths in my doctoral dissertation.

## **1.1. Background**

The way contemporary clinical psychologists think about their clients shape the conceptualizations of psychological illness or psychological wellness, and their responsibilities is shaped by several early theories, economic, societal, and political circumstances of the last century. The first psychology clinic was found by Lightner Witmer in the University of Pennsylvania in 1886, where he was mostly occupied with children experiencing learning and school problems (Reisman, 1991; as cited in Maddux, Snyder & Lopez, 2008, p. 332). In this early era of clinical psychology, there were no concepts of mental disorders or abnormal behaviors, but rather precise measurement and understanding of human psychological processes were prioritized. The introduction of psychoanalysis to the field of clinical psychology was initiated by Dr. Sigmund Freud's visit to Clark University in 1909; and an emphasis on psychopathology and mental illness gradually dominated the field of clinical psychology in the following years.

In a letter written to Oskar Pfister, Dr. Sigmund Freud expressed his attitude on human nature by simply saying "I have found little that is 'good' about human beings on the whole. In my experience most of them are trash, no matter whether they publicly subscribe to this or that ethical doctrine or to none at all. That is something you cannot say aloud, or perhaps even think, though your experience of life can hardly have been different than mine." (Mosbacher, 1963). Being one of the earliest schools of psychotherapy, psychodynamic therapies are mostly build on ideas and perspective of Sigmund Freud. Fundamentally, psychodynamic psychology postulates the significance of early developmental processes (i.e., psychosexual stages) on individuals' current psychological states, and the role of unconscious processes for explaining the current behavior that cannot be explained with relevant and apparent mental processes. Psychodynamic psychology involves the use of particular techniques to reach the unconscious, such as free association, dream interpretation, transference analysis, and investigation of defense mechanisms; and it eventually aims to resolve the internal conflicts that results in the presence of current psychological distress and psychic abnormalities (Magnavita, 2002). Psychodynamic theory offered much for the understanding of human psychic processes, but it has been criticized to a great extend too. Criticisms regarding to three central assumptions of psychodynamic theory is particularly relevant to the context of the



present dissertation: (1) Psychodynamic perspective considers human behavior and mental processes as end products of unconscious conflicts, (2) there is no emphasis on the significance of volitional processes, and (3) there is no emphasis regarding to the good in humans (Hubble & Miller, 2014).

Unlike the psychoanalytical school of therapy, behaviorist and cognitivist schools of psychology became the main sources of knowledge for building evidence based therapy. To sum up, the interaction between cognitive, affective, and behavioral domains results in the complex human experience: dysfunctional interpretations (i.e., schemas; Young & Klosko, 1993; dysfunctional core beliefs; Beck, 1979) and appraisals (i.e., dysfunctional appraisals; Salkovskis, 1996) contribute to the presence and maintenance of psychological problems. Cognitive behavioral therapies fundamentally aim to identify dysfunctional interpretations, and use a number of techniques, such as systematic desensitization (Wolpe, 1958), Socratic questioning (Beck, 1995), limited re-parenting (Young, Klosko, & Weishaar, 2003), guided imagery (Young et al., 2003), and stress inoculation training (Meichenbaum, 1996) to alleviate psychological distress. Evidence based therapies originating from the teachings of cognitivist and behaviorist schools of psychology became efficient tools for clinical psychologists in the last decades. In contrast with psychodynamic theory, cognitive behavioral perspective's main emphasis was placed on the conscious processes. However, the contextual background of the present doctoral dissertation requires to remark two essential criticisms targeting cognitive behavioral therapies in general. First, similar to the psychodynamic theory, cognitive behavioral therapies are criticized for their deterministic nature by greatly leaning on the cause-effect relations between cognitive, affective, and behavioral processes; emphasis on volitional processes is lacking (Slife & Williams, 1995). Second, cognitive behavioral therapies' major goal is to alleviate psychological distress efficiently, and as quick as possible; without any promises for the identification and improvement of human strengths (Hamilton, Kitzman, & Guyotte, 2006).

Among early therapy schools, humanistic approach holds a distinctive feature for the conceptualization of human psyche due to its central assumption that all people are inherently good; they have freedom and willpower to strive for survival, fulfillment, and self-actualization in the face of vulnerabilities and life adversities (Wong, 2006). Logotherapy (Frankl, 1988) and client-centered therapy (Rogers,

1957) are two major approaches that prioritized the volitional processes for change, and growth. Logotherapy (Marshall, 2012) centralized the importance of life meaning and it was based on the assumptions that “life has meaning under all circumstances, even the most miserable ones; our main motivation for living is our will to find meaning in life; we have freedom to find meaning in what we do and what we experience, or at least in the stand we take when faced with a situation of unchangeable suffering”. Similarly, client-centered therapy (Rogers, 1957) emphasized volitional processes and it aimed to assist clients for developing a sense of self that is organized and consistent. Psychopathology occurs when people are unaware of their rationality and inner voices due to distorted self-concept (Rogers, 1961, as cited in Wong, 2006, p. 200); and people are rational and responsible in nature, they are capable for making constructive choices and personal growth (Rogers, 1977, as cited in Wong, 2006, p. 200).

Despite the brief presence of the humanistic approaches in psychology, 20<sup>th</sup> century clinical psychology was dominated by the extensive studies that depict abnormal behavior and human misery in every possible aspect. Since its publication for the first time by the American Psychiatric Association in 1952, Diagnostic and Statistical Manual of Mental Disorders (DSM) has had a huge increase in the number of psychological conditions defined as disorders. While the first edition of DSM (APA, 1952) was 130 pages long and listed 106 mental disorders, the latest edition of the manual published in 2013 –DSM V (APA, 2013)– is 947 pages long and lists 312 mental disorders. The accumulation of knowledge provided great advantages for mental health professionals to understand psychopathology, and to build and develop clinical interventions to a great degree (Seligman, 2000). However, the understanding about human strengths, virtues, and positive traits has not equally developed. Seligman (2000), highlighted the necessity of massive research for developing a nosology of human strengths.

## **1.2. Clinical Psychology Profession**

Just as adverse life events play a significant role of transformative nature in the course of human life, psychology as a science had also experienced a significant transformation after World War II. An academic discipline involved with experimentation and investigation of behaviors and psychic processes before the World War II, psychology had become increasingly more involved with the use of

psychological knowledge in practical settings to offer consultation, treatment, and healing (Capshew, 1986). Initiated by the adversities of war, the foundation of the United States Veterans Administration (VA) in 1946, and United States National Institute of Mental Health (NIMH) in 1947 anticipated the work of clinical psychologists mostly as psycho-diagnosticians under the direction of psychiatrists (Maddux, Snyder & Lopez, 2008). Seligman and Csikszentmihalyi (2000) highlighted the significance of financial opportunities for psychologists to make a living, generated by the increased need for mental health services during and aftermath of World War II. Following the foundation of VA and NIMH, 12<sup>th</sup> division of American Psychological Association, Society for Clinical Psychology was established in 1948. Society for Clinical Psychology (APA, 2015) defines clinical psychology as the interconnectedness of theory and clinical knowledge for primarily understanding, preventing, and relieving psychological distress or dysfunction to promote subjective and behavioral well-being and personal development. Despite this ideal definition provided by APA (2015), clinical psychology is still lacking theoretical and clinical knowledge to promote well-being (Wood & Tarrier, 2010).

Similar to the development of clinical psychology in the USA, clinical psychology in Turkey had also experienced a transformation as a result of a catastrophe, 1999 Gölcük Earthquake (Karancı, 2005). Despite the availability of graduate programs in clinical psychology and the relatively established role of clinical psychologists' in mental health settings prior to the earthquake, wide public acknowledgement of clinical psychology as a profession was realized after the 1999 Gölcük Earthquake. That was mostly due to active voluntary service of psychologists to provide mental health care in the aftermath of the earthquake. Interestingly, it was not only the public to become aware of clinical psychology profession; clinical psychologists had taken significant steps towards institutionalization after 2000. One of the most imperative steps for the institutionalization of clinical psychology in Turkey was the 1<sup>st</sup> Annual Işık Savaşır Clinical Psychology symposium in early 2000s that coincides with the aftermath of the earthquake (Gençöz, 2005).

The perception of clinical psychologists in Turkey by the public, by psychiatrists and by themselves was studied by Çenesiz in 2007. It was revealed that psychiatrists perceived clinical psychologists as psycho-diagnosticians; they did not estimate an active role for clinical psychologists for delivering treatment in the forms

of psychotherapy. Not very different from the views of psychiatrists, clinical psychologists assumed their primary function as assisting diagnosis and treatment in mental health institutions. Interestingly, public opinion about the role and duties of clinical psychologists seemed to be more favorable than psychiatrists' opinions or clinical psychologists' opinions on the profession. The main role of clinical psychologists was attributed by the public as being "help-providers", who are "more humanistic and friendly" than psychiatrists. The findings of Çenesiz's study (2007) revealed that clinical psychologists' are perceived as mental health professionals, who are involved in assessment, diagnosis, and treatment of mental disorders by themselves and psychiatrists; whereas public's view about clinical psychology resembled a humanistic help providing institution rather than an authoritative correction institution.

As clinical psychology become more visible in professional grounds in Turkey, a legislation regarding to the definition of clinical psychology as an auxiliary health profession was put in action by Turkish Ministry of Health in 2014. The definition of clinical psychology profession entailed the application and interpretation of observational and interview techniques for assessing personality, intelligence, development, attitude, and adjustment; delivery of training about human behavior; participating and contributing in preventive activities for community mental health; delivery of psychotherapy for conditions that are not diagnosed as psychological disorders (Resmi Gazete, 2014). According to this legislation, clinical psychologist can only perform these tasks and duties under the surveillance of a psychiatrist. Likewise, İşkur (2014), the official recruitment agency of Turkey, defined clinical psychology as a profession that is involved with the activities of assessment, diagnosis, and treatment of mental health problems.

The developmental history of clinical psychology as an independent professional practice in the USA and in Turkey provides an evidence for why clinical psychologists were mainly involved in the study of mental disorders, impairments, and distress. Recently, clinical psychologists have been mostly involved in the alleviation of psychological distress; yet, a systematic research effort for understanding about human strengths and developing interventions to amplify strengths is missing in the field of clinical psychology. Clinical psychology can make great use of the comparatively new branch of positive psychology to reach a more

balanced theory of psychological illness and well-being and to add new components to therapy that aim to amplify strengths and virtues.

### **1.3. Positive Psychology**

Positive psychology is a field of scientific study concerned with positive experiences, positive traits, optimal functioning, psychological well-being, and institutions that enhance positivity (Duckworth, Steen, & Seligman, 2005). The central underlying assumption of positive psychology is that positive experiences, and traits are not enslaved by negative states or traits. In other words, positive is not necessarily the absence of negative; relieving negative states does not necessarily lead to positive states (Duckworth et al., 2005). A general evaluation of positive psychology research yields three central themes, namely studies on pleasant life, good life, and life meaning. Pleasant life is indicated by happiness, subjective well-being, and life satisfaction; whereas good life is characterized by high engagement and flow that are facilitated by character strengths; and lastly meaningful life is characterized by being connected to something larger than oneself (Duckworth, 2005). The ultimate focus of the positive psychology research is to understand human striving that make life more fulfilling and enjoyable.

From positive psychology point of view, decent psychological health is not only characterized by the absence of psychopathology but also by the presence of a richer, more fulfilling and satisfying existence. Psychological assets, such as perseverance, optimistic thinking about the future, high levels of engagement and seeking new challenges, satisfaction with the past were exemplified as strengths that lead to personal growth and achievements in life according to Seligman and Csikszentmihalyi (2000).

### **1.4. Aims and Organization of the Present Doctoral Dissertation**

The need for developing a better and advanced understanding of human strengths within clinical psychology theory and practice might be fulfilled by a paradigm shift in clinical research from disease models to a strength based one (Seligman & Csikszentmihalyi 2000). Infusing the concepts and priorities of positive psychology research to mental health studies might enable the transformation of current disease models. The present doctoral dissertation incorporates life meaning, subjective happiness, curiosity, and flow propensity as personal strengths; autotelic personality as a stable and enduring set of personality traits that predicts higher

engagement with life; personal growth initiative as a set of strategies that lead to growth and transformation; and lastly, psychopathology indicated by depression, trait anxiety, worry, and obsessions and compulsions. The ultimate aim of the current dissertation was to contribute the integration of psychopathology and psychotherapy research with positive psychology. For this purpose, three sequential studies were carried out: (1) Four previously developed psychometric instruments of positive psychology (i.e., Swedish Flow Proneness Questionnaire (SFPQ), Curiosity and Exploration Questionnaire – II (CEI-II), Meaning in Life Questionnaire (MLQ), and Subjective Happiness Questionnaire (SHS)) were adapted to Turkish culture; (2) Autotelic Personality Inventory (API) as a strength based personality inventory predicting flow and life engagement was developed; and (3) general associations and conceptual models of personal strengths, autotelic personality, and psychopathology were tested. The adaptation of SFPQ, CEI-II, MLQ, and SHS to Turkish culture aimed to facilitate the study of positive psychology in Turkey, and they are utilized for testing the validity of the newly developed Autotelic Personality Inventory and also for testing the assumptions of the main study. Extensive literature review regarding to the study variables was provided in the corresponding chapters.

This doctoral dissertation is consisting of five chapters. The first chapter provides a general introduction overviewing the essence and significance of the present doctoral dissertation. The second chapter is devoted to the adaptation of Swedish Flow Proneness Questionnaire, Curiosity and Exploration Inventory II, Meaning in Life Questionnaire, and Subjective Happiness Scale. The third chapter is devoted to the psychometric study of the newly developed Autotelic Personality Inventory. After being equipped with all the necessary assessment tools, the fourth chapter comprised the main study examining the expected associations among the variables and testing the conceptual models. The last chapter was designated as a general conclusion chapter.

## CHAPTER II

### SCALE ADAPTATIONS

Within this chapter of the doctoral dissertation, 4 positive psychology instruments will be adapted to Turkish culture. Swedish Flow Proneness Questionnaire (Ullen et al., 2002) as an instrument that captures flow proneness in three contexts; Curiosity and Exploration Inventory - II (Kashdan et al., 2009) as a measure of trait curiosity; Meaning in Life Questionnaire (Steger, Frazier, Oishi & Kaler, 2006) as an indicator of presence of meaning, and search for meaning; and lastly Subjective Happiness Questionnaire (Lyubomirsky & Lepper, 1999) as a measure of subjective happiness. For each of the scales, exploratory and confirmatory factor analyses were carried out in separate samples as suggested by Van Prooijen and Van Der Kloot (2001), and psychometric properties were investigated in terms of reliability and validity.

#### **2.1. Swedish Flow Proneness Questionnaire (SFPQ)**

Extensive research has shown that being engaged in challenging but controllable tasks lead to a unique psychological state called flow (Csikszentmihalyi, 1988). Flow state is characterized by being greatly absorbed by the task at hand, decreased self-awareness, distortion in time perception, intensive joy, and a sense of fulfillment (Csikszentmihalyi, 1975). Csikszentmihalyi's early observations of painters and chess players during his Ph.D. research has pioneered flow research. He observed that, artists and experts frequently report experiences of intense involvement and enjoyment of their chosen activity. His research implied that a good life can be achieved through means of flow experience (Csikszentmihalyi, 1975), which is associated with high levels of performance and satisfaction (Csikszentmihalyi, 1975).

Everyone experiences flow. However, there is variability in the intensity and frequency of such transcendental experience among individuals. Research indicated that such variability is due several personality and cognitive factors. An active

ability to find challenging tasks that is doable and controllable with the current skill level of the individual is one of these factors. Both very easy and extremely challenging tasks would lead to non-flow states due to states of boredom, anxiety, worry, and apathy. Achieving such balance between challenge and skill also facilitates improvement of skills. In addition to challenge-skill balance, setting goals, unambiguous feedback regarding the progress, an ability to focus attention, and a sense of control are required to achieve flow state (Csikszentmihalyi, 1975; Csikszentmihalyi, 1990)

Early flow research captured flow experience by experience sampling method, in which participants were asked to report their momentary experiences immediately by using diaries or palm computers that provide push notifications to report the real time experience (Csikszentmihalyi, 1988). Such research provided extensive information on the nature of flow and non-flow states. Relatively recently, survey fashioned self-report instruments have also been used to measure major dimensions of flow experience and dispositional tendencies to have flow experience (Jackson & Csikszentmihalyi, 1999). Measuring flow proneness with self-report instruments have become increasingly more used recently.

Flow proneness was described as the tendency to experience and maintain flow state and actively seeking situations where flow state can be achieved (Ullen et al., 2012). Recently, Ullen et al. (2012) has developed a new measure of flow proneness called Swedish Flow Proneness Inventory (SFPQ). It aims to measure how frequently flow is experienced in three different contexts; work, household, and leisure. SFPQ has 22 items, for each of the three situations 7 items explore flow frequency. Remaining one item asks whether the participant is actively working, since work domain of flow is only responded by individuals, who are currently working. Seven items aim to capture the main dimensions of flow experience described by Csikszentmihalyi (1990): Sense of concentration, skill-challenge balance, explicit goals, clear feedback, sense of control, lack of a sense of boredom, and enjoyment. These flow dimensions were shown to have the highest factor loadings on a global flow factor. Twenty-one items measuring the flow frequency in three different settings are measured on a 5-point Likert-type scale ranging from never (1) to everyday or almost everyday (5). The aim of the present study was to study the psychometric properties of SFPQ in Turkey.



### **2.1.1. Method**

#### **2.1.1.1. Participants**

**Sample 1.** The data were collected online via Surveyey.com between 11th and 31th of May, 2014. Surveyey.com is a website that enables users to collect data online. After the questionnaire set was created in the web interface, a www link referring to questionnaire set was created. This link was shared with the general psychology class rosters via METU Online Course Management System. Participants of this study were given 1 bonus point for participation. Along with collecting data from general psychology students, a Facebook group was created and participants were invited via snowball sampling method. Participants were announced that tablet PC's would be given to two participants determined with a lottery.

Eight hundred and three participants were reached between 11<sup>th</sup> and 31<sup>st</sup> of May 2014. Data screening was made, prior to analysis. Participants who completed the questionnaire in less than 20 minutes were excluded from the sample. As a result of several data screening criteria, further statistical analysis was conducted with 651 participants. Statistical analyses were conducted using SPSS 20 statistical package program.

The mean age of the participants were 23.47 ( $SD = 4.04$ ). The sample was consisting of 161 males (24.8 %) and 489 females 75.2 %). Four-hundred and ten participants were single, 46 were married, and 194 were committed in a relationship. The majority of the participants (66.3 %) were undergraduate students, whereas 20 % and 13.7 % were affiliated with masters and Ph.D. degrees, respectively. All of the participants were enrolled in an undergraduate or graduate program at the time of data collection. Two-hundred and one participants reported history of psychiatric help, whereas 450 participants had never sought help from a mental health professional. The first sample is utilized for the exploration of factor analytic structure, reliability and, validity investigations of SFPQ.

**Sample 2.** The data were collected online via Survey.com between 9<sup>th</sup> and 15<sup>th</sup> of June, 2014. Participants were contacted via e-mails they provided during the first study. After data screening, 222 participants were left for further analyses. Mean age of the participants was 23.64 ( $SD = 4.03$ ). The sample was consisting of 46 males (20.3 %) and 176 females (79.7 %). Sample 2 was recruited for test-retest reliability.

**Sample 3.** The data were collected online via Qualtrics.com between 26<sup>th</sup> September and 22<sup>th</sup> of November, 2014. After data screening, 379 participants remained for further analyses. Mean age of the participants was 24.90 ( $SD = 7.5$ ). The sample consisted of 80 (21.1 %) males and 299 (78.9 %) females. One (.3 %) participant had completed primary school, 195 (51.5 %) participants had achieved a high school diploma, and 98 (25.9 %) participants had an undergraduate degree, 55 (14.5 %) had a master's degree, and 30 (7.9 %) participants were currently enrolled in or graduated from a Ph.D. program. One-hundred and twenty two participants (32.19 %) were employed and 257 participants (67.81 %) were unemployed. One-hundred and sixty seven (44.1 %) participants reported history of psychiatric help, whereas 212 (55.9 %) participants had never sought help from a mental health professional. Sample 3 is recruited for confirmatory factor analysis.

Table 2.1 provides descriptive properties of three samples recruited in the present research.

Table 2.1.1

*Descriptive Properties of the Study Samples*

	<i>M</i>	<i>SD</i>	<i>N</i>	%	Min-Max
<b>Sample 1</b>					
Age	23.47	4.04	652		17-58
Gender					
Male			162	24.8	
Female			490	75.2	
Education					
Undergraduate			438	67.2	
M.S.			124	19.0	
Ph.D.			90	13.8	
Employment status					
Unemployed			453	69.5	
Employed			194	29.8	
Ever consulted mental health professional					
Yes			201	30.8	
No			450	69.1	
<b>Sample 2</b>					
Age	23.63	4.00	222		18-39
Gender					
Male			45	20.3	
Female			177	79.7	
Education					
Undergraduate			141	63.5	
M.S.			50	22.5	
Ph.D.			31	14	
Employment status					
Unemployed			156	70.3	
Employed			66	29.7	
Ever consulted mental health professional					
Yes			78	35.1	
No			144	64.9	
<b>Sample 3</b>					
Age	24.90	7.50	379		17-63
Gender					
Male			80	21.1	
Female			299	78.9	
Education					
Primary School			1	.3	
High School			195	51.5	
Undergraduate			98	25.9	
M.S.			55	14.5	
Ph.D.			30	7.9	
Employment status					
Unemployed			122	32.2	
Employed			257	67.8	
Ever consulted mental health professional					
Yes			167	44.1	
No			212	55.9	

### 2.1.1.2. Instruments

**Curiosity and Exploration Inventory- II.** CEI-II is a valid and reliable instrument that aims to measure trait-like curiosity. It was developed by Kashdan & Silvia (2009). It is a 7-item, 2-factor scale. The 4-item stretching subscale assesses the orientation for seeking novel and challenging objects, events, and ideas with the aim of integrating these experiences and information. Stretching was assumed to lead personal growth. The 3-item embracing subscale reflects the ability to self-regulate attention to let immersion in these novel and challenging activities. The internal consistency reliability of the global CEI-II ( $\alpha = .86$ ), stretching subscale ( $\alpha = .79$ ) and embracing subscale ( $\alpha = .76$ ) were acceptable. This scale was adapted to Turkish culture by the present researcher, and detailed psychometric properties of Turkish CEI-II were presented in the next chapter of the dissertation.

**Meaning in Life Questionnaire (MLQ).** MLQ (Steger et al., 2006) is an instrument capturing meaning in life with two components, namely search for meaning and the presence of meaning. Meaning in life was defined as the sense and significance experienced with regard to one's being and existence (Steger et al. 2006). Each of the components (subscales) are measured by 5 items adding up to 10 items in total. Presence of meaning subscale measures the extent to which respondents feel their lives have meaning, whereas the search for meaning subscale measures the extent to which respondents strive to find meaning and understanding in their lives. The scale was designed in a 7-point Likert-type fashion ranging from 1 (*absolutely true*) to 7 (*absolutely untrue*). The scale had proved satisfactory validity and reliability in a series of studies conducted with college freshmen (referans). Adaptation of MLQ to Turkish culture was made by the present researcher; and detailed psychometric properties were presented in the next chapter of the dissertation.

**Subjective Happiness Scale (SHS).** SHS (Lyubomirsky & Lepper, 1999) is a 4-item, 7-point Likert type scale that aims to quantize "subjective happiness" in a global and inclusive manner. Psychometric characteristics of the SHS indicated that, despite it is a short questionnaire with a single factor, it effectively measures happiness. The internal consistency reliability of the scale was found .93. Besides, a 3-week test-retest reliability coefficient was found .61. Convergent validity of the

scale was studied with relevant constructs, such as optimism, positive and negative affect, neuroticism and satisfying correlations were revealed.

Two items of SHS asks respondents to compare themselves to others and the other two items request a self-rating. Adaptation of SHS to Turkish culture was made by the present researcher. Detailed psychometric properties were presented in the next chapter of the dissertation.

**Basic Personality Traits Inventory (BPTI).** BPTI is 45-item personality inventory assessing the personality traits from a 5-factor model perspective. It is developed by Gençöz and Öncül (2008). The adjectives in the scale are measured on a scale ranging between 1 (*does not apply to me*) and 5 (*definitely applies to me*). BPTI derives 6 personality traits (extraversion, conscientiousness, agreeableness, neuroticism, openness to experience, and negative valence). The internal consistency coefficients found in the original study are as follows: Extraversion(.89), conscientiousness (.85), agreeableness (.85), neuroticism (.83), openness to experience (.80), negative valence (.71). The present study yielded .88 for extraversion, .84 for conscientiousness, .84 for agreeableness, .81 for neuroticism, .75 for openness to experience, and .67 for negative valence.

**Positive and Negative Affect Schedule (PANAS).** It is a 20-item self-report measure of positive and negative affect developed by Watson, Clark, and Tellegen (1988). It provides independent measures of positive affect and negative affect with positive and negative affect subscales each consisting of 10 items. Positive affect represents the extent to which an individual experiences enthusiasm and alertness, whereas negative affect represents lethargy and sadness. The Cronbach's alpha was .88 for the positive affect subscale and .85 for the negative affect subscale (Watson et al., 1988). The test-retest reliability of the scale was .47 (Watson et al., 1988). The Turkish adaptation study of PANAS was conducted by Gençöz (2000), who found similar internal consistency coefficients with Watson et al. (1988): .83 for the positive affect subscale and .86 for the negative affect subscale. The test-retest reliability of the Turkish version was .40 for the positive affect subscale, and .54 for the negative affect subscale (Gençöz, 2000). In the present study, the internal consistency reliability of PANAS was examined in Sample 1. The coefficients were .86 for both positive affect and negative affect dimensions of PANAS.

**The Satisfaction with Life Scale.** The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) is a self-report measure on which respondents indicate their degree of agreement with five statements about the satisfaction with life, such as “In most ways my life is close to my ideal”. Items are rated to on a 7-point Likert scale that ranges from strongly disagree to strongly agree. Higher scores on the SWLS indicate greater satisfaction with life. It is an internally consistent scale in which Cronbach’s alpha coefficient tends to be in the upper .80 and test-retest reliability in the .64 to .84 range (Pavot & Diener, 1993). This inventory was adapted into Turkish by Gençöz, Durak, and Şenol-Durak (2007), and they obtained satisfactory psychometric properties for the scale. In their study with correctional officers, they found Cronbach’s alpha coefficient as .83 and sufficient criterion related validity. In the present study, in sample 1, the internal consistency reliability coefficient of SWLS was .89.

**Life Orientation Test (LOT).** Life Orientation Test (LOT) was developed by Scheier and Carver (1985). It is used to determine the level of optimism and individuals’ orientation towards life. It has 12 items, 4 of which measure the positive orientation towards life, 4 items measure the negative orientation, whereas 4 items do not intend to measure any construct. Each of the items are designed in a 5-point Likert fashion ranging from 0 (*strongly disagree*) to 5 (*strongly agree*). LOT was adapted to Turkish culture by Aydın and Tezer (1991). The Turkish version yielded .72 internal consistency coefficient (Cronbach alpha). Besides, a 4-week interval test-retest reliability coefficient was .77. Üstündağ and Budak (1999) found that Turkish version of the scale has a 2-factor structure that confirms the original scale. In the present study, LOT yielded .85 internal consistency coefficient.

**Beck Depression Inventory (BDI).** BDI is a 21 item self-report inventory that aims to measure cognitive, emotional and motivational symptoms of depression (Öner, 1997). It is developed by Beck, Rush, Shaw, and Emery (1978). Respondents are asked to report how they felt over the last week by choosing the most suitable statement among 4 statements in each item. Each item is scored from 0 to 3. It is adapted to Turkish culture by Hisli (1988) with an internal consistency coefficient of .74. In the present study, the internal consistency coefficient for BDI was .89.

**State - Trait Anxiety Inventory (STAI).** STAI is a 40-item, 4-point Likert type scale ranging from 1 (*not at all*) to 4 (*very much so*). It aims to measure how anxious a person generally feels, and how anxious a person feels in a specific moment in time. It was developed by Spielberger, Gorsuch, and Lushene (1970). STAI has two subscales namely, state and trait anxiety subscales. Each of these subscales consists of 20 items. The test-retest reliability of the scale ranged from .16 to .54 for state anxiety subscale and from .73 to .86 for trait anxiety subscale (Spielberger et al., 1970). The internal consistency for the state anxiety subscale varied between .83 and .92; and for the trait anxiety subscale it varied between .86 and .92 (Spielberger et al., 1970). The Turkish adaptation of STAI was done by Öner and LeCompte (1985) with clinical and nonclinical samples. In Turkish adaptation study (Öner et al., 1985), test-retest reliability was between .71 and .86 for trait anxiety inventory; test-retest reliability was between .26 and .68 for state anxiety inventory. The internal consistency was between .83 and .87 for trait anxiety subscale, and the internal consistency of state anxiety subscale ranged from .94 to .96 (Öner et al., 1985). In the present study, only the trait subscale of the inventory was used ( $\alpha = .88$ ).

### **2.1.1.3. Procedure**

Psychometric properties of Swedish Flow Proneness Questionnaire (SFPQ) and hypothesis testing were studied in three different samples. The research project was approved by the Review Board of Middle East Technical University. The original SFPQ was translated into Turkish by three PhD candidates in Psychology. After the initial translation, three separate Turkish versions were examined by the researchers. After careful consideration, a single Turkish scale was submitted to another bilingual PhD Candidate in Psychology for back translation. Following the back translation, the original items of the scale were compared with the back translated items and the final version of the SFPQ was agreed upon by the researchers.

## **2.1.2. Results**

### **2.1.2.1. Exploratory Factor Analysis**

The items of Swedish Flow Proneness Questionnaire (SFPQ) are measuring 7 domains of flow in three contexts. Therefore, the responses to each item vary due to the contexts and domains of flow. In other words, SFPQ measures flow proneness by seven domains at work, household, and leisure contexts. Researchers preferred a confirmatory factor analysis to examine construct validity rather than doing exploratory factor analysis. The present research also includes an exploratory factor analysis to examine factor structure of SFPQ. However, the number of factors was forced to 3, rather than considering factors with Eigenvalues exceeding 1. The Kaiser-Meyer-Olkin Sampling adequacy test yielded .83,  $p < .001$ , which indicates perfect sample size for PCA. The three factor solution explained 50 % of the variance with 22 items of SFPQ with lowest Eigen value of 2.52. After investigating the factor loadings of each item, factors differentiated as flow at work, flow at household, and flow during leisure time as expected. Table 2.2 shows the factor analytic structure of SFPQ.

### **2.1.2.2. Differences between Flow Dimensions**

In order to see if there are significant differences among three flow dimensions, repeated measures ANOVAs were carried out with SFPQ general score as the dependent variable and flow domain as the within-subject factor with three levels (FP-Work, FP-Household, and FP-Leisure) in Sample 1. The analysis revealed a significant effect of flow dimension,  $F(2,1301) = 96.95$ ,  $p < .001$ . Post hoc tests indicated no significant difference between FP-Work ( $m = 23.71$ ) and FP-Household ( $m = 24.05$ ). However, the difference between FP-Work ( $m = 23.71$ ) and FP-Leisure ( $m = 26.26$ ); and the difference between FP-Household ( $m = 24.05$ ) and FP-Leisure ( $m = 26.26$ ) were significant.



Table 2.1.2

*Factor Structure of SFPQ*

	Factor		
	Leisure	Work	Household
Leisure			
SFPQ 22	<b>.80</b>	.03	.04
SFPQ 18	<b>.79</b>	.12	.07
SFPQ 20	<b>.79</b>	.12	.09
SFPQ 21	<b>.78</b>	.14	.12
SFPQ 19	<b>.74</b>	.03	.15
SFPQ 16	<b>.58</b>	.15	.07
SFPQ 17	<b>.58</b>	.07	.08
Work			
SFPQ 7	.06	<b>.80</b>	.15
SFPQ 6	.09	<b>.80</b>	.16
SFPQ 4	.16	<b>.77</b>	.12
SFPQ 8	.04	<b>.74</b>	.03
SFPQ 5	.17	<b>.63</b>	-.03
SFPQ 3	.08	<b>.62</b>	-.06
SFPQ 2	.03	<b>.36</b>	.13
Maintenance			
SFPQ 13	.07	.17	<b>.78</b>
SFPQ 14	.18	.15	<b>.76</b>
SFPQ 15	.06	-.02	<b>.71</b>
SFPQ 11	.19	.18	<b>.66</b>
SFPQ 9	-.01	.00	<b>.65</b>
SFPQ 10	.01	.00	<b>.59</b>
SFPQ 12	.27	.13	<b>.46</b>

### **2.1.2.2. Confirmatory Factor Analysis**

Confirmatory factor analysis was carried out with sample 3. A model with 22 items of SFPQ, where 7 dimensions and 3 settings were taken into account as latent variables indicated by the SFPQ items, was tested. Figure 1 shows the nature of relations among the indicators and latent variables in the confirmatory factor analysis. The analysis indicated a non-normality (*Mardia's Z* = 123.53), hence robust statistics were taken into consideration instead of the maximum likelihood model. The percentage of residuals between the *z* scores of -0.1 and +0.1 was 98.26. Robust statistics revealed that the suggested model of SFPQ fit the data very well, *Satorra-Bentler*  $\chi^2(144) = 258.46, p = 0.00, CFI = 0.94, RMSEA = 0.05$ . Each of the regression coefficients between indicators and latent variables was significant. The CFA showed a good model fit to the data. LM test did not suggest any significant and/or noteworthy increment in  $\chi^2$ . Thus, no modifications were necessary. Figure 1 depicts the confirmed factor structure of SFPQ.

### **2.1.2.3. Internal Consistency Reliability**

Internal consistency among items of SFPQ was estimated using Cronbach's alpha coefficient and found .85 for the whole scale. Besides, .82, .80, and .86 were yielded for work, household, and leisure subscales, respectively. The original version of SFPQ yielded .85 internal consistency coefficient for the whole scale. Table 2.3 shows reliability coefficients for SFPQ.

### **2.1.2.5. Test-Retest Reliability**

Sample 1 and sample 2 were taken into consideration together to examine SFPQ's stability over time. Time lag between Time 1 and Time 2 was 3 weeks. Test-retest reliability for SFPQ was found .75,  $p < .001$ . FP-Work, FP-Household, and FP-Leisure dimensions yielded .78, .70 and .59 test retest reliability coefficients, respectively.

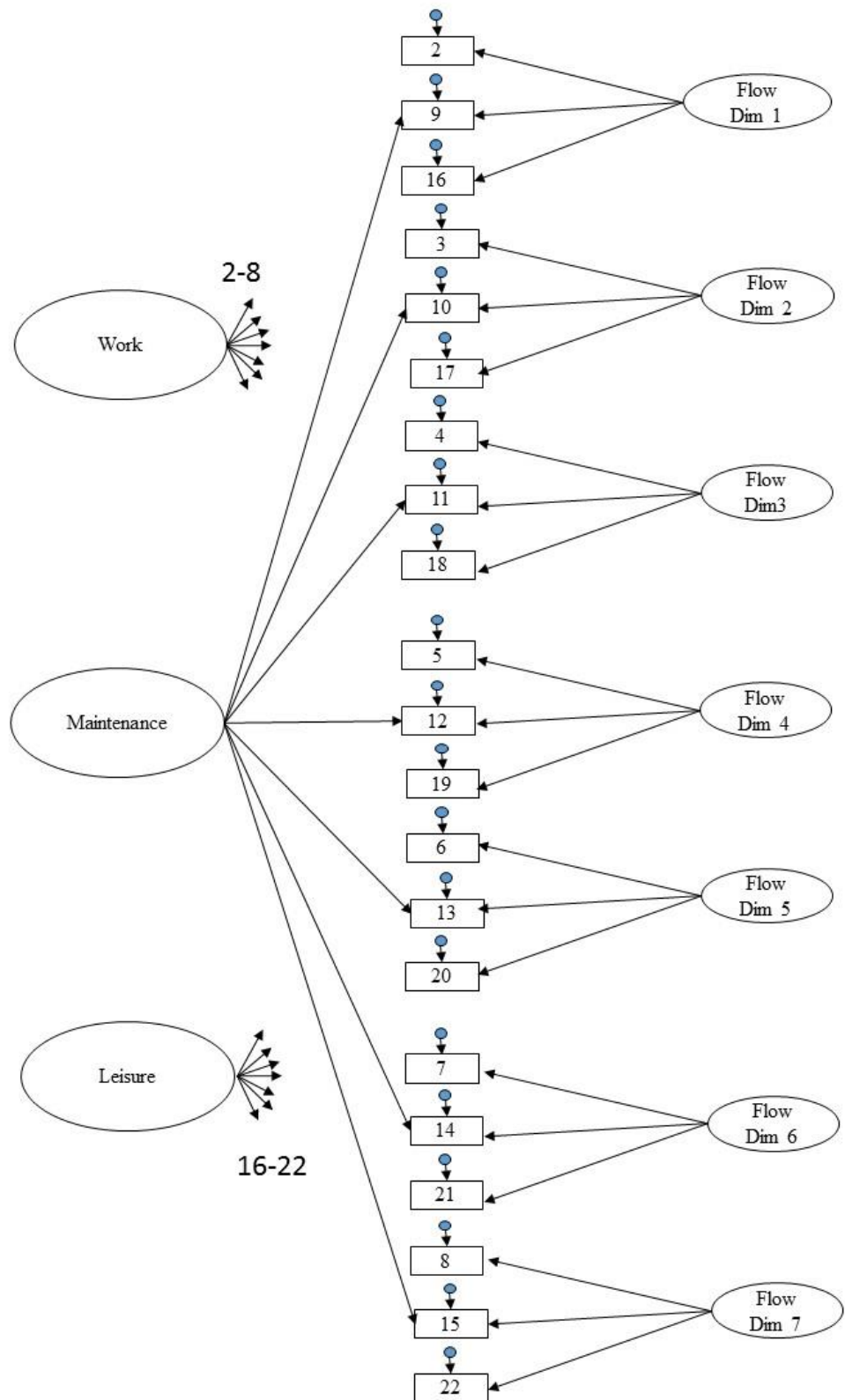


Figure 2.1. *Confirmed Factor Structure Model for SFPQ*

Table 2.1.3  
*Reliability Coefficients of SFPQ (N=652)*

	Internal Consistency	Test Re-test Reliability
SFPQ General	.85	.75
FP Work	.82	.78
FP Maintenance	.80	.70
FP Leisure	.86	.59

### 2.1.2.6. Validity

Convergent, divergent, and discriminant validities of the SFPQ were assessed by examining the zero order correlations of the scale with several theoretically related constructs. Table 2.4 shows correlation coefficients between SFPQ and other measures included for validity purposes.

In terms of convergent validity, SFPQ was found to be positively correlated with extraversion ( $r = .26, p < .01$ ), conscientiousness ( $r = .42, p < .01$ ), openness to experience ( $r = .38, p < .01$ ), agreeableness ( $r = .32, p < .01$ ), stretching self ( $r = .31, p < .01$ ), and embracing novelties ( $r = .15, p < .01$ ), positive affect ( $r = .42, p < .01$ ), happiness ( $r = .37, p < .01$ ), life orientation ( $r = .39, p < .01$ ), presence of meaning ( $r = .41, p < .01$ ), and life satisfaction ( $r = .37, p < .01$ ), as expected. In terms of divergent validity, SFPQ was found to be negatively correlated with neuroticism ( $r = -.18, p < .01$ ), negative valence ( $r = -.26, p < .01$ ), negative affect ( $r = -.24, p < .01$ ), depression ( $r = -.35, p < .01$ ), trait anxiety ( $r = -.41, p < .01$ ), and search for meaning ( $r = -.11, p < .01$ ), as expected.

Table 2.1.4

*Correlations between SFPQ and Theoretically Relevant Constructs*

	SFPQ Total	FP-Work	FP- Maintenance	FP-Leisure
FP-Work	.70**	1.00	.24**	.27**
FP-Maintenance	.71**	.24**	1.00	.27**
FP-Leisure	.73**	.27**	.27**	1.00
Extraversion	.26**	.28**	.15**	.13**
Conscientiousness	.42**	.36**	.40**	.15**
Agreeableness	.32**	.23**	.23**	.24**
Neuroticism	-.18**	-.13**	-.08	-.18**
Openness	.38**	.36**	.24**	.23**
Negative Valence	-.26**	-.19**	-.13**	-.25**
Stretching	.31**	.34**	.14**	.19**
Embracing	.15**	.16**	.07	.10*
Positive Affect	.42**	.39**	.26**	.25**
Negative Affect	-.24**	-.23**	-.11**	-.18**
Life Orientation	.39**	.36**	.21**	.26**
Social Desirability	.26**	.21**	.18**	.16**
Emotion Regulation	.21**	.17**	.17**	.11**
Subjective Happiness	.37**	.32**	.25**	.22**
Expressivity	.17**	.10**	.15**	.11**
Presence of Meaning	.41**	.39**	.28**	.22**
Search for Meaning	-.11**	-.09*	-.07	-.08*
Life Satisfaction	.37**	.39**	.19**	.21**
Depression	-.35**	-.35**	-.19**	-.21**
Trait Anxiety	-.41**	-.38**	-.22**	-.27**

Note 1. \*Correlation is significant at the 0.05 level (2-tailed), \*\*Correlation is significant at the 0.01 level (2-tailed)

### 2.1.3. Discussion

The present study showed that Turkish version of the Swedish Flow Proneness Questionnaire (SPFQ) is a valid and reliable instrument measuring flow propensity at work, maintenance and leisure time dimensions. Exploratory and confirmatory factor analyses, internal consistency coefficients, and test-retest procedures were implemented to validate SFPQ in Turkish culture. A 3-factor solution was revealed with the exploratory factor analysis. Besides, a model of flow proneness (FP) with 21 items in 3 domains and 7 dimensions was tested via confirmatory factor analysis. The factor structure was confirmed in a second, independent Turkish sample.

In compliance with the original research, personality traits and flow proneness were associated. Neuroticism was negatively related to all SFPQ dimensions. Negative affect, negative valence, search for meaning, depression, and trait anxiety were also negatively related with global flow proneness. Therefore, it was suggested that neuroticism in general might account for a detrimental impact on flow proneness. Openness to experience, conscientiousness, and extraversion were positively related with flow proneness. Similar associations were described earlier by Ross and Keiser (2014). Furthermore, as implied by earlier work of Csikszentmihalyi (1975), flow proneness was positively related with life orientation, happiness, presence of meaning, and life satisfaction. The findings of the present study pointed out that a good life with meaning, satisfaction, and happiness is very much related with flow proneness. Moreover, it is noteworthy that participants' general flow proneness differentiated among three flow dimensions, namely FP-work, FP-household, and FP-leisure. Therefore, similar with the original study, it was found that individuals' ability to enter and sustain flow vary in different contexts, because in different contexts flow might be evoked by distinct factors.

Turkish adaptation of the SFPQ is the first research attempt to contribute to the measurement of flow proneness in different contextual backgrounds. The use of SFPQ as a research instrument is expected to contribute positive psychology research in Turkey. Scientific studies and clinical applications can be realized by means of several studies that use SFPQ as an indicator of flow proneness. Neither psychology in general, nor clinical psychology research in Turkey have not investigated the

concept of flow and related psychological mechanisms yet. However, general psychology research has made extensive contributions for understanding flow state in the last two decades (Nakamura & Csikszentmihalyi, 2002). There is extensive outcomes on the flow state and its associations with academic success (Nakamura, 1988), protective effect of flow proneness for adverse life events (Schmidt, 2000), and positive effects of flow proneness on physical health (Patton, 1999). In this respect, intervention programs for enhancing flow experience at school (Kahn, 2000), family environment (Rathunde, 1988), and in the workplace (Nakamura & Csikszentmihalyi., 2002) were developed. The current state of research in flow psychology indicates that applications of flow theory in clinical contexts is still missing. Therefore, the infusion of concepts from flow theory to clinical research and practice would facilitate the development of new knowledge and paradigm in clinical psychology.

Initially, interventions that aim to enhance psychological well-being through flow mechanisms can be developed. Taking baseline measurements of flow proneness and positive personal traits that facilitate flow would allow clinicians to enhance the effective and strategic use of positive traits to enhance flow propensity; to select specific tasks that intrinsically motivate the client to engage in; to determine the difficulty level of the task in accordance with measured skills; to practice skills on a regular basis to increase intrinsic motivation and transform it into a source of reward; and to define roadblocks for every client that leads to non-flow states (Carr, 2004). In addition to the plausible intervention development, clinical psychologists should study the nature of flow state in different clinical populations, such as depression, substance abuse, anxiety, obsessive compulsive disorder etc. The nature of associations would further contribute to the understanding and formulation of psychopathological conditions.

The foremost strength of present study was the utilization of data sets, which provided adequate sampling for reliability, validity, and factor analytic investigations. The psychometric properties of the SFPQ, in terms of its internal reliability, consistency over time, and associations with relevant psychological constructs as an indicator of validity were found satisfactory and in accordance with the original scale. Another strength of the study was the implementation of exploratory and confirmatory factor analyses in separate samples. The explored

factors in the first data set were confirmed in an independent sample. In terms of limitations, all of the studies presented in the scale adaptation chapter of the dissertation share the same limitations due to time period in which data collection procedure was executed for sample 1 (scale adaptation sample) and sample 2 (test-retest sample). On 13<sup>th</sup> of May, 2014, the day when the data collection procedure was initiated, a coal mine explosion caused an underground mine fire that burned for 2 days; 301 people were allegedly dead in the incident which was the most horrible mine disaster in Turkey's history, and it precipitated a huge devastation for the nation. Disasters of great extent might be accounted for an interference with people's affective and cognitive responses. Therefore, the nature of the data might be affected by the mining incidence. Lastly, sample 1 and sample 2 were consisting of college students. Thus, replication of the study with general population might provide evidence for the generalizability of the results.

## **2.2. Curiosity and Exploration Inventory – II (CEI-II)**

Conceptualizations of curiosity in behavioral sciences root back to as early as William James' work "Principles of Psychology", where James (1890) described curiosity as a predisposition for being excited and motivated by novelties and an active ability to direct attentional resources towards specific information. More recently, it has been a common view among positive psychologists that curiosity is an essential strength of humans, as it is a recognition, pursuit and intense desire to explore novelties, challenges and uncertainties (Kashdan & Silvia, 2009). Full awareness of and receptiveness to the outer world and to the present moment, curiosity motivates and enables individuals to behave and comprehend in harmony with the available information efficiently. By doing so, stretching of the personal knowledge, skills and abilities becomes likely (Kashdan & Silvia, 2009). Positive psychologists considered it as a personal virtue (Peterson, Ruch, Beerman, Park, & Seligman, 2007) that enables individuals to find subjects that are fascinating; to explore and to discover by taking an interest in ongoing experience for its own sake. In addition to providing such space for stretching self, as Berlyne stated it (1960), curiosity is also a powerful aspect of human motivation. Several theories of motivation, including theory of planned behavior (Ajzen, 1991), self-determination theory (Deci & Ryan, 2002), flow theory (Csikszentmihalyi, 1975), and planned happenstance theory (Mitchell, Levin, & Krumboltz, 1999), encompassed curiosity



as a central motivational aspect within their theoretical framework. Besides curiosity accounted for a sub-trait in openness to experience trait of big five personality inventory (McCrae, 1987). Within self-determination theory (Deci & Ryan, 2002), the concept of intrinsic motivation holds very similar properties with curiosity, as it was defined as an innate inclination towards novelty and challenges to extend and practice personal qualities, and to discover and learn. Besides, within flow theory perspective (Csikszentmihalyi, 1975), curiosity is a main predictor to enter and sustain flow state. According to this theoretical perspective, the nature of flow state is characterized by being absorbed to the activity at hand by deploying the whole personal resources; the depicted nature of flow state resembles curiosity. Learning, exploring, and being absorbed to a task at hand that stimulated the deployment of attentional resources is enhanced by curiosity according to Loewenstein (1994). Furthermore, planned happenstance theory (Mitchell, Levin, & Krumboltz, 1999) referred to the benefits of being curious, as it makes individuals open to unplanned experiences and transforms those experiences into opportunities for learning about the self and the outer world. Taken together with intelligence, curiosity is responsible for transforming abilities into success (Day & Langevin, 1969).

Despite phenomenological explanations and several motivational theories encompassing curiosity, curiosity as a trait has been only studied in the last 15 years. This is mostly because curiosity was related and essential to several psychological theories, and it was not studied as a distinctive trait until late 1990's (Kashdan et al., 2009). Moreover, as pointed out by Mussel in 2010, curiosity and related constructs were lacking discriminant validity by that time. Besides, an investigation of literature through scientific databases also showed that 90 % of curiosity research was carried out after year 2000.

Curiosity was studied in different contexts of research within psychology until 2000's. However, each of this research indicated contradicting findings with the English proverb "curiosity killed the cat". Over and above, as cited by Kashdan et al. (2009), Sylvan Tomkins (1962) highlighted the survival value of curiosity, as the absence of it would make a destruction to intellectual development no less than organic brain conditions. Similarly, Larson, Piersel, Imao, and Allen (1990) indicated that higher curiosity is related to a more positive problem solving appraisal. Moreover, Loewy (1998) discussed that curiosity can raise the possibility of building a compassionate relationship because of its effect on the virtue to discover things

about other people. Furthermore, Mikulincer (1997) stressed that adults with secure attachment style are more curious than insecurely attached adults. For personal growth, Spielberg and Starr (1994), suggested that curious individuals, as compared to their counterparts, tend to seek out challenges and unusual activities for self-change.

Curiosity as a trait has been just started to be studied extensively in various fields of psychology. Lauriola et al. (2015) found a positive relation between curiosity and self-regulation; Ness and Riese (2015) found that curiosity aids the process of constructing a common knowledge of experts from different disciplines working together in huge organizations; Hassan, Bashir, and Mussel (2015) revealed the mediating role of curiosity between conscientiousness and learning; Wang and Li (2015) indicated that the relation of curiosity with well-being and emotional exhaustion are mediated by personal initiative. Kaczmarek, Kashdan, Drazkowski, Bujacz, and Goodman (2014) found that curiosity was positively linked with individual's inclination towards gratitude without being provided any guidance. The study results indicate the role of curiosity as a personal strength.

As Kashdan et al. (2009) and Mussel (2010) pointed out, reliable and valid constructs aiming to capture curiosity as a trait were missing. In 2004, 7-item Curiosity and Exploration Inventory (CEI) that aims to measure curiosity with two subscales was introduced (Kashdan, Rose, & Fincham, 2004). Exploration subscale was reflecting the orientation towards seeking novelties and challenges, whereas absorption subscale was reflecting the ability to regulate attention to become absorbed with the novelties and challenges. However, CEI indicated low internal consistency, mostly due to its sensitivity to social desirability effects and the items generated for absorption subscale were lacking the ability to capture the construct.

Even though CEI had demonstrated weak psychometric properties, it had become a widely-used instrument in curiosity research due to the lack of instruments in curiosity research until its introduction. Therefore in 2009, Kashdan et al. carried out a series of research to introduce an improved version of CEI, and named it as CEI-II. CEI-II was proved to be a reliable and valid measure of curiosity with two domains. The first domain is called stretching and it reflects the orientation to actively seek opportunities for new information and experiences; the second domain is called embracing as it reflects the disposition to embrace the novel, ambiguous and volatile nature of everyday life (Kashdan et al., 2009). CEI-II is a 10-item scale, each

of which are reflected with 5 items. The aim of the present study was to study the psychometric properties of CEI-II in Turkey.

### **2.2.1. Method**

#### **2.2.1.1. Participants**

**Sample 1.** The data were collected online via Surveyey.com between 11th and 31th of May, 2014. Surveyey.com is a website that enables users to collect data online. After the questionnaire set was created in the web interface, a www link referring to questionnaire set was created. This link was shared with the general psychology class rosters via METU Online Course Management System. Participants of this study were given 1 bonus point for participation. Along with collecting data from general psychology students, a Facebook group was created and participants were invited via snowball sampling method. Participants were announced that tablet PC's would be given to two participants determined with a lottery.

Eight hundred and three participants were reached between 11<sup>th</sup> and 31<sup>st</sup> of May 2014. Data screening was made, prior to analysis. Participants who completed the questionnaire in less than 20 minutes were excluded from the sample. As a result of several data screening criteria, further statistical analysis was conducted with 651 participants. Statistical analyses were conducted using SPSS 20 statistical package program.

The mean age of the participants were 23.47 ( $SD = 4.04$ ). The sample was consisting of 161 males (24.8 %) and 489 females 75.2 %). Four-hundred and ten participants were single, 46 were married, and 194 were committed in a relationship. The majority of the participants (66.3 %) were undergraduate students, whereas 20 % and 13.7 % were affiliated with masters and Ph.D. degrees, respectively. All of the participants were enrolled in an undergraduate or graduate program at the time of data collection. Two-hundred and one participants reported history of psychiatric help, whereas 450 participants had never sought help from a mental health professional.

The first sample is utilized for the exploration of factor analytic structure, reliability and, validity investigations of CEI-II.

**Sample 2.** The data were collected online via Survey.com between 9<sup>th</sup> and 15<sup>th</sup> of June, 2014. Participants were contacted via e-mails they provided during the first study. After data screening, 222 participants were left for further analyses. Mean age of the participants was 23.64 ( $SD = 4.03$ ). The sample was consisting of 46 males (20.3 %) and 176 females (79.7 %). Sample 2 was recruited for test-retest reliability.

**Sample 3.** The data were collected online via Qualtrics.com between 26<sup>th</sup> September and 22<sup>th</sup> of November, 2014. After data screening, 379 participants remained for further analyses. Mean age of the participants was 24.90 ( $SD = 7.5$ ). The sample consisted of 80 (21.1 %) males and 299 (78.9 %) females. One (.3 %) participant had completed primary school, 195 (51.5 %) participants had achieved a high school diploma, and 98 (25.9 %) participants had an undergraduate degree, 55 (14.5 %) had a master's degree, and 30 (7.9 %) participants were currently enrolled in or graduated from a Ph.D. program. One-hundred and twenty two participants (32.19 %) were employed and 257 participants (67.81 %) were unemployed. One-hundred and sixty seven (44.1 %) participants reported history of psychiatric help, whereas 212 (55.9 %) participants had never sought help from a mental health professional. Sample 3 is recruited for confirmatory factor analysis.

Table 2. 3.1 provides descriptive properties of three samples recruited in the present research.

Table 2.3.1.

*Descriptive Properties of the Study Samples*

	<i>M</i>	<i>SD</i>	<i>N</i>	%	Min-Max
<b>Sample 1</b>					
Age	23.47	4.04	652		17-58
Gender					
Male			162	24.8	
Female			490	75.2	
Education					
Undergraduate			438	67.2	
M.S.			124	19.0	
Ph.D.			90	13.8	
Employment status					
Unemployed			453	69.5	
Employed			194	29.8	
Ever consulted mental health professional					
Yes			201	30.8	
No			450	69.1	
<b>Sample 2</b>					
Age	23.63	4.00	222		18-39
Gender					
Male			45	20.3	
Female			177	79.7	
Education					
Undergraduate			141	63.5	
M.S.			50	22.5	
Ph.D.			31	14	
Employment status					
Unemployed			156	70.3	
Employed			66	29.7	
Ever consulted mental health professional					
Yes			78	35.1	
No			144	64.9	
<b>Sample 3</b>					
Age	24.90	7.50	379		17-63
Gender					
Male			80	21.1	
Female			299	78.9	
Education					
Primary School			1	.3	
High School			195	51.5	
Undergraduate			98	25.9	
M.S.			55	14.5	
Ph.D.			30	7.9	
Employment status					
Unemployed			122	32.2	
Employed			257	67.8	
Ever consulted mental health professional					
Yes			167	44.1	
No			212	55.9	

### 2.2.1.2. Instruments

**Curiosity and Exploration Inventory- II.** CEI-II is a valid and reliable instrument that aims to measure trait-like curiosity. It was developed by Kashdan et al. (2009). It is a 10 item, 2-factor scale. The 5-item stretching subscale assesses the orientation for seeking novel and challenging objects, events, and ideas with the aim of integrating these experiences and information. Stretching was assumed to lead personal growth. The 5-item embracing subscale reflects the ability to self-regulate attention to let immersion in these novel and challenging activities. The internal consistency reliability of the global CEI-II ( $\alpha = .86$ ), stretching subscale ( $\alpha = .79$ ) and embracing subscale ( $\alpha = .76$ ) were acceptable.

**Basic Personality Traits Inventory (BPTI).** BPTI is 45-item personality inventory assessing the personality traits from a 5-factor model perspective. It is developed by Gençöz and Öncül (2008). The adjectives in the scale are measured on a scale ranging between 1 (*does not apply to me*) and 5 (*definitely applies to me*). BPTI derives 6 personality traits (extraversion, conscientiousness, agreeableness, neuroticism, openness to experience, and negative valence). The internal consistency coefficients found in the original study are as follows: Extraversion(.89), conscientiousness (.85), agreeableness (.85), neuroticism (.83), openness to experience (.80), negative valence (.71). The present study yielded .88 for extraversion, .84 for conscientiousness, .84 for agreeableness, .81 for neuroticism, .75 for openness to experience, and .67 for negative valence in Sample 1.

**Positive and Negative Affect Schedule (PANAS).** It is a 20-item self-report measure of positive and negative affect developed by Watson, Clark, and Tellegen (1988). It provides independent measures of positive affect and negative affect with positive and negative affect subscales each consisting of 10 items. Positive affect represents the extent to which an individual experiences enthusiasm and alertness, whereas negative affect represents lethargy and sadness. The Cronbach's alpha was .88 for the positive affect subscale and .85 for the negative affect subscale (Watson et al., 1988). The test-retest reliability of the scale was .47 (Watson et al., 1988). The Turkish adaptation study of PANAS was conducted by Gençöz (2000), who found similar internal consistency coefficients with Watson et al. (1988): .83 for the positive affect subscale and .86 for the negative affect subscale. The test-retest reliability of the Turkish version was .40 for the positive affect subscale, and .54 for

the negative affect subscale (Gençöz, 2000). In the present study, the internal consistency reliability of PANAS was examined in Sample 1. The coefficients were .86 for both positive affect and negative affect dimensions of PANAS.

**Beck Depression Inventory (BDI).** BDI is a 21 item self-report inventory that aims to measure cognitive, emotional and motivational symptoms of depression (Öner, 1997). It is developed by Beck, Rush, Shaw, and Emery (1978). Respondents are asked to report how they felt over the last week by choosing the most suitable statement among 4 statements in each item. Each item is scored from 0 to 3. It is adapted to Turkish culture by Hisli (1988) with an internal consistency coefficient of .74. In the present study, the internal consistency coefficient for BDI was .89 in Sample 1.

**State - Trait Anxiety Inventory (STAI).** STAI is a 40-item, 4-point Likert type scale ranging from 1 (*not at all*) to 4 (*very much so*). It aims to measure how anxious a person generally feels, and how anxious a person feels in a specific moment in time. It was developed by Spielberger, Gorsuch, and Lushene (1970). STAI has two subscales namely, state and trait anxiety subscales. Each of these subscales consists of 20 items. The test-retest reliability of the scale ranged from .16 to .54 for state anxiety subscale and from .73 to .86 for trait anxiety subscale (Spielberger et al., 1970). The internal consistency for the state anxiety subscale varied between .83 and .92; and for the trait anxiety subscale it varied between .86 and .92 (Spielberger et al., 1970). The Turkish adaptation of STAI was done by Öner and LeCompte (1985) with clinical and nonclinical samples. In Turkish adaptation study (Öner et al., 1985), test-retest reliability was between .71 and .86 for trait anxiety inventory; test-retest reliability was between .26 and .68 for state anxiety inventory. The internal consistency was between .83 and .87 for trait anxiety subscale, and the internal consistency of state anxiety subscale ranged from .94 to .96 (Öner et al., 1985). In the present study, only the trait subscale of the inventory was used ( $\alpha = .88$ ).

**Acceptance and Action Questionnaire-II (AAQ-II).** AAQ-II (Bond, Hayes, Baer, Carpenter, Guenole, Orcut et al., 2011) is a 10-item questionnaire that aims to measure psychological flexibility. Items are designed in 7-point Likert scaling ranging from 1 (*never true*) to 7 (*always true*). Higher scores on this questionnaire

indicate greater levels of psychological flexibility. The original version of the AAQ-II had .83 internal consistency coefficient and .80 retest reliability coefficient over a 3-months period. The Turkish version of the AAQ-II (Meunier, Gökdemir, Uyar, Baştuğ, Atmaca, & Ayrancı, 2014) confirmed the factor structure of AAQ-II in the Turkish sample. The internal consistency of the scale was found .88, and retest reliability was found .78 over a 2-months period. The internal consistency of the Turkish version of the AAQ-II was investigated in the present study, too. The scale yielded an internal consistency coefficient of .90 in Sample 1.

**Emotion Regulation Questionnaire (ERQ).** ERQ (Gross & John, 2003) aims to investigate individuals' emotion regulation strategies with two subscales: cognitive reappraisal and suppression. The tendency to regulate emotions through cognitive strategies is measured with the 6-item cognitive reappraisal subscale, whereas lack of emotional expression is assessed with the 4-item suppression subscale. Each item is designed with a Likert type scaling ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The original scale yielded .79 internal consistency coefficient for the cognitive reappraisal subscale and .73 for the suppression subscale. Retest reliability of the original scale was found .69 in a 3-month period. Turkish version of the ERQ was adapted by Yurtsever (2008), and the Turkish version yielded .85 and .78 internal consistency coefficients for cognitive reappraisal and suppression subscales, respectively. The internal consistency of the Turkish version of the ERQ was investigated in the present study, too. The whole scale yielded an internal consistency coefficient of .77; besides .55 and .71 were yielded for cognitive reappraisal and suppression subscales in Sample 1, respectively.

**Berkeley Expressivity Questionnaire (BEQ).** BEQ (Gross & John, 1995) is a 16 item questionnaire that reflects expressivity in 3 domains: positive expressivity, negative expressivity, and impulse strength. Items are measured on a Likert-type scale ranging from 1 to 7 (1 = *strongly disagree*, 7 = *strongly agree*). High scores on the items indicate higher levels of emotional expressivity. The original scale yielded .86 internal consistency coefficient for the whole BEQ; and .70, .70, and .80 were internal consistency coefficients of positive expressivity, negative expressivity, and impulse strength, respectively. Test-retest reliability of the original scale was found as .86. BEQ was adapted to Turkish culture by Akın (2011). The Turkish version of the scale showed adequate reliability coefficients and satisfactory validity in Turkish



sample. The Turkish version of the BEQ yielded .88 internal consistency coefficient for the whole scale. For positive expressivity, negative expressivity, and impulse strength subscales internal consistency coefficients were .74, .82, and .87, respectively. Test-retest reliability of the Turkish BEQ scale was found .81 by Akın (2011). The internal consistency of the Turkish version of the BEQ was also investigated in the present study. The whole scale yielded an internal consistency coefficient of .84. Besides, .72, .74, and .75 were found for positive expressivity, negative expressivity and impulse strength, respectively in Sample 1.

**Oxford Happiness Questionnaire Short Form (OHQ-S).** Oxford Happiness Questionnaire was developed by Hills and Argyle (2002) as a short form of Oxford Happiness Inventory. It aims to measure happiness with 7 items on a 6-point Likert scale ranging from *strongly agree* to *strongly disagree*. The original scale yielded .91 internal consistency coefficient. Doğan and Sapmaz (2012) studied the adaptation of the scale to Turkish culture. The Turkish form of the scale yielded .91 internal consistency coefficient with a single-factor solution. The present study yielded .83 internal consistency coefficient for the Oxford Happiness Questionnaire in Sample 1.

**Rosenberg Self-Esteem Scale (R-SES).** Rosenberg Self-Esteem Scale is a 10-item, 4-point Likert type scale developed by Rosenberg (1965). The scale measures self-worth and self-acceptance related overall feelings in adolescents. Internal consistency coefficient was found .77 in the original study. The scale was adapted into Turkish culture by Çuhadaroğlu (1985). Çuhadaroğlu used psychiatric interviews with high school students as a comparison base to validate R-SES, and a correlation coefficient of .71 was found between the scale scores and psychiatric interviews. The present study yielded .92 internal consistency coefficient for R-SES in Sample 1.

### **2.2.1.3. Procedure**

Psychometric properties of Curiosity and Exploration Inventory -II (CEI-II) were studied in three different samples. The research project was approved by the Review Board of Middle East Technical University. The original CEI-II was translated into Turkish by three PhD candidates in Psychology. After the initial translation, three separate Turkish versions were examined by the researchers. After

careful consideration, a single Turkish scale was submitted to another bilingual PhD candidate in Psychology for back translation. Following the back translation, the original items of the scale were compared with the back translated items and the final version of the CEI-II was agreed upon by the researchers.

## **2.2.2. Results**

### **2.2.2.1. Exploratory Factor Analysis**

Series of exploratory factor analyses (EFA) were carried out via SPSS, utilizing principal component analysis with varimax rotation in sample 1. Kaiser-Meyer-Olkin coefficient was found .85,  $p < .001$ , which demonstrated excellent sampling adequacy for PCA in the first dataset. The EFA indicated 2 factors with Eigen values higher than one (3.93 and 1.43) that explain 53.53 % of the variance. Visual examination of the scree plot also specified an initial two factor solution of Curiosity and Exploration Inventory – II (CEI-II). The examination of the rotated component matrix indicated a misfit in the item distribution for several items compared to the original CEI-II. Unexpectedly, 4<sup>th</sup>, 7<sup>th</sup> and 10<sup>th</sup> items of the scale loaded to the irrelevant factor. Item 4 (Everywhere I go, I am out looking for new things or experiences - Gittiğim her yerde, yeni şeyler ve deneyimler ararım) was originally generated for the embracing subscale of the CEI-II, however it loaded to the stretching subscale of the Turkish CEI-II. Item 10 (I am the kind of person who embraces unfamiliar people, events, and places - Yabancı insanlara, olaylara ve yerlere kucak açan insanlardırım) was also originally developed for the embracing subscale of the CEI-II, however it loaded to the stretching subscale of the Turkish CEI-II. Lastly, item 7 (I am always looking for experiences that challenge how I think about myself and the world - Her zaman kendimle ve dünyayla ilgili düşüncelerime meydan okuyacak deneyimler ararım) was originally developed for stretching subscale of CEI-II, however it loaded to the embracing subscale of the CEI-II. A second exploratory factor analysis was performed with the exclusion of above mentioned items in sample 1. Kaiser-Meyer-Olkin coefficient was found as .75,  $p < .001$  demonstrating adequate sampling adequacy for PCA in the first dataset. The EFA indicated two factors with Eigen values higher than one (2.79 and 1.41) explaining 60 % of the variance and indicating an increment of 6.5 % in the explained variance as compared to the initial EFA. Second exploratory factor

analysis indicated a corresponding factor structure of Turkish CEI-II with the original inventory. First, 3<sup>rd</sup>, 5<sup>th</sup>, and 9<sup>th</sup> items were loaded to the stretching subscale, and 2<sup>nd</sup>, 6<sup>th</sup>, and 8<sup>th</sup> items were loaded to the embracing subscale. Mean score was 17.33 (*sd* = 3.38) for stretching subscale and 6.90 (*sd*=2.58) for the embracing subscale of the CEI-II. The whole CEI-II's mean score was 21.45 (*SD*=4.34). Table 2 shows the factor structure of CEI-II derived from the second exploratory factor analysis.

Table 2.3.2

*Factor Structure of CEI-II*

	Factor	
	1	2
8. I prefer jobs that are excitingly unpredictable.	<b>.87</b>	.09
2. I am the type of person who really enjoys the uncertainty of everyday life	<b>.79</b>	.02
6. I like to do things that are a little frightening.	<b>.71</b>	.20
3. I am at my best when doing something that is complex or challenging.	-.01	<b>.79</b>
5. I view challenging situations as an opportunity to grow and learn.	.29	<b>.74</b>
9. I frequently seek out opportunities to challenge myself and grow as a person.	.40	<b>.68</b>
1. I actively seek as much information as I can in new situations.	-.03	<b>.64</b>

*Note.* Embracing subscale, 2: Stretching subscale

#### 2.2.2.2. Internal Consistency

Internal consistency among the items of CEI-II was estimated using Cronbach's alpha coefficient and it was found to be .75 for the whole scale. Cronbach's alpha coefficients of the embracing and stretching subscales were .73 and .71, respectively. Sample 1 was used to yield the internal consistency coefficients. Table 2.3.3 shows reliability coefficients for CEI-II.

### 2.2.2.3. Test-Retest Reliability

Sample 1 and sample 2 were taken into consideration together to examine CEI-II's stability over time. Time lag between Time 1 and Time 2 was 3 weeks. Test-retest reliability for CEI-II was found .80 for the whole scale; .76 and .79 for stretching and embracing subscales, respectively. Test-retest reliabilities are provided in Table 2.3.3.

Table 2.3.3  
*Reliability Coefficients of CEI-II*

	Internal Consistency	Test-Retest Reliability
CEI-II	.75	.80
Stretching Subscale	.71	.70
Embracing Subscale	.73	.73

### 2.2.2.3. Confirmatory Factor Analysis

A confirmatory factor analysis with 7 CEI-II items loading onto 2 factors was carried out via EQS in sample 3. The sample indicated a non-normality (*Mardia's Z* = 10.44), hence robust statistics were taken into consideration instead of the maximum likelihood model. In terms of distribution of residuals, 85.72 % of residuals were between z scores of -0.1 and +0.1. Robust statistics revealed that the suggested model of CEI-II fit the data marginally, *Satorra-Bentler*  $\chi^2(13) = 74.20, p = 0.00, CFI = 0.92, RMSEA = 0.11$ . Each of the regression coefficient between indicators and latent variables was significant. Lagrange Multiplier test was run to see if any significant increment in  $\chi^2$  would be achieved by doing post-hoc modifications, but no noteworthy increments were indicated.

### 2.2.2.4. Validity

Convergent, divergent, and discriminant validities of the CEI-II were assessed by examining the zero order correlations of the scale with several theoretically related constructs. Table 2.3.4 shows correlation coefficients among CEI-II and other measures included for validity purposes. Among the personality traits captured by basic personality traits inventory, openness to experience had the highest positive

correlation with CEI-II ( $r = .44, p < .01$ ). Besides, extraversion ( $r = .16, p < .01$ ), conscientiousness ( $r = .13, p < .01$ ), agreeableness ( $r = .19, p < .01$ ) had positive correlations with CEI-II. Neuroticism had a weak negative correlation with the CEI-II ( $r = -.08, p < .05$ ). Reappraisal ( $r = .16, p < .01$ ) and suppression ( $r = .26, p < .01$ ) subscales of ERQ, positive affect ( $r = .37, p < .01$ ), general happiness ( $r = .24, p < .01$ ), and self-esteem ( $r = .23, p < .01$ ) had positive correlations with CEI-II. Depression ( $r = -.14, p < .01$ ), anxiety ( $r = -.29, p < .01$ ), psychological inflexibility ( $r = -.15, p < .01$ ), and negative expressivity ( $r = -.15, p < .01$ ) yielded negative correlations with CEI-II.

Table 2.3.4.

*Correlations between CEI-II and Related Constructs*

	CEI-II Total	CEI-II Stretching	CEI-II Embracing
<b>ERQ</b>			
Reappraisal	.16**	.13**	.13**
Suppression	.26**	.27**	.14**
<b>BEQ</b>			
Negative Expressivity	-.15**	-.09*	-.17*
Positive Expressivity	.05	.08*	-.03
Impulse Strength	-.06	-.01	-.10*
<b>AAQ-II</b>			
Inflexibility	-.15**	-.13**	-.10*
<b>BIG FIVE</b>			
Extraversion	.16**	.20**	.05
Conscientiousness	.13**	.25**	-.13**
Agreeableness	.19**	.25**	.03
Neuroticism	-.09*	-.08*	-.08
Openness to Experience	.44**	.47**	.29**
<b>PANAS</b>			
Positive Affect	.37**	.44**	.17**
Negative Affect	-.01	-.03	.04
<b>WELL-BEING</b>			
General Happiness	.24**	.27**	.11**
Self-Esteem	.23**	.27**	.07
<b>PSYCHOPATHOLOGY</b>			
Depression	-.14**	-.17**	-.02
Anxiety	-.29**	-.29**	-.16**

Note 1. ERQ: Emotion Regulation Questionnaire; BEQ: Berkeley Expressivity Questionnaire; AAQ-II: Acceptance and Action Questionnaire; PANAS: Positive and Negative Affect Schedule.

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

### 2.2.3. Discussion

The aim of the present study was to adapt Curiosity and Exploration Inventory – II (CEI-II) to Turkish culture. Our study had revealed a 7-item, 2-factor inventory with embracing and stretching subscales. The original CEI-II structure with 10 items in two subscales was not confirmed in the present study. However, the 7-item, 2-factor solution yielded satisfactory and comparable psychometric properties in terms of reliability and validity of CEI-II in Turkey. Embracing and stretching were identified as two distinct components, which are also related to one another in the present study. In terms of validity, positive affect, self-esteem, and general happiness were positively correlated with CEI-II in parallel with the previous research findings (Kashdan, & Steger, 2009; Gallagher & Lopez, 2007; Kashdan et al., 2004). Similarly, in terms of personality traits, curiosity was considered as a central facet of openness to experience. Therefore, the correlation between CEI-II and openness to experience was of anticipated nature. Extraversion also implies an interest towards others, being sensitive to rewards and positive affectivity. Therefore, the positive correlation between CEI-II and extraversion was meaningful. Likewise, since psychological flexibility is defined as an ability to be in the present moment without the need to become defensive, the negative relation between inflexibility and CEI-II was meaningful. Such flexibility is accompanied by distress tolerance implied by minor negative correlations of depression, anxiety, and negative expressivity with CEI-II. However, reappraisal as the ability to regulate emotions by embracing different perspectives on events was also meaningfully and positively correlated with CEI-II. However, the positive correlation between suppression subscale of the ERQ and CEI-II was surprising, since suppression implies the lack of emotional expressions as a medium to regulate emotions.

The internal consistency coefficients were .75, .71, and .73 for the whole scale, stretching and embracing subscales, respectively. The internal consistency of CEI-II was evaluated as satisfactory. Test-retest reliability coefficient was found as .80 for the whole scale with a 3-week interval. The 2-factor, 7-item CEI-II solution was also assessed via confirmatory factor analysis in a different sample and it was revealed that the two-factor solution fit the data better than a single-factor solution.

CEI-II was designed to accommodate two main aspects of curiosity (Kashdan, 2009). Stretching domain reflects an inclination towards active seeking out knowledge and novel experiences, whereas embracing domain reflects the willingness to embrace novel, uncertain, and unpredictable nature of everyday life. The adaptation of CEI-II to Turkish culture has several important contributions to the study of positive psychology and clinical psychology in Turkey for a number of reasons. Initially, the original CEI-II was the first attempt to measure trait like curiosity with two domains that is proved to be valid and reliable in several study samples. Earlier research in psychology had attributed significant properties to curiosity phenomenon for being an essential human predisposition (James, 1890), a personal virtue (Peterson et al., 2007) that leads to personal growth, an indispensable motivational aspect of survival value (Tomkins, 1962), resemblance of intrinsic motivation (Deci, & Ryan, 2002), and as a predictor of flow state (Csikszentmihalyi, 1975). However, none of the above mentioned theories had an attempt to operationalize and measure trait like curiosity. Therefore, the adaptation of the CEI-II, as a psychometrically valid and reliable instrument, would enable Turkish psychology researchers to study the associations of curiosity with all aspects of human motivational experience, and particularly with human psychological well-being. A study conducted by Gerber and Hoelson (2011) highlighted the frequency of stress-related problems amongst trainee psychologists due to nature of their professional work that involves uncertainties and confrontations in the training process. A study design aiming to determine curiosity levels of trainee psychologists and its associations with training related distress indicated that moderate to high levels of curiosity was associated with active strategies (i.e., reliance on supervision, peer consultation, self-enhancement, learning from practical experience, using certain positive cognitive appraisals, and self-care )to deal with uncertainties during their professional development (Gerber & Hoelson, 2011). By the same token, it can be speculated that assessment of trait-like curiosity as a baseline clinical measure in the therapy context might provide information on client's general inclination to actively seek out new information and embrace novelties as an index of growth tendency. Besides, assessment of curiosity levels in trainee psychologists might assist the elements of supervisory sphere to address specific areas of development for the supervisee.

The present study has several strengths and limitations. Initially, the adaptation study was realized with the utilization of three data sets which are consisting of adequate sampling of responses required for psychometric analysis of reliability, validity, and factor structure of the CEI-II. Therefore, sampling adequacy was one of the strengths of the present study. Secondly, as suggested by Van Prooijen and Van Der Kloot (2001), exploratory and confirmatory factor analyses were conducted in two separate samples. Thus, the explored factor structure in the first data set was confirmed in a distinct sample. Sufficient number of psychological instruments was utilized to validate CEI-II, and Turkish adaptation of CEI-II had statistically significant associations with the relevant psychological instruments that are comparable to the original CEI-II. One of the significant limitations of the present study was due to the time interval in which data collection procedure was implemented for sample 1 (scale adaptation sample) and sample 2 (test-retest sample). On 13<sup>th</sup> of May, 2014 when the data collection procedure was initiated, a coal mine explosion caused an underground mine fire that burned for 2 days; 301 people were reportedly dead in the occasion which was the worst mine disaster in Turkey's history, and a huge catastrophe for the nation. Disasters of such great extend might be accounted for an interference with people's affective and cognitive responses. Therefore, the nature of the data might be affected by the mining incidence. Secondly, sample 1 and sample 2 were consisting of college students. Thus, replication of the study with general population might provide evidence for the generalizability of the results.

Being the first instrument that captures trait-like curiosity with two domains, the use of CEI-II in several research contexts might contribute to better understanding of human motivation in relation with several strategies, behaviors, and affective domains. Need for autonomy and self-acceptance (Deci, & Ryan, 2000) were found more likely to be fulfilled for highly curious people; therefore, CEI-II can be used to test associations of curiosity trait with optimal psychological functioning and optimal development of self (İmamoğlu, 2003). Furthermore, general curiosity can be studied in relation with subjective well-being, adjustment to adverse life events, traumatic events and related psychological disorders, psychological growth, therapy compliance, and life meaning in the future studies.



Lastly, the effectiveness of clinical interventions anchoring to curiosity should be tested in the future.

### **2.3. Meaning in Life Questionnaire**

Is there a meaning in life? If there is, what is it and does it make a difference? Relatively new questions in psychological sciences, above questions has always been one of the central themes in western philosophy. The same question investigating if there is a meaning was asked from different angles by Ancient Greek philosophers, Enlightenment Era philosophers, 19<sup>th</sup> and 20<sup>th</sup> century philosophers and comparatively recently by psychologists also. A fundamental theme that is looked for or denied in each of these attempts was the occurrence that is larger than one's self and stretching the self.

In 1965, Viktor Frankl's book "Man's Search for Meaning: An Introduction to Logotherapy" was published. Sadly enough, this book was written as a chronicle about his experiences in a concentration camp during World War II. In his work, Frankl pointed out the inevitability of the presence or search of a meaning in life. He emphasized the importance of striving for a meaning for a life worth living. In his words:

"What man actually needs is not a tensionless state but rather the striving and struggling for some goal worthy of him. What he needs is not the discharge of tension at any cost, but the call of a potential meaning waiting to be fulfilled by him" (Frankl, V. E., 1965).

This is one of the earliest efforts in psychology literature to emphasizing the importance of a meaningful life. However, in psychology, meaning in life was brought to the spotlight only after the pathology oriented understanding of human mind was started to become challenged by positive psychology movement that seeks human strengths and virtues (Seligman & Csikszentmihalyi, 2000). Since then, meaning in life was taken into account from various positions in psychology research. Research questions in meaning of life research can be clustered into several central themes. (1) Necessity and function of meaning in life, (2) universality vs uniqueness of meaning in life, (3) How to succeed a meaningful life (4) Prerequisites of achieving a meaningful life, (5) psychopathology / psychological well-being in the presence or absence of meaning, (6) happiness and lastly (7) general functioning.

As recited earlier, meaning in life have been studied within various perspectives and paradigms due to its indefinite nature and fuzzy conceptualization. In quantitative psychology research, Purpose in Life Test (Crumbaugh & Maholick, 1964; as cited in Steger et al. 2006), Life Regard Index (Battista & Almond, 1973; as cited in Steger et al. 2006), and Sense of Coherence Scale (Antonovsky, 1987; as cited in Steger et al. 2006) can be accounted as main instruments utilized as a measure of meaning in life. However, none of these scales were constructed for this purpose, and included numerous irrelevant items that would confound (Steger et al. 2006).

Based on the previous findings and thoughts, Steger et al. (2006) suggested the Meaning in Life Questionnaire (MLQ) with two components, namely *search for meaning* and the *presence of meaning*. Meaning in life was defined as the sense and significance experienced with regard to one's being and existence (Steger et al. 2006). Such operationalization embraces all of the major definitions of meaning. Each of the components (subscales) are measured by five items adding up to ten items in total. Presence of meaning subscale measures the extent to which respondents feel their lives have meaning, whereas the search for meaning subscales measures the extent to which respondents strive to find meaning and understanding in their lives.

The scale is designed in a 7-point Likert-type format ranging from 1 (absolutely true) to 7 (absolutely untrue). The scale had proved satisfactory validity and reliability in a series of studies conducted with college freshmen (Steger et al., 2006). The aim of the present study was to investigate the psychometric properties of MLQ in Turkey.

### **2.3.1. Method**

#### **2.3.1.1. Participants**

**Sample 1.** The data were collected online via Surveyey.com between 11th and 31th of May, 2014. Surveyey.com is a website that enables users to collect data online. After the questionnaire set was created in the web interface, a www link referring to questionnaire set was created. This link was shared with the general psychology class rosters via METU Online Course Management System. Participants of this study were given 1 bonus point for participation. Along with collecting data

from general psychology students, a Facebook group was created and participants were invited via snowball sampling method. Participants were announced that tablet PC's would be given to two participants determined with a lottery.

Eight hundred and three participants were reached between 11<sup>th</sup> and 31<sup>st</sup> of May 2014. Data screening was made, prior to analysis. Participants who completed the questionnaire in less than 20 minutes were excluded from the sample. As a result of several data screening criteria, further statistical analysis was conducted with 651 participants. Statistical analyses were conducted using SPSS 20 statistical package program. The mean age of the participants were 23.47 ( $SD = 4.04$ ). The sample was consisting of 161 males (24.8 %) and 489 females 75.2 (%). Four-hundred and ten participants were single, 46 were married, and 194 were committed in a relationship. The majority of the participants (66.3 %) were undergraduate students, whereas 20 % and 13.7 % were affiliated with masters and Ph.D. degrees, respectively. All of the participants were enrolled in an undergraduate or graduate program at the time of data collection. Two-hundred and one participants reported history of psychiatric help, whereas 450 participants had never sought help from a mental health professional. The first sample is utilized for the exploration of factor analytic structure, reliability and, validity investigations of MLQ.

**Sample 2.** The data were collected online via Survey.com between 9<sup>th</sup> and 15<sup>th</sup> of June, 2014. Participants were contacted via e-mails they provided during the first study. After data screening, 222 participants were left for further analyses. Mean age of the participants was 23.64 ( $SD = 4.03$ ). The sample was consisting of 46 males (20.3 %) and 176 females (79.7 %). Sample 2 was recruited for test-retest reliability.

**Sample 3.** The data were collected online via Qualtrics.com between 26<sup>th</sup> September and 22<sup>th</sup> of November, 2014. After data screening, 379 participants remained for further analyses. Mean age of the participants was 24.90 ( $SD = 7.5$ ). The sample consisted of 80 (21.1 %) males and 299 (78.9 %) females. One (.3 %) participant had completed primary school, 195 (51.5 %) participants had achieved a high school diploma, and 98 (25.9 %) participants had an undergraduate degree, 55 (14.5 %) had a master's degree, and 30 (7.9 %) participants were currently enrolled in or graduated from a Ph.D. program. One-hundred and twenty two participants (32.19 %) were employed and 257 participants (67.81 %) were unemployed. One-

hundred and sixty seven (44.1 %) participants reported history of psychiatric help, whereas 212 (55.9 %) participants had never sought help from a mental health professional. Sample 3 is recruited for confirmatory factor analysis. Table 2.3.1 provides descriptive properties of three samples recruited in the present research.

### **2.3.1.2. Instruments**

**Basic Personality Traits Inventory (BPTI).** BPTI is 45-item personality inventory assessing the personality traits from a 5-factor model perspective. It is developed by Gençöz and Öncül (2008). The adjectives in the scale are measured on a scale ranging between 1 (*does not apply to me*) and 5 (*definitely applies to me*). BPTI derives 6 personality traits (extraversion, conscientiousness, agreeableness, neuroticism, openness to experience, and negative valence). The internal consistency coefficients found in the original study are as follows: Extraversion(.89), conscientiousness (.85), agreeableness (.85), neuroticism (.83), openness to experience (.80), negative valence (.71). The present study yielded .88 for extraversion, .84 for conscientiousness, .84 for agreeableness, .81 for neuroticism, .75 for openness to experience, and .67 for negative valence in Sample 1.

**Positive and Negative Affect Schedule (PANAS).** It is a 20-item self-report measure of positive and negative affect developed by Watson, Clark, and Tellegen (1988). It provides independent measures of positive affect and negative affect with positive and negative affect subscales each consisting of 10 items. Positive affect represents the extent to which an individual experiences enthusiasm and alertness, whereas negative affect represents lethargy and sadness. The Cronbach's alpha was .88 for the positive affect subscale and .85 for the negative affect subscale (Watson et al., 1988). The test-retest reliability of the scale was .47 (Watson et al., 1988). The Turkish adaptation study of PANAS was conducted by Gençöz (2000), who found similar internal consistency coefficients with Watson et al. (1988): .83 for the positive affect subscale and .86 for the negative affect subscale. The test-retest reliability of the Turkish version was .40 for the positive affect subscale, and .54 for the negative affect subscale (Gençöz, 2000). In the present study, the internal consistency reliability of PANAS was examined in Sample 1. The coefficients were .86 for both positive affect and negative affect dimensions of PANAS.

Table 2.3.1.

*Descriptive Properties of the Study Samples*

	<i>M</i>	<i>SD</i>	<i>N</i>	%	Min-Max
<b>Sample 1</b>					
Age	23.47	4.04	652		17-58
Gender					
Male			162	24.8	
Female			490	75.2	
Education					
Undergraduate			438	67.2	
M.S.			124	19.0	
Ph.D.			90	13.8	
Employment status					
Unemployed			453	69.5	
Employed			194	29.8	
Ever consulted mental health professional					
Yes			201	30.8	
No			450	69.1	
<b>Sample 2</b>					
Age	23.63	4.00	222		18-39
Gender					
Male			45	20.3	
Female			177	79.7	
Education					
Undergraduate			141	63.5	
M.S.			50	22.5	
Ph.D.			31	14	
Employment status					
Unemployed			156	70.3	
Employed			66	29.7	
Ever consulted mental health professional					
Yes			78	35.1	
No			144	64.9	
<b>Sample 3</b>					
Age	24.90	7.50	379		17-63
Gender					
Male			80	21.1	
Female			299	78.9	
Education					
Primary School			1	.3	
High School			195	51.5	
Undergraduate			98	25.9	
M.S.			55	14.5	
Ph.D.			30	7.9	
Employment status					
Unemployed			122	32.2	
Employed			257	67.8	
Ever consulted mental health professional					
Yes			167	44.1	
No			212	55.9	

**Beck Depression Inventory (BDI).** BDI is a 21 item self-report inventory that aims to measure cognitive, emotional and motivational symptoms of depression (Öner, 1997). It is developed by Beck, Rush, Shaw, and Emery (1978). Respondents are asked to report how they felt over the last week by choosing the most suitable statement among 4 statements in each item. Each item is scored from 0 to 3. It is adapted to Turkish culture by Hisli (1988) with an internal consistency coefficient of .74. In the present study, the internal consistency coefficient for BDI was .89 in Sample 1.

**The Satisfaction with Life Scale.** The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) is a self-report measure on which respondents indicate their degree of agreement with five statements about the satisfaction with life, such as “In most ways my life is close to my ideal”. Items are rated to on a 7-point Likert scale that ranges from strongly disagree to strongly agree. Higher scores on the SWLS indicate greater satisfaction with life. It is an internally consistent scale in which Cronbach’s alpha coefficient tends to be in the upper .80 and test-retest reliability in the .64 to .84 range (Pavot & Diener, 1993). This inventory was adapted into Turkish by Gençöz, Durak, and Şenol-Durak (2007), and they obtained satisfactory psychometric properties for the scale. In their study with correctional officers, they found Cronbach’s alpha coefficient as .83 and sufficient criterion related validity. In the present study, in sample 1, the internal consistency reliability coefficient of SWLS was .89.

### **2.2.1.3. Procedure**

Psychometric properties of Meaning in Life Questionnaire (MLQ) were studied in three different samples. The research project was approved by the Review Board of Middle East Technical University. The original MLQ was translated into Turkish by three PhD candidates in Psychology. After the initial translation, three separate Turkish versions were examined by the researchers. After careful consideration, a single Turkish scale was submitted to another bilingual PhD candidate in Psychology for back translation. Following the back translation, the original items of the scale were compared with the back translated items and the final version of the MLQ was agreed upon by the researchers.

## **2.3.2. Results**

### **2.3.2.1. Exploratory Factor Analysis**

Factor structure of MLQ was investigated with principal axis factoring (PAF) with direct oblimin rotation ( $\kappa=0$ ) through SPSS. Principal axis factoring with direct oblimin rotation was preferred due to the divergent nature of MLQ subscales. Initially, Kaiser-Meyer-Olkin coefficient was found .87,  $p<.001$  which demonstrated excellent sampling adequacy for PAF in the recent dataset. Visual examination of scree plot specified a two factor solution of MLQ. By the same token, 2 factors with Eigen values higher than 1 was observed similar to the original study, 4.46 and 2.85, respectively. Item loadings to two factors corresponded to the original scales factor structure. Ten items of the MLQ loaded onto two factors named *search for meaning* and *presence of meaning*. Two factor solution of MLQ explained 66.40 % of the variance, 41.26 % of variance was explained by the first factor itself. Mean score was 23.6 ( $SD = 6.9$ ) in presence subscale and 22.7 ( $SD = 7$ ) in search subscale. The original study yielded a mean score of 24.5 ( $SD = 6.6$ ) for presence subscale and 23.1 ( $SD = 6.6$ ) for search subscales which are very similar to the findings obtained in present study. Table 2.3.2 shows item loadings onto both factors of MLQ.

### **2.3.2.2. Internal Consistency**

The internal consistency among items of MLQ's two subscales was tested using Cronbach's alpha coefficient and found .90 and .91 for presence and search subscales, respectively.

### **2.3.2.3. Test-retest Reliability**

The time 2 data collected from the sample showed that MLQ scores are stable over time. Time lag between time 1 and time 2 was 3 weeks. Test-retest reliability for MLQ was found .79 and .66 for *presence of meaning* and *search for meaning* subscales respectively. The original MLQ study revealed .70 and .73 test-retest reliability for presence of meaning and search for meaning subscales for 1 month interval. Thus, our results were similar with the original study's results in this manner.

Table 2.3.2

*Factor Structure of MLQ*

	Factor	
	1	2
Hayatımı neyin anlamı kıldığını bilirim.	<b>-.85</b>	-.20
Hayatımın net bir amacı vardır.	<b>-.85</b>	-.34
Hayatım için tatmin edici bir amaç keşfettim.	<b>-.80</b>	-.12
Hayatımın net bir amacı yok.	<b>-.78</b>	-.24
Hayatımın anlamını biliyorum	<b>-.76</b>	-.05
Hayatım için bir amaç ya da misyon arıyorum.	-.21	<b>.90</b>
Hayatımda bir anlam arıyorum.	-.13	<b>.82</b>
Sürekli, hayatımı kayda değer hale getirecek bir şeyler arıyorum.	-.17	<b>.79</b>
Hayatımı anlamlı hissettirecek bir şey arıyorum.	-.19	<b>.79</b>
Her zaman hayatımın amacını bulma arayışındayım.	-.19	<b>.77</b>

Table 2.3.3

*Reliability Coefficients of MLQ*

	Internal Consistency	Test-Retest Reliability
Presence of Meaning	.90	.79
Search for Meaning	.91	.66

**2.3.2.4. Validity**

In order to assess convergent and divergent validity, MLQ was correlated with other theoretically associated constructs. Table 1 indicates the correlations of related constructs with MLQ in the present study and in the original MLQ study. As an evidence for convergent validity, presence of meaning was found positively correlated with satisfaction with life, extraversion, openness to experience, conscientiousness, agreeableness and positive affect; whereas the negative correlations of presence of meaning with depression and negative affect was evaluated as a sign of divergent validity. In contrast with the original study, no significant correlation was found between search for meaning and neuroticism.



Search for meaning subscale was positively correlated neuroticism, depression and negative affect and it had no remarkable negative correlation with other variables. The present study revealed highly agreeing results to the original study in terms of convergent validity. In terms of discriminant validity, the weak and negative correlation between MLQ subscales ( $r = -.21, p < .001$ ) is accounted as evidence of discriminant validity. Table 2.3.4 summarizes correlations between MLQ Subscales, and relevant constructs.

Table 2.3.4

*Correlations between CEI-II and Related Constructs*

	Presence of Meaning	Search for Meaning
Life Satisfaction	.44**	-.17**
Extraversion	.29**	-.07
Conscientiousness	.37**	-.01*
Agreeableness	.32**	-.03
Neuroticism	-.06	.12**
Openness to Experience	.35**	-.08*
Positive Affect	.40**	-.09*
Negative Affect	-.23**	.16**
Depression	-.40**	.21**

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

### 2.3.2.5. Confirmatory Factor Analysis

The initial factor structure derived from the first sample using principle axis factoring is tested for model fit via EQS 6.2 in Sample 3. A confirmatory factor analysis (CFA) was conducted to test the model fit for “presence of meaning” latent variable indicated by items 1, 4, 5, 6, 9 of MLQ and “search of meaning” latent variable indicated by items 2, 3, 7, 8, 10 of MLQ. The analysis indicated a non-normality (*Mardia's Z* = 32.80), hence robust statistics were taken into consideration instead of the maximum likelihood model. The average off-diagonal absolute standardized residual was 0.04. The percentage of residuals between the *z* scores of -0.1 and +0.1 was 82.83 (41.82 % of residuals were between -0.1 and 0 whereas 40.91

% of residuals were between 0 and .1). The remaining 9.09 % of residuals fell between the values 0.1 and 0.2 and 9.09 % of residuals fell between -0.1 and -0.3.

Robust statistics revealed that the suggested model of MLQ fit the data very well, *Satorra-Bentler*  $\chi^2(34) = 115.94$ ,  $p = 0.00$ ,  $CFI = 0.96$ ,  $RMSEA = 0.07$ ,  $CI$  [0.06, 0.09]. Besides, regression coefficients for the “*presence of meaning*” latent variable ranged between .77 to .86 whereas regression coefficients for the “*search of meaning*” latent variable ranged between .76 to .91. Each of the regression coefficients were significant. The CFA showed a good model fit to the data. However, in order to see if there is more space to develop model fit, Lagrange Multiplier Test (LM Test) was run to see any post-hoc modification available. LM test did not suggest any significant and/or noteworthy increment in  $\chi^2$ , therefore no modifications were performed.

### **2.3.3. Discussion**

Among several instruments that are used to measure meaning in life, Meaning in Life Questionnaire (MLQ) was particularly designed to capture two domains, namely search for meaning and presence of meaning. The results of the present study showed that Turkish version of MLQ is a psychometrically reliable instrument that can be used for research and applied purposes. The Turkish MLQ revealed high internal consistency and high stability over 3 weeks. MLQ’s search for meaning and presence of meaning subscales were correlated with theoretically relevant scales in expected directions and the correlation coefficients were similar to those revealed in the original study (Steger et al., 2006). Thus, Turkish version of MLQ did have both convergent and divergent validities. Besides, confirmatory factor analysis (CFA) yielded a two-factor model with sufficient fit indices that were also identical with the original scale.

Meaning in life is a significant predictor of psychological well-being (Seligman, 2002; Baumeister & Vohs, 2002). In this respect, humanistic therapy schools, such as Logotherapy and client-centered therapy centralize the significance of life meaning in their approach. One of the anticipated gains of Turkish psychology research and clinical field is the practical and theoretical function of MLQ for assessing the presence of and/or the search of life meaning. Especially,

clinical practice contexts that prioritize human growth can make great use of MLQ as a clinical tool. The presence of life meaning was found to be associated with general stability of life, life purposes including goals and fulfillments, experiencing a sense of positivity, justification of present action, and self-verification, self-efficacy, and lastly self-worth (Baumeister & Vohs, 2002). Therefore, assessment of life meaning for clinical purposes might assist clinicians to make enriched formulations of their clients' problems. Kleftaras and Psarra (2012) studied the role of the dimensions of meaning in life on depressive symptoms and psychological well-being. They found that participants with higher life meaning have lower depressive symptomatology, higher subjective well-being, and better general health. Kleftaras and Psarra (2012) also highlighted the necessity and lacking of inclusion of meaning in life aspect to current research and clinical applications of mental health.

Carrying out research about meaning in life in Turkey would offer a contribution to world literature by providing data from Turkish culture, since ways for derivation of meaning might be culture sensitive (Kleftaras & Psarra, 2012). Particularly, interpersonal aspect of life meaning might lead to culture specific strategies to derive life meaning from social interactions.

Sample sizes were found sufficient in all three samples of the current research. Simple correlations, exploratory factor analysis, internal consistency, convergent and divergent validities were studied in the first sample; time stability analysis was studied in the second sample; and as suggested by Van Prooijen & Van Der Kloot (2001) confirmatory factor analysis was carried out in the third sample. Sampling adequacy was satisfactory for scale adaptation purposes. Further studies are suggested to examine the psychometric properties of MLQ in community samples within Turkish culture. Furthermore, quantity and variety of psychological instruments that were used to validate MLQ was adequate, and Turkish adaptation of MLQ has indicated associations with relevant psychological instruments in expected directions, which were similar to the findings of the original MLQ study. Similar with other scale adaptation studies, the main limitation of the present study was due to the time interval in which data collection procedure was implemented for sample 1 (scale adaptation sample) and sample 2 (test-retest sample). On 13<sup>th</sup> of May, 2014 when the data collection procedure was initiated, a coal mine explosion caused an underground mine fire that burned for 2 days; 301 people were reportedly dead in the

occasion which was the worst mine disaster in Turkey's history, and a huge catastrophe for the nation. Disasters of such great extent might be accounted for an interference with people's affective and cognitive responses. Therefore, the nature of the data might be affected from the mining incidence. Secondly, sample 1 and sample 2 were consisting of college students. Therefore, replication of the study with general population might provide evidence for the generalizability of the results.

#### **2.4. Subjective Happiness Scale**

Happiness is the main pursuit of life for most people in western societies. Psychology researchers are in an attempt to understand the underlying origins of happiness and discuss the interplay between genetic dispositions, finances, physical activity, adaptation, life events and several other variables that might be accounted for happiness (Lyubomirsky & Lepper, 1999). According to Chekola (2006) extend to which the sort of things that are desired in life are available to oneself is the most important aspect of happiness. Similarly, Veenhoven (1984) defined happiness as the subjective evaluation of overall life quality in terms of positive assets. However, there is a huge variability in the way happiness is achieved, and sources of happiness might change for everyone (Freedman, 1978). That's because, individuals have various aspirations, aims and needs in life. Despite the difficulty to define what makes people happy; Lybomirsky et al. (1999) pointed out that most people know whether they're happy or not. Therefore, it is fair to say that happiness is a very subjective state.

Subjective Happiness Questionnaire (SHS) is a four item, seven point Likert scale that aims to quantize "subjective happiness" in a global and inclusive manner. It is developed by Lyubomirsky and Lepper (1999). Psychometric studies on the SHS indicate that, despite it is a short questionnaire with a single factor, it effectively measures happiness. Two items of SHS asks respondents to compare themselves to others and other two items request a self-rating. Internal consistency of the scale was found as .93. Besides, a three week test-retest reliability coefficient was found as .61. Convergent validity of the scale was studied with relevant constructs such as optimism, positive and negative affect, neuroticism and relevant pattern of associations were revealed.

The aim of the present study is to adapt SHS to Turkish culture.

## **2.4.1. Method**

### **2.4.1.1. Participants**

**Sample 1.** The data were collected online via Surveyey.com between 11th and 31th of May, 2014. Surveyey.com is a website that enables users to collect data online. After the questionnaire set was created in the web interface, a www link referring to questionnaire set was created. This link was shared with the general psychology class rosters via METU Online Course Management System. Participants of this study were given 1 bonus point for participation. Along with collecting data from general psychology students, a Facebook group was created and participants were invited via snowball sampling method. Participants were announced that tablet PC's would be given to two participants determined with a lottery.

Eight hundred and three participants were reached between 11<sup>th</sup> and 31<sup>st</sup> of May 2014. Data screening was made, prior to analysis. Participants who completed the questionnaire in less than 20 minutes were excluded from the sample. As a result of several data screening criteria, further statistical analysis was conducted with 651 participants. Statistical analyses were conducted using SPSS 20 statistical package program.

The mean age of the participants were 23.47 ( $SD = 4.04$ ). The sample was consisting of 161 males (24.8 %) and 489 females 75.2 %). Four-hundred and ten participants were single, 46 were married, and 194 were committed in a relationship. The majority of the participants (66.3 %) were undergraduate students, whereas 20 % and 13.7 % were affiliated with masters and Ph.D. degrees, respectively. All of the participants were enrolled in an undergraduate or graduate program at the time of data collection. Two-hundred and one participants reported history of psychiatric help, whereas 450 participants had never sought help from a mental health professional. The first sample is utilized for the exploration of factor analytic structure, reliability and, validity investigations of SFPQ.

**Sample 2.** The data were collected online via Survey.com between 9<sup>th</sup> and 15<sup>th</sup> of June, 2014. Participants were contacted via e-mails they provided during the first study. After data screening, 222 participants were left for further analyses. Mean age of the participants was 23.64 ( $SD = 4.03$ ). The sample was consisting of 46 males (20.3 %) and 176 females (79.7 %). Sample 2 was recruited for test-retest reliability.

Table 2.4.1.

*Descriptive Properties of the Study Samples*

	<i>M</i>	<i>SD</i>	<i>N</i>	%	Min-Max
<b>Sample 1</b>					
Age	23.47	4.04	652		17-58
Gender					
Male			162	24.8	
Female			490	75.2	
Education					
Undergraduate			438	67.2	
M.S.			124	19.0	
Ph.D.			90	13.8	
Employment status					
Unemployed			453	69.5	
Employed			194	29.8	
Ever consulted mental health professional					
Yes			201	30.8	
No			450	69.1	
<b>Sample 2</b>					
Age	23.63	4.00	222		18-39
Gender					
Male			45	20.3	
Female			177	79.7	
Education					
Undergraduate			141	63.5	
M.S.			50	22.5	
Ph.D.			31	14	
Employment status					
Unemployed			156	70.3	
Employed			66	29.7	
Ever consulted mental health professional					
Yes			78	35.1	
No			144	64.9	
<b>Sample 3</b>					
Age	24.90	7.50	379		17-63
Gender					
Male			80	21.1	
Female			299	78.9	
Education					
Primary School			1	.3	
High School			195	51.5	
Undergraduate			98	25.9	
M.S.			55	14.5	
Ph.D.			30	7.9	
Employment status					
Unemployed			122	32.2	
Employed			257	67.8	
Ever consulted mental health professional					
Yes			167	44.1	
No			212	55.9	

**Sample 3.** The data were collected online via Qualtrics.com between 26<sup>th</sup> September and 22<sup>th</sup> of November, 2014. After data screening, 379 participants remained for further analyses. Mean age of the participants was 24.90 ( $SD = 7.5$ ). The sample consisted of 80 (21.1 %) males and 299 (78.9 %) females. One (.3 %) participant had completed primary school, 195 (51.5 %) participants had achieved a high school diploma, and 98 (25.9 %) participants had an undergraduate degree, 55 (14.5 %) had a master's degree, and 30 (7.9 %) participants were currently enrolled in or graduated from a Ph.D. program. One-hundred and twenty two participants (32.19 %) were employed and 257 participants (67.81 %) were unemployed. One-hundred and sixty seven (44.1 %) participants reported history of psychiatric help, whereas 212 (55.9 %) participants had never sought help from a mental health professional. Sample 3 is recruited for confirmatory factor analysis.

Table 2.4.1 provides descriptive properties of three samples recruited in the present research.

#### **2.4.1.2. Instruments**

**Basic Personality Traits Inventory (BPTI).** BPTI is 45-item personality inventory assessing the personality traits from a 5-factor model perspective. It is developed by Gençöz and Öncül (2008). The adjectives in the scale are measured on a scale ranging between 1 (*does not apply to me*) and 5 (*definitely applies to me*). BPTI derives 6 personality traits (extraversion, conscientiousness, agreeableness, neuroticism, openness to experience, and negative valence). The internal consistency coefficients found in the original study are as follows: Extraversion(.89), conscientiousness (.85), agreeableness (.85), neuroticism (.83), openness to experience (.80), negative valence (.71). The present study yielded .88 for extraversion, .84 for conscientiousness, .84 for agreeableness, .81 for neuroticism, .75 for openness to experience, and .67 for negative valence.

**Positive and Negative Affect Schedule (PANAS).** It is a 20-item self-report measure of positive and negative affect developed by Watson, Clark, and Tellegen (1988). It provides independent measures of positive affect and negative affect with positive and negative affect subscales each consisting of 10 items. Positive affect represents the extent to which an individual experiences enthusiasm and alertness, whereas negative affect represents lethargy and sadness. The Cronbach's alpha was

.88 for the positive affect subscale and .85 for the negative affect subscale (Watson et al., 1988). The test-retest reliability of the scale was .47 (Watson et al., 1988). The Turkish adaptation study of PANAS was conducted by Gençöz (2000), who found similar internal consistency coefficients with Watson et al. (1988): .83 for the positive affect subscale and .86 for the negative affect subscale. The test-retest reliability of the Turkish version was .40 for the positive affect subscale, and .54 for the negative affect subscale (Gençöz, 2000). In the present study, the internal consistency reliability of PANAS was examined in Sample 1. The coefficients were .86 for both positive affect and negative affect dimensions of PANAS.

**The Satisfaction with Life Scale.** The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) is a self-report measure on which respondents indicate their degree of agreement with five statements about the satisfaction with life, such as “In most ways my life is close to my ideal”. Items are rated to on a 7-point Likert scale that ranges from strongly disagree to strongly agree. Higher scores on the SWLS indicate greater satisfaction with life. It is an internally consistent scale in which Cronbach’s alpha coefficient tends to be in the upper .80 and test-retest reliability in the .64 to .84 range (Pavot & Diener, 1993). This inventory was adapted into Turkish by Gençöz, Durak, and Şenol-Durak (2007), and they obtained satisfactory psychometric properties for the scale. In their study with correctional officers, they found Cronbach’s alpha coefficient as .83 and sufficient criterion related validity. In the present study, in sample 1, the internal consistency reliability coefficient of SWLS was .89.

**Life Orientation Test (LOT).** Life Orientation Test (LOT) was developed by Scheier and Carver (1985). It is used to determine the level of optimism and individuals’ orientation towards life. It has 12 items, 4 of which measure the positive orientation towards life, 4 items measure the negative orientation, whereas 4 items do not intend to measure any construct. Each of the items are designed in a 5-point Likert fashion ranging from 0 (*strongly disagree*) to 5 (*strongly agree*). LOT was adapted to Turkish culture by Aydın and Tezer (1991). The Turkish version yielded .72 internal consistency coefficient (Cronbach alpha). Besides, a 4-week interval test-retest reliability coefficient was .77. Üstündağ and Budak (1999) found that Turkish version of the scale has a 2-factor structure that confirms the original scale. In the present study, LOT yielded .85 internal consistency coefficient.



**Oxford Happiness Questionnaire Short Form (OHQ-S).** Oxford Happiness Questionnaire was developed by Hills and Argyle (2002) as a short form of Oxford Happiness Inventory. It aims to measure happiness with 7 items on a 6-point Likert scale ranging from *strongly agree* to *strongly disagree*. The original scale yielded .91 internal consistency coefficient. Doğan and Sapmaz (2012) studied the adaptation of the scale to Turkish culture. The Turkish form of the scale yielded .91 internal consistency coefficient with a single-factor solution. The present study yielded .83 internal consistency coefficient for the Oxford Happiness Questionnaire in Sample 1.

**Beck Depression Inventory (BDI).** BDI is a 21 item self-report inventory that aims to measure cognitive, emotional and motivational symptoms of depression (Öner, 1997). It is developed by Beck, Rush, Shaw, and Emery (1978). Respondents are asked to report how they felt over the last week by choosing the most suitable statement among 4 statements in each item. Each item is scored from 0 to 3. It is adapted to Turkish culture by Hisli (1988) with an internal consistency coefficient of .74. In the present study, the internal consistency coefficient for BDI was .89.

**Rosenberg Self-Esteem Scale (R-SES).** Rosenberg Self-Esteem Scale is a 10-item, 4-point Likert type scale developed by Rosenberg (1965). The scale measures self-worth and self-acceptance related overall feelings in adolescents. Internal consistency coefficient was found .77 in the original study. The scale was adapted into Turkish culture by Çuhadaroğlu (1985). Çuhadaroğlu used psychiatric interviews with high school students as a comparison base to validate R-SES, and a correlation coefficient of .71 was found between the scale scores and psychiatric interviews. The present study yielded .92 internal consistency coefficient for R-SES in Sample 1.

#### **2.4.1.3. Procedure**

Psychometric properties of Subjective Happiness Scale (SHS) is investigated in three different samples. The research project was approved by the Review Board of Middle East Technical University. The original SHS was translated into Turkish by three PhD candidates in Psychology. After the initial translation, three separate Turkish versions were examined by the researchers. After careful consideration, a single Turkish scale was submitted to another bilingual PhD Candidate in

Psychology for back translation. Following the back translation, the original items of the scale were compared with the back translated items and the final version of the SHS was agreed upon by the researchers.

## **2.4.2. Results**

### **2.4.2.1. Exploratory Factor Analysis**

Initially, factor structure of the SHS was examined through SPSS. A principal component analysis (PCA) was performed with Varimax rotation. Kaiser-Meyer-Olkin Sampling Adequacy coefficient was found .83,  $p < .001$  which demonstrates excellent sampling adequacy for PCA. PCA revealed that the four items of the SHS yielded a single factor with an Eigen value higher than 1 (2.96). 74% of the variance was explained by a single factor solution. Mean score was 4.61 ( $SD = 1.34$ ) in SHS which is very similar to the results of original study which was held with 551 US college students ( $M = 4.63$ ,  $SD = 1.72$ ). Factor loadings of SHS items are summarized in Table 2.4.2

### **2.4.2.2. Internal Consistency**

Internal consistency among items of SHS was tested using Cronbach's alpha coefficient and found .88.

### **2.4.2.3. Test-retest Reliability**

Longitudinal data was collected with the sample, and SHS demonstrated stability over time. Time lag between time one and time two was 3 weeks. And test-retest reliability for SHS was found .81,  $p < .001$ . The original SHS study reveals .85 test-retest reliability for 1 month time lag. Therefore, our results are analogous with the original study's results in this manner.

Table 2.4.2

*Factor Structure of SHS*

							Factor
							1
1 Genel olarak, kendimi:							
1	2	3	4	5	6	7	
çok mutlu bir insan olarak görmem						çok mutlu bir insan olarak görürüm	<b>.90</b>
3. Bazı insanlar genellikle çok mutludur. Bu insanlar hayatlarında olup bitenden bağımsız olarak, genellikle her durumu en iyi şekilde değerlendirerek, hayattan zevk alırlar. Bu niteleme sizi ne ölçüde tanımlıyor?							
1	2	3	4	5	6	7	
hiç						oldukça fazla	<b>.87</b>
2. Çoğu arkadaşşıma göre ben:							
1	2	3	4	5	6	7	
daha az mutluyum						daha çok mutluyum	<b>.84</b>
4. Bazı insanlar genellikle çok mutlu değildir. Depresyonda olmasalar bile, hiçbir zaman yeterince mutlu görünmezler. Bu niteleme sizi ne ölçüde tanımlıyor?							
1	2	3	4	5	6	7	
hiç						oldukça fazla	<b>.83</b>

Table 2.4.3

*Correlations between SHS and Related Constructs*

	Subjective Happiness
Life Satisfaction	.44*
Extraversion	.29*
Conscientiousness	.37*
Agreeableness	.32*
Neuroticism	-.06
Openness to Experience	.35*
Positive Affect	.40*
Negative Affect	-.23*
Depression	-.40*

Note. \*Correlation is significant at the 0.01 level.

#### 2.4.2.4. Validity

Convergent validity of SHS was found satisfactory in the present study. Table 2.4.3 shows the correlations of related constructs with SHS in the present and original study. As expected, subjective happiness was moderately negatively correlated with neuroticism, negative affect and depression whereas it was moderately positively correlated with extraversion, positive affect, self-esteem, life satisfaction, positive life orientation, and oxford happiness questionnaire. The present study revealed highly agreeing results to the original study in terms of convergent validity.

#### 2.4.2.5. Confirmatory Factor Analysis

The single factor structure derived from the first sample using principle component analysis through SPSS is tested for a model fit via EQS in the third sample. A confirmatory factor analysis (CFA) was conducted to test a single factor with four indicators. Mardia's Coefficient indicated a slight non-normality (*Mardia's*  $Z = 32.80$ ), suggesting to take robust statistics into consideration instead of the maximum likelihood model. However, Schweizer (2010) recommends that, selection of larger limits might be necessary with large samples or few indicator variables. Since, there is single factor with four indicators and Mardia's  $Z$  is higher than 5, robust statistics were taken into account. The average off-diagonal absolute

standardized residual was 0.03. The percentage of residuals between the z scores of -0.1 and +0.1 is 81.82 % (41.82 % of residuals are between -.1 and 0 whereas 40.00 % of residuals are between 0 and .1). Maximum likelihood statistics revealed that the suggested model of SHS fit the data well,  $\chi^2(2) = 14.34, p = 0.00, CFI = 0.98, GFI = .98, AGFI = .89, RMSEA = 0.12$ . The CFA showed an adequate model fit to the data.

### **2.4.3. Discussion**

The present study aimed to examine the psychometric properties of Subjective Happiness Scale (SHS) in Turkish culture. The results of the study proved Turkish SHS as a reliable and valid measure of subjective happiness. The Turkish version yielded satisfactory internal consistency, factor structure, convergent and discriminant validity, and test-retest reliability. In terms of convergent validity, SHS strongly and positively correlated with Oxford Happiness Questionnaire. Besides, SHS had moderate positive associations with optimism, life satisfaction, extraversion, positive affect, and self-esteem. This does not only indicate the convergent validity of the SHS, but also shows that SHS measures the distinct construct of happiness. Furthermore, correlations of SHS with irrelevant constructs were low as an evidence of discriminant validity. In general, Turkish adaptation of SHS yielded adequate psychometric qualities.

Gender, age, education level and marital status did not make a difference in SHS scores. However, participants with a present physical illness scored lower than healthy individuals on SHS. Future studies might investigate the relation of subjective happiness with different types of physical illnesses, duration of illness, chronic vs. acute illnesses, general functioning degradation due to illness, and adjustment.

The original SHS was constructed on a subjectivist attitude that reflects happiness from respondent's perspective (Lyubomirsky & Lepper, 1999). Four items of SHS require subjects to make a self-evaluation if they are happy or unhappy. That is a functional approach to measure happiness universally, because the concept of happiness was defined differently among various cultures. Veenhoven (2012) stated that conceptualizations, patterns, societal correlates, and susceptibility to social desirability greatly varies among different cultures. Therefore, the subjectivist

attitude of SHS remains functional by allowing study participants to evaluate their own level of happiness compared to others within their cultures.

Several theories in psychology considers happiness as a major indicator of psychological well-being. It was characterized by positive emotions (Seligman, 2002); it can be achieved through pleasure, life engagement, positive relationships, presence of life meaning, and having accomplishments (Seligman, 2004); and lastly it constitutes a life worth living (Diener, Lucas, & Oishi, 2002). Therefore, integrating the study of happiness and subjective well-being to the field of clinical psychology might enhance the development of treatment strategies that target the subjective well-being. From this point of view, clinical psychologists can use SHS both as a research instrument and a valuable assessment tool for positively oriented mental health service. The utilization of subjective well-being and related concepts in therapy is not evident in Turkish clinical psychology literature. However, Fava and Ruini (2003) suggested a treatment approach named as well-being therapy, which targets improvements on six fundamental dimensions, i.e., autonomy, personal growth, environmental mastery, purpose in life, positive relations, and self-acceptance. The rationale for developing the well-being therapy was based on the finding that life quality measurement is a significant predictor of relapse and recurrence of depression (Thunedborg, Black, & Bech, 2003, as cited in Fava, & Ruini, 2003, p. 46); response to a treatment is confounded with full recovery (Fava, 1996, as cited in Fava, & Ruini, 2003, p. 46); and quality of life assessment in treatment and clinical research had broadened the evaluation of treatment outcome (Gladis, Gosch, Dishuk, & Crits-Cristoph, 1999, as cited in Fava, & Ruini, 2003, p. 46). Well-being therapy holds similarities with cognitive behavioral therapy in terms of session structures and techniques. Despite the promising outlook represented by the well-being therapy, its deterministic nature by leaning to cognitive behavioral therapy, using psychological well-being as a tool that solely aims to prevent relapse and assist the correction of the bad, not centralizing the subjective experience of the clients appears as the shortcomings of it.

A therapy approach that encompasses the subjective nature of well-being and its relation with life meaning, personal virtues, and engagement should be studied and developed. SHS and its background ideology can be used for the assessment of psychological well-being along with other instruments of positive psychology to

realize a client-centered, evidence-based therapy for helping clients to live a better life. Initially, it is suggested that research focusing on the associations between subjective happiness and its precedents, associations with several sources of psychological distress, and its contribution for understanding both psychological well-being and illnesses should be carried out.

The present study's strengths were evaluated as the use of three data sets each of which provide adequate sampling required for reliability, validity, and factor analytical analysis; exploratory and confirmatory factor analyses were conducted in two separate samples as suggested by Prooijen and Van Der Kloot (2001); various instruments were utilized to test validity of SHS and comparable outcomes to the original SHS study (ref) were yielded.

Individuals' responses on SHS, a measure of "subjective" happiness, might be greatly influenced by adverse life events. In this respect, one important limitation of the present study was due to the period when data collection procedure was implemented for sample 1 (scale adaptation sample) and sample 2 (test-retest sample). On 13<sup>th</sup> of May, 2014 when the data collection procedure was started, a coal mine blast caused an underground mine fire that burned for 2 days; 301 miners were reportedly dead in the occasion which was the worst mine disaster in Turkey's history, and a huge catastrophe for the nation. Another limitation of the current study was the recruitment of college students in sample 1 and sample 2. Thus, replication of the study with general population might provide evidence for the generalizability of the results.

## CHAPTER III

### AUTOTELIC PERSONALITY INVENTORY

#### 3.1. Background

Flow is a psychological state that is marked with an altered state of consciousness in which distorted time perception and loss of self-consciousness is accompanied with intense joy and fulfillment (Csikszentmihalyi, 1975). Csikszentmihalyi (1975) discusses that a good life (fulfilling, joyful and meaningful) can only be achieved with increased flow state proportion in everyday life.

Since then, a great number of studies uncovered various dimensions of flow as a psychological state. In addition to above mentioned properties of flow (i.e., time distortion, loss of self-consciousness, intense joy, fulfillment); intense concentration, clear goals and feedback with regard to task at hand, a balance between challenge and skill level, merging of actions and awareness, and finally a sense of control were agreed as other major components of flow state (Csikszentmihalyi, 1975; Csikszentmihalyi, 1990; Csikszentmihalyi & Larson, 1987; Csikszentmihalyi & LeFevre, 1989).

The necessity to reveal the nature of flow experience (a state rather than a trait) required measuring the experience rather than the trait associations of flow until relatively recent time. The properties of the “experience” was studied, however such studies did also reveal that there are interpersonal differences in the ability to enter and sustain the flow state. Due to the concentrated efforts to understand the flow state, the number of studies that reviewed the trait-like properties that would facilitate flow experience are limited. As mentioned in the literature review chapter, early flow research from 1970’s to 1990’s was carried out with experience sampling method (ESM) that is purely experience related (Csikszentmihalyi, 1988).

Csikszentmihalyi (1990) coined the term autotelic personality for referring a combination of trait-like personal qualities that would provide ease for entering and sustaining the flow state. The central benchmark for autotelic personality is doing the



activity at hand for its own sake rather than the external reward; doing the activity alone is the reward (Csikszentmihalyi, 1997). Besides, a trait like ability to find a balance between the skill level and the difficulty of the task is a central property that would lead to building skills further. Autotelic personality, a very comprehensive concept, is still lacking an adequate operationalization. Despite the lack of research in above mentioned trait-like properties, researchers studied the link between autotelic personality and related psychological constructs. However, since there is no trait-based stable instrument for measuring autotelic personality, flow frequency was taken as an indicator of autotelic personality in these studies. Autotelic personality was related with higher intrinsic motivation, higher desire for challenge, superior concentration skills, high perceived ability, and low trait anxiety (Jackson & Kimiecik, 2008); lower stress and strain in flow context compared to counterparts (Abuhamdeh, 2000); higher commitment and achievement in academic work, higher self-esteem, increased psychological resilience, sense of fulfillment, and life satisfaction (Asakawa, 2010); more positive experiences in daily life, self-esteem, and well-defined future goals (Adlai-Gail, 1994); higher community orientation and personal expressiveness (Asakawa & Nakamura, 2008).

Studying autotelic personality in relation with the domains of the Five-Factor Model (FFM, Costa & McCrae, 1992) has recently been trending. By doing so, autotelic personality construct was explained by the corresponding combination of particular personality traits within FFM. There are two studies in the literature that realized such investigation. Ross and Keiser (2014) carried out a study to examine flow-propensity through the lens of the Five Factor Personality Model reflecting a network of personality traits. In this study, FFM factors accounted for 38% of the variance in global flow. In neuroticism factor, vulnerability, self-consciousness and anxiety were strongly and negatively predicting flow; whereas in extraversion factor assertiveness and activity were strongly and positively predicting flow; in agreeableness factor, compliance and modesty were negatively predicting flow; and lastly in conscientiousness factor, self-discipline and achievement striving were positively predicting flow. Besides, the study also determined the predictive roles of FFM factors in flow components; it was found that time transformation (4 %) and unambiguous feedback (10 %) were the less explained flow components by FFM. However, loss of self-consciousness (27 %) and clear goals (44 %) were more

explained with FFM factors. Overall findings suggested that FFM personality traits can capture autotelic personality to a large extent. Lower neuroticism and agreeableness, higher conscientiousness and extraversion were important predictors of flow propensity. Interestingly, openness to experience was not a significant predictor of flow propensity (autotelic personality). Ullen et al. (2012) used a similar approach while studying flow propensity. Neuroticism and conscientiousness were identified as the major FFM factors accounting for 22 % of the variance in flow propensity. It was speculated that extraversion may further reflect a tendency toward increased engagement, in what would be expected in autotelic personality style.

Thus, as the earlier literature indicates, there is no instrument measuring autotelic personality. The aim of the present study is to provide a psychometrically sound, reliable and valid instrument of autotelic personality in the light of flow phenomenology.

### **3.1.1. Autotelic Personality as a Constellation of Stable Traits**

Why do some people experience and enjoy flow state more than other people? The autotelic personality construct should capture both ability and need to experience flow state (Baumann, 2012). The initial model of flow (1975) necessitates a balance between available skills and the difficulty of the task for flow state to exist. Therefore, the ability to find tasks that are neither very easy nor very difficult in relation with the skill level seems to be an essential trait of autotelic personality constellation. However, the revised model of flow (Csikszentmihalyi & Csikszentmihalyi, 1998) proposed that further psychological states are aroused when skills and challenges are balanced. For instance, when the task is too easy (e.g., watching TV) and requires little or no skill, despite the balance between the skill and challenge is achieved, apathy, rather than flow, is experienced. Therefore, they revised their initial model by saying that high skills matching with highly challenging tasks are required for flow state to exist. Therefore, other personality traits that would support finding flow inducing experiences and building the necessary skills should be captured by the autotelic personality construct. Seeking challenges, curiosity, enjoyment and persistence, narrow concentration, integration and differentiation, independence and cooperation, transcendence, and being in

present (Csikszentmihalyi et al., 1993; Nakamura & Csikszentmihalyi, 2002) are supporting traits even though they might be opposing one another sometimes (Baumann, 2012).

#### **3.1.1.1. Ability to balance skills and challenges**

An initial study by Haworth and Evans (1995) used experience sampling method in a student sample to capture the level of experienced challenges, perceived skills, and positive affect. Increased perceived challenge led to increased enjoyment and interest, whereas it was not linked with happiness. When high challenge was matched by high skills, both enjoyment and interest tended to be high in student sample, whereas middle and low challenge-skill levels did not make a significant difference in enjoyment and interest. Therefore, this finding supports the idea that flow state requires high perceived challenges matching with highly perceived skills. However, as discussed earlier, the ability to balance skills with challenges cannot be accounted for predicting the flow propensity alone because of theoretical constraints. A good support to that view comes from Engeser and Rheinberg (2008). They tested the assumption that flow depends solely on the balance between challenge and the skill. In contrast with the initial model of flow (Csikszentmihalyi, 1975), they revealed that the relationship between flow experience and skill-challenge balance was moderated by the achievement motive. Therefore, the need to achieve is a significant contributor to flow experience. It can be said that the task should also evoke curiosity, need to achieve, enjoyment, persistence, and concentration. Fullagar, Knight, and Sovern (2012) tracked the challenge-skill balance in music students throughout a semester while they were studying toward a recital. The balance between the challenge of music passage and perceived skills to play the music was found significantly correlated with the flow experience. The ability to balance also decreased performance anxiety in music students in the presence of flow state. It was found that flow and anxiety were antithetical experiences. Speculating that, the degree of expertise to play a recital may only be developed in time with intrinsic motivation, it can be said that achievement motive may also play an important role in this study. Lastly, Asakawa (2004) indicated that autotelic students' levels of perceived challenges and skills were more balanced than non-autotelic students. In

the same study, it was found that autotelic students had a tendency to posit themselves where challenges were higher than their perceived skills, whereas non-autotelic students did the opposite. Therefore, a trait that captures the ability to balance skills with challenges is inevitable yet not sufficient to capture autotelic personality constellation.

### **3.1.1.2. Seeking Challenges**

Beside the ability to match challenges with skills, autotelic personality requires actively seeking new challenges that would help to improve available skills or virtues. Csikszentmihalyi, Rathunde, and Whalen (1993) defined autotelic personality as a combination of receptive and active qualities. Openness to new challenges and readiness to engage and persist in high-challenge tasks require those receptive and active qualities that predict flow state. Csikszentmihalyi (1997) recapped such qualities as “disinterested interest” or “effortless effort” indicating a personal orientation towards skill mastery. More recently, Abuhamdeh (2000) conceptualized seeking challenges from Self Determination Theory perspective as an intrinsic motivation for high-challenge high-skill situations. However, there is no research that studied on the link between flow experience and such meta-skills (combined qualities).

Challenge seeking can be seen as a need to achieve. According to Moneta and Csikszentmihalyi (1996), in activities and contexts that provide a central role to achievement, flow model may be more relevant. For instance, scholar or artistic activities and work related contexts would be more suitable than household duties or leisure activities for flow state to occur. According to Engeser et al. (2008), individuals who have low fear of failure and high hope for success have increased flow intensity and frequency when compared with their counterparts. Besides, individuals with fear of failure prefer an unbalanced situation where skills are exceeding the difficulty of the task (Atkinson, 1957). Several studies yielded that flow was associated with achievement during the high school years (Carli, Delle Fave & Massimini, 1988; Nakamura, 1988).

### **3.1.1.3. Curiosity**

If one has failed to develop curiosity and interest in the early years, it is a good idea to acquire them now, before it is too late to improve the quality of life. Even the most routine tasks, like washing dishes, dressing, or mowing the lawn become more rewarding if we approach them with the care it would take to make a work of art. The next step is to transfer some psychic energy each day from tasks that we don't like doing, or from passive leisure, into something we never did before, or something we enjoy doing but don't do often enough because it seems too much trouble. There are literally millions of potentially interesting things in the world to see, to do, to learn about. But they don't become actually interesting until we devote attention to them. (Csikszentmihalyi, 1997).

Curiosity is an active quality and a fundamental human strength (Peterson & Seligman, 2004). Within several theoretical frameworks, constructs that resemble the concept of curiosity are build. Intrinsic motivation as the innate tendency to look for novelty and challenges, to encompass and exercise one's capacities to explore and to learn (Ryan & Deci, 2000) and flow (Csikszentmihalyi, 1990) as being absorbed in a challenging and enjoyable activities can be accounted as resemblances of curiosity (Fredrickson, 1998). However, apart from these resemblances noted, there is no research that investigated the link between flow propensity and curiosity as a trait. However, higher curiosity was found to be positively related to positive problem solving appraisal and negatively related to trait anxiety (Heppner, Walther, & Good, 1995). From autotelic personality perspective, higher curiosity would result in the ability to be motivated by intrinsic rewards (Csikszentmihalyi, 1990).

### **3.1.1.4. Being in the Present**

Flow state was characterized by the complete involvement with the task at hand and enjoyment of the present moment (Csikszentmihalyi, 1990). Therefore, an inclination towards such enjoyment of the moment was an autotelic feature. Such inclination to situate self in the present moment would foster sensitivity and awareness about the context; thus it brought liberation from rigid mind-sets and enhances novelty (Snyder, Shane, & Lopez, 2011).

### **3.1.1.5. Persistence and Enjoyment**

Persistence was defined as the perseverance to complete a task regardless of frustration and fatigue (Cloninger, Svrakic, & Przybeck, 1993). A longitudinal study that utilized the ESM with high school students indicated a positive relation between the quality of experience and persistence in the activity. Csikszentmihalyi et al. (1993) showed that students, who still committed to their talent area that was determined at age 17 for four years, had experienced more flow and less anxiety than their peers who disengaged with the determined talent area. Besides, persistence in the face of challenges and difficulties was strongly related to self-efficacy (Bandura, 1986). High self-efficacy led to resistance to disruptions in self-regulation; therefore, let one persevere and achieved the desired outcomes (Bandura, 1986). A recent study by Teng (2011) revealed that persistent subjects were more likely to experience flow while playing online computer games. Similar to other trait-like components of autotelic personality, the link between persistence and flow propensity was not extensively studied.

### **3.1.1.6. Concentration**

Becoming completely absorbed in the task at hand requires a narrow concentration that is, bringing all of the attention to the present. A study by Swann, Piggot, Crust, Keegan, and Hemmings (2015) on flow experiences of golf players indicated that concentration was a key construct underlying the flow experience. It was found that perceived task difficulty was positively linked with golfers' concentration. In a similar vein, Csikszentmihalyi (2002) stated that intensified concentration is a product of the balance between skill and challenge in the flow state. A recent study by Hamari and Koivisto (2014) about flow predictors in computer games found that concentration is a salient component of flow experience in online gaming. Concentration, a state rather than a trait, has been studied extensively within flow theory framework. However, the ability to concentrate as a trait-like construct was not studied as a flow propensity measure.

### **3.1.1.7. Integration & Differentiation**

As discoursed by Heinz Werner (1957), improvements and modifications in the organization of functioning in a domain can be deliberated as human development. He argued that integration and differentiation are the two main routes that play an essential role in human development. Similarly, flow theory asserted that human complexity is achieved by an increase in both differentiation and integration (Csikszentmihalyi, 1993). Differentiation and integration are general terms that would be applied to many aspects of psychological experience. Fundamentally, differentiation refers to the degree to which a system is composed of subordinate parts with different structures and functions from one another. Integration, on the other hand, is the extent to which the differentiated parts of the system communicate harmoniously and enhance one another's goals. The more a system is differentiated and integrated, the more the complexity increases (Csikszentmihalyi, 1993).

Flow theory (Csikszentmihalyi, 1993) asserted that complexity in interests, abilities, and goals is a main property of autotelic individuals. Therefore, high integration and differentiation levels should be an asset possessed by autotelic personalities. Within the communal relations context, a well-integrated and well-differentiated individual should be able to express his/her distinct individuality; and be able to use social ties and support mechanisms to realize his own personal being and goals. Such complexity would provide a suitable background for optimal experience. A sense of autonomy, self-confidence, being able to function in cooperation with other individuals to relate with others by accommodating to dissimilarities indicate a well-differentiated and well-integrated self (Csikszentmihalyi, 1993).

### **3.1.1.8. Cooperation**

In a similar vein with integration and differentiation, developing an independent self and being open to cooperation does also set a promising scene for experiencing flow. Csikszentmihalyi (1995) pointed out that school is the main place where individuals are presented means and opportunities for developing a complex self. For creating school environments that enhance self – complexity, flow theory suggested that cooperation should be encouraged rather than competition. A study by

Schweinle, Turner, and Meyer (2006) found that encouraging social relationships and letting students to work with their classmates would facilitate cooperation, which in turn, led to an increased commitment and interest in the subject matter. However, the link between cooperation and flow propensity has not been studied in the literature yet.

### **3.1.1.9. Transcendence**

As proposed by Csikszentmihalyi (1990), transcendence is a predisposition that predicts flow proneness. Viktor Frankl (1966) described transcendence as a fundamental characteristic of being human, which always points and directed to something other than the self. Being a human means being open to the world, which is replete with other beings to encounter and meanings to fulfill. According to Frankl (1966), being motivated by meaning is the central aspect of transcendence. Such a state can only be found, experienced or created in an active interaction with the world. Similarly, Maslow (1971) suggested that self-actualization finishes in seeking some cause beyond the self and in being driven by universal values. On the relation between flow and transcendence, Osin, Malyutina and Kosheleva (2015) carried out a study with college students in Russia. Their findings indicated that transcendence was associated with task engagement, experienced task meaning, and flow experience.

### **3.1.2 The Present Study**

In the light of the literature mentioned above, the aim of the present study is first to develop a measure of Autotelic Personality by utilizing the rich phenomenology on flow state and trait-like factors that predict the intensity and frequency of flow experience. Based on the information given before, a 9-factor, 45-item Autotelic Personality Inventory (API) was developed. Until recently, researchers had not examined flow within the context of a nomological trait constellation. The study aims to generate an initial pool of items for API; to explore its factor analytic structure, and to test the reliability and validity of the refined scale, to investigate test-retest reliability, and lastly confirmation of factor structure.



## **3.2. Method**

### **3.2.1. Participants and Procedure**

**Sample 1.** The data were collected online via Surveyey.com between 11th and 31th of May, 2014. Surveyey.com is a website that enables users to collect data online. After the questionnaire set was created in the web interface, a www link referring to questionnaire set was created. This link was shared with the general psychology class rosters via METU Online Course Management System. Participants of this study were given 1 bonus point for participation. Along with collecting data from general psychology students, a Facebook group was created and participants were invited via snowball sampling method. Participants were announced that tablet PC's would be given to two participants determined with a lottery.

Eight hundred and three participants were reached between 11<sup>th</sup> and 31<sup>st</sup> of May 2014. Data screening was made, prior to analysis. Participants who completed the questionnaire in less than 20 minutes were excluded from the sample. As a result of several data screening criteria, further statistical analysis was conducted with 651 participants. Statistical analyses were conducted using SPSS 20 statistical package program.

The mean age of the participants were 23.47 ( $SD = 4.04$ ). The sample was consisting of 161 males (24.8 %) and 489 females 75.2 %). Four-hundred and ten participants were single, 46 were married, and 194 were committed in a relationship. The majority of the participants (66.3 %) were undergraduate students, whereas 20 % and 13.7 % were affiliated with masters and Ph.D. degrees, respectively. All of the participants were enrolled in an undergraduate or graduate program at the time of data collection. Two-hundred and one participants reported history of psychiatric help, whereas 450 participants had never sought help from a mental health professional.

The first sample is utilized for the exploration of factor analytic structure, reliability and, validity investigations of API.

**Sample 2.** The data were collected online via Survey.com between 9<sup>th</sup> and 15<sup>th</sup> of June, 2014. Participants were contacted via e-mails they provided during the first study. After data screening, 222 participants were left for further analyses. Mean age

of the participants was 23.64 ( $SD = 4.03$ ). The sample was consisting of 46 males (20.3 %) and 176 females (79.7 %). Sample 2 was recruited for test-retest reliability.

**Sample 3.** The data were collected online via Qualtrics.com between 26<sup>th</sup> September and 22<sup>th</sup> of November, 2014. After data screening, 379 participants remained for further analyses. Mean age of the participants was 24.90 ( $SD = 7.5$ ). The sample consisted of 80 (21.1 %) males and 299 (78.9 %) females. One (.3 %) participant had completed primary school, 195 (51.5 %) participants had achieved a high school diploma, and 98 (25.9 %) participants had an undergraduate degree, 55 (14.5 %) had a master's degree, and 30 (7.9 %) participants were currently enrolled in or graduated from a Ph.D. program. One-hundred and twenty two participants (32.19 %) were employed and 257 participants (67.81 %) were unemployed. One-hundred and sixty seven (44.1 %) participants reported history of psychiatric help, whereas 212 (55.9 %) participants had never sought help from a mental health professional. Sample 3 is recruited for confirmatory factor analysis.

Table 3.1 provides descriptive properties of three samples recruited in the present research.

### **Procedure**

The purpose of studies conducted in the Sample 1 were to create and test a pool of items for the construction of API, and to investigate the psychometric properties of the API. Initial statistical testing for factor structure was performed through principal components analysis after all of the items were generated. Sample 2 was recruited for test-retest reliability; and confirmatory factor analysis was performed in Sample 3 through EQS 6.2.

In order to create the initial pool, 6 doctoral candidates in psychology at the researcher's institution were invited for a 3-hour focus group. The researcher presented the concept of flow and autotelic personality to the attendants of the focus group in a sublime / indirect manner. Later on, excerpts describing flow experiences of individuals from diverse backgrounds such as sports, music, and performing arts were read aloud. The attendants of the focus group were asked to write adjectives that would describe a person who is able to experience such flow experiences. After this stage, the derived adjectives were studied by the researcher and dissertation advisor to generate the initial item pool. An original pool of 113 items were

generated based on the priori hypothesis that there are 9 dimensions of autotelic personality, namely ability to balance skills with challenges, curiosity, transcendence, seeking challenges, persistence and joy, integration and differentiation, cooperation, curiosity and concentration. At least 10 potential items were constructed to measure each hypothesized factor, and the order of these items were randomized. These items were investigated in terms of clarity and content specificity by another doctoral candidate in Psychology. Table 3.2 shows the descriptive statistics for final API items.

Table 3.1

*Descriptive Properties of the Study Samples*

	<i>M</i>	<i>SD</i>	<i>N</i>	%	Min-Max
<b>Sample 1</b>					
Age	23.47	4.04	652		17-58
Gender					
Male			162	24.8	
Female			490	75.2	
Education					
Undergraduate			438	67.2	
M.S.			124	19.0	
Ph.D.			90	13.8	
Employment status					
Unemployed			453	69.5	
Employed			194	29.8	
Ever consulted mental health professional					
Yes			201	30.8	
No			450	69.1	
<b>Sample 2</b>					
Age	23.63	4.00	222		18-39
Gender					
Male			45	20.3	
Female			177	79.7	
Education					
Undergraduate			141	63.5	
M.S.			50	22.5	
Ph.D.			31	14	
Employment status					
Unemployed			156	70.3	
Employed			66	29.7	
Ever consulted mental health professional					
Yes			78	35.1	
No			144	64.9	
<b>Sample 3</b>					
Age	24.90	7.50	379		17-63
Gender					
Male			80	21.1	
Female			299	78.9	
Education					
Primary School			1	.3	
High School			195	51.5	
Undergraduate			98	25.9	
M.S.			55	14.5	
Ph.D.			30	7.9	
Employment status					
Unemployed			122	32.2	
Employed			257	67.8	
Ever consulted mental health professional					
Yes			167	44.1	
No			212	55.9	

Table 3.2  
*Descriptive Statistics for Final API Items (N = 652)*

Subscale	Item Means	SD	Corrected Item-Scale <i>r</i>	Squared Multiple Correlations
<b>Concentration</b>				
API 3 (r)	2.57	1.17	.65	.44
API 9	2.71	1.15	.58	.42
API 14	2.95	1.23	.66	.43
API 21(r)	2.53	1.13	.70	.53
API 30 (r)	2.74	1.18	.65	.48
API 31	2.98	1.06	.69	.53
API 39 (r)	2.81	1.12	.69	.51
<b>Persistence and Joy</b>				
API 2	4.08	.94	.69	.52
API 4	3.83	.85	.58	.35
API 5	3.89	.96	.68	.52
API 13	3.77	1.04	.69	.54
API 18	3.55	1.01	.67	.63
API 19	3.47	1.03	.67	.63
API 40	4.01	.93	.56	.33
<b>Curiosity</b>				
API 1	4.17	.79	.56	.38
API 6	4.11	.82	.66	.47
API 7	4.11	.85	.54	.36
API 20	3.41	1.11	.54	.33
API 29	4.11	.77	.65	.47
API 36	3.26	1.11	.52	.31
API 37	3.85	.90	.68	.50
<b>Transcendence</b>				
API 13	3.77	1.04	.38	.19
API 24	2.63	1.31	.58	.39
API 25	3.17	1.22	.67	.51
API 41	2.72	1.24	.72	.56
API 42	3.46	1.12	.58	.37
API 8	3.60	1.14	.56	.32
<b>Integration &amp; Differentiation</b>				
API 10 (r)	3.68	1.19	.63	.40
API 11	3.64	1.01	.44	.20
API 12 (r)	3.75	1.08	.61	.40
API 22 (r)	3.82	1.15	.69	.49
API 23 (r)	4.02	1.13	.59	.39

Table 3.2 Continued  
*Descriptive Statistics for Final API Items (N=652)*

Subscale	Item Means	SD	Corrected Item-Total <i>r</i>	Squared Multiple Correlations
Challenge Skill				
Balance				
API 15	4.02	.72	.68	.54
API 16	4.16	.70	.69	.54
API 17	3.90	.82	.40	.17
API 26	3.94	.75	.59	.38
Being in the Present				
API 38	4.00	.93	.42	.20
API 43	4.29	.73	.38	.16
API 44	3.54	1.09	.44	.26
API 45	4.13	.86	.62	.39
Cooperation				
API 32 (r)	3.24	1.25	.46	.22
API 33	4.14	.84	.58	.44
API 34	4.18	.80	.62	.46
Seeking Challenges				
API 27	3.77	.94	.57	.40
API 28	3.35	1.00	.60	.42
API 35 (r)	3.07	1.07	.39	.16

*Note 1.* API: Autotelic Personality Inventory

*Note 2.* “r” refers to reverse scored items.

### 3.2.2. Instruments

In addition to the initially generated 113 items of API, several measures were included to the questionnaire set to test convergent and discriminant validities of the API.

**Curiosity and Exploration Inventory- II.** CEI-II is a valid and reliable instrument that aims to measure trait-like curiosity. It was developed by Kashdan et al. (2009). It is a 10-item, 2-factor scale. The 5-item stretching subscale assesses the orientation for seeking novel and challenging objects, events, and ideas with the aim of integrating these experiences and information. The 5-item embracing subscale reflects the ability to self-regulate attention to let immersion in these novel and challenging activities. The internal consistency reliability of the CEI-II ( $\alpha = .86$ ), stretching subscale ( $\alpha = .79$ ) and embracing subscale ( $\alpha = .76$ ) were acceptable in the original study. This scale was adapted to Turkish culture within the scope of the present doctoral dissertation. A 7-item, 2-factor solution was yielded with CEI-II in the Turkish sample. Three items loaded onto the embracing subscale, whereas 4 items loaded onto the stretching subscale. The internal consistency of CEI-II ( $\alpha = .75$ ), stretching ( $\alpha = .71$ ), and embracing ( $\alpha = .73$ ) subscales were found acceptable in Turkish culture.

**Meaning in Life Questionnaire (MLQ).** MLQ (Steger et al., 2006) is an instrument capturing meaning in life with two components, namely search for meaning and the presence of meaning. Meaning in life was defined as the sense and significance experienced with regard to one's being and existence (Steger et al., 2006). Each of the components (subscales) are measured by 5 items adding up to 10 items in total. Presence of meaning subscale measures the extent to which respondents feel their lives have meaning, whereas the search for meaning subscale measures the extent to which respondents strive to find meaning and understanding in their lives. The scale was designed in a 7-point Likert-type fashion ranging from 1 (*absolutely true*) to 7 (*absolutely untrue*). The internal consistency of presence of meaning subscale ( $\alpha = .86$ ) and search for meaning subscale ( $\alpha = .87$ ) was found acceptable in the original study. Adaptation of MLQ to Turkish culture was made within the scope of the present doctoral dissertation and acceptable internal

consistency coefficients were yielded for the presence of meaning ( $\alpha = .90$ ) and search for meaning ( $\alpha = .91$ ) subscales.

**Subjective Happiness Scale (SHS).** SHS (Lyubomirsky & Lepper, 1999) is a 4-item, 7-point Likert type scale that aims to quantize “subjective happiness” in a global and inclusive manner. Psychometric characteristics of the SHS indicated that, despite it is a short questionnaire with a single factor, it effectively measures happiness. The internal consistency reliability of the scale was found acceptable in the original study ( $\alpha = .93$ ). Adaptation of SHS to Turkish culture was made within the scope of the present doctoral dissertation and an acceptable internal consistency ( $\alpha = .88$ ) was obtained.

**Swedish Flow Proneness Questionnaire (SFPQ).** *SFPQ* (Ullen et al., 2012) was used as an indicator for flow proneness in daily life. It is a 22-item self-report measure developed to estimate an individual's proneness to experience flow, and it consists of three subscales (7 items each) assessing flow proneness during work, leisure, and maintenance activities. One additional item assesses current employment, as the work sub-scale was administered only to working individuals. The items are measured on a 5-point Likert scale ranging from 1 (*never*) to 5 (*everyday*). The items capture flow experience on above three domains based on Csikszentmihalyi (1997) criteria; i.e., a subjective sense of concentration, balance between skills, challenge of a task, explicit goals, clear feedback, sense of control, lack of boredom. The internal consistency of the scale was found acceptable in the original study ( $\alpha = .87$ ). *SFPQ* was adapted to Turkish culture within the scope of the present doctoral dissertation, and an acceptable internal consistency ( $\alpha = .85$ ) was obtained.

**Basic Personality Traits Inventory (BPTI).** BPTI is 45-item personality inventory assessing the personality traits from a 5-factor model perspective. It is developed by Gençöz and Öncül (2008). The adjectives in the scale are measured on a scale ranging between 1 (*does not apply to me*) and 5 (*definitely applies to me*). BPTI derives 6 personality traits (extraversion, conscientiousness, agreeableness, neuroticism, openness to experience, and negative valence). The internal consistency coefficients found in the original study are as follows: Extraversion(.89), conscientiousness (.85), agreeableness (.85), neuroticism (.83), openness to



experience (.80), negative valence (.71). The present study yielded .88 for extraversion, .84 for conscientiousness, .84 for agreeableness, .81 for neuroticism, .75 for openness to experience, and .67 for negative valence.

**Positive and Negative Affect Schedule (PANAS).** It is a 20 item self-report measure of positive and negative affect developed by Watson, Clark, and Tellegen (1988). It provides independent measures of both positive and negative affect with two subscales each consisting of 10 items. Positive affect represents the extent to which an individual experiences enthusiasm and alertness whereas negative affect represents lethargy and sadness. The Cronbach's alpha was .88 for the positive affect subscale and .85 for the negative affect subscale (Watson et al., 1988). The test-retest reliability of the scale was .47 (Watson et al., 1988). The Turkish adaptation study of PANAS was conducted by Gençöz (2000), who also found similar internal consistency coefficients with Watson et al. (1988): .83 for the positive affect subscale and .86 for the negative affect subscale. The test-retest reliability of the Turkish version was .40 for the positive affect subscale and .54 for the negative affect subscale (Gençöz, 2000).

**The Satisfaction with Life Scale.** The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen & Griffin, 1985) is a self-report measure on which respondents indicate their degree of agreement with five statements about the satisfaction with life, such as "In most ways my life is close to my ideal". Items are rated to on a 7-point Likert scale that ranges from strongly disagree to strongly agree. Higher scores on the SWLS indicate greater satisfaction with life. It is an internally consistent scale in which Cronbach's alpha coefficient tends to be in the upper .80 and test-retest reliability in the .64 to .84 range (Pavot & Diener, 1993). This inventory was adapted into Turkish by Gençöz, Durak, and Şenol-Durak (2007), and they obtained satisfactory psychometric properties for the scale. In their study with correctional officers, they found Cronbach's alpha coefficient as .83 and sufficient criterion related validity. In the present study, in sample 1, the internal consistency reliability coefficient of SWLS was .89.

**Oxford Happiness Questionnaire Short Form (OHQ-S).** Oxford

Happiness Questionnaire Short Form was developed by Hills and Argyle (2002) and it aims to measure happiness with 7 items on a 6-point Likert scale ranging from “strongly agree” to “strongly disagree”. Doğan and Sapmaz (2012) studied the adaptation of the scale to Turkish culture. The Turkish form of the scale yielded comparable psychometric properties with the original scale with a single factor solution.

**Life Orientation Test (LOT).** Life Orientation Test (LOT) was developed by Scheier and Carver (1985). It is used to determine the level of optimism and individuals’ orientation towards life. It has 12 items, 4 of which measure the positive orientation towards life, 4 items measure the negative orientation, whereas 4 items do not intend to measure any construct. Each of the items are designed in a 5-point Likert fashion ranging from 0 (*strongly disagree*) to 5 (*strongly agree*). LOT was adapted to Turkish culture by Aydın and Tezer (1991). The Turkish version yielded .72 internal consistency coefficient (Cronbach alpha). Besides, a 4-week interval test-retest reliability coefficient was .77. Üstündağ and Budak (1999) found that Turkish version of the scale has a 2-factor structure that confirms the original scale. In the present study, LOT yielded .85 internal consistency coefficient.

**Beck Depression Inventory (BDI).** BDI is a 21 item self-report inventory that aims to measure cognitive, emotional and motivational symptoms of depression (Öner, 1997). It is developed by Beck, Rush, Shaw, and Emery (1978). Respondents are asked to report how they felt over the last week by choosing the most suitable statement among 4 statements in each item. Each item is scored from 0 to 3. It is adapted to Turkish culture by Hisli (1988) with an internal consistency coefficient of .74. In the present study, the internal consistency coefficient for BDI was .89.

**State - Trait Anxiety Inventory (STAI).** STAI is a 40-item, 4-point Likert type scale ranging from 1 (*not at all*) to 4 (*very much so*). It aims to measure how anxious a person generally feels, and how anxious a person feels in a specific moment in time. It was developed by Spielberger, Gorsuch, and Lushene (1970). STAI has two subscales namely, state and trait anxiety subscales. Each of these subscales consists of 20 items. The test-retest reliability of the scale ranged from .16 to .54 for state anxiety subscale and from .73 to .86 for trait anxiety subscale

(Spielberger et al., 1970). The internal consistency for the state anxiety subscale varied between .83 and .92; and for the trait anxiety subscale it varied between .86 and .92 (Spielberger et al., 1970). The Turkish adaptation of STAI was done by Öner and LeCompte (1985) with clinical and nonclinical samples. In Turkish adaptation study (Öner et al., 1985), test-retest reliability was between .71 and .86 for trait anxiety inventory; test-retest reliability was between .26 and .68 for state anxiety inventory. The internal consistency was between .83 and .87 for trait anxiety subscale, and the internal consistency of state anxiety subscale ranged from .94 to .96 (Öner et al., 1985). In the present study, only the trait subscale of the inventory was used ( $\alpha = .88$ ).

### **3.3. Results**

#### **3.3.1. Exploratory Factor Analysis**

Using SPSS, an exploratory factor analysis was conducted through principal component analysis with varimax rotation. The initial factor solution yielded 26 factors, with 15 factors having only 1 item loaded. However, scree-plot analysis strongly suggested the existence of 9 dominant factors. Since the main aim of the scale development is to create theoretically interpretable constructs; based on this initial analysis, items revealing high factor loading coefficients among the 9 hypothetical factors were kept, and other items were removed from the analysis. After several exploratory factor analyses, a 45-item and 9-factor solution was reached via principal component analysis with varimax rotation. The Kaiser-Meyer-Olkin sampling adequacy test yielded .90,  $p < .001$ , which indicates perfect sample size for PCA. The 9 factor solution explained 60 % of the total variance. After examining the factor loadings of each item, factors were named. In this phase, new factors emerged and some hypothetical factors appeared to reduce to a single factor. Final factors were determined as concentration (7 items), persistence and joy (7 items), curiosity (7 items), transcendence (5 items), integration-differentiation (5 items), skill challenge balance (4 items), being in the present (4 items), cooperation (3 items), and seeking challenge (3 items). These 9 factors were theoretically appropriate based on the previous research on the proneness to psychological flow. Table 3.3 shows the factor analytic structure of API.

Table 3.3

*Varimax Rotated Factor Loadings of API Items (N = 652)*

Items	Factors								
	I	II	III	IV	V	VI	VII	VIII	IX
<b>Concentration</b>									
API 21	<b>.76</b>	.07	-.03	.03	.07	-.01	-.11	.08	.14
API 30	<b>.76</b>	.14	-.02	.09	.09	-.03	-.07	.09	.16
API 39	<b>.79</b>	.09	-.01	.04	.09	.00	.01	.01	.13
API 3	<b>.74</b>	.08	-.02	.09	.10	.05	.03	-.02	.00
API 14	<b>.71</b>	.21	.07	.09	.08	.04	.05	.04	.06
API 31	<b>.68</b>	.27	.10	.24	.09	.09	.10	.03	-.08
API 9	<b>.55</b>	.36	.11	.40	-.02	.06	.07	.01	-.17
<b>Persistence &amp; Joy</b>									
API 18	.13	<b>.71</b>	.03	.17	.13	.00	.24	-.04	.25
API 2	.16	<b>.69</b>	.28	.15	.12	.10	-.11	.09	.03
API 5	.30	<b>.68</b>	.20	.16	.03	.08	-.09	.19	-.05
API 19	.22	<b>.67</b>	.08	.19	.16	.02	.24	-.07	.23
API 13	.25	<b>.65</b>	.24	.17	.21	.14	-.12	.06	.02
API 4	.19	<b>.60</b>	.20	.01	.05	.13	.28	.09	.06
API 40	.10	<b>.54</b>	.11	.21	.12	.19	.04	.30	.14
<b>Curiosity</b>									
API 6	-.01	.18	<b>.72</b>	.04	.14	.02	.09	.26	-.03
API 37	.04	.11	<b>.72</b>	.02	.19	.12	.15	.04	.10
API 7	.02	.03	<b>.68</b>	.03	-.05	.03	.11	.12	.14
API 29	.02	.17	<b>.67</b>	.04	.06	.23	.16	.03	.22
API 36	.01	.00	<b>.66</b>	.06	.12	.04	.09	-.11	.05
API 20	.00	.19	<b>.65</b>	.12	.09	-.10	.05	.03	-.06
API 1	.03	.27	<b>.60</b>	.08	-.04	.08	.13	.08	.17
<b>Transcendence</b>									
API 41	.21	.15	.04	<b>.83</b>	.03	.00	.01	-.01	.06
API 25	.08	.08	.05	<b>.82</b>	-.05	.06	.05	.01	.11
API 24	.08	.15	.01	<b>.75</b>	.03	-.01	-.05	-.07	.12
API 8	.12	.14	.18	<b>.66</b>	-.09	.04	.07	.18	-.07
API 42	.15	.39	.18	<b>.51</b>	.08	.10	.16	.08	.15
<b>Integration &amp; Differentiation</b>									
API 22	.12	.09	.10	-.06	<b>.77</b>	.02	.14	.12	.01
API 12	.07	.04	.04	.02	<b>.76</b>	.06	.03	.16	.06
API 10	.07	.23	.00	-.01	<b>.72</b>	.03	.02	.22	.01
API 23	.19	.16	.07	-.13	<b>.63</b>	.13	.14	.16	.00
API 11	.06	.01	.25	.12	<b>.60</b>	.06	.04	.01	.05

Table 3.3 Continued.

*Varimax Rotated Factor Loadings of API Items*

Items	Factors								
	I	II	III	IV	V	VI	VII	VIII	IX
<b>Skills &amp; Challenge Balance</b>									
API 15	-.01	.05	.11	.04	.03	<b>.83</b>	.08	.05	.03
API 16	.08	.12	.16	.00	.13	<b>.82</b>	.06	.06	.08
API 26	.10	.13	.04	.05	.11	<b>.75</b>	.10	.06	.09
API 17	-.06	.10	-.08	.06	.00	<b>.57</b>	.15	.13	-.39
<b>Being in the Present</b>									
API 45	-.03	.13	.19	.04	.15	.10	<b>.74</b>	.08	.03
API 44	.03	-.14	.17	.04	.11	-.02	<b>.73</b>	.02	.03
API 38	-.03	.24	.25	.00	.10	.15	<b>.53</b>	.10	-.14
API 43	-.01	.14	.13	.07	.00	.24	<b>.51</b>	.21	.06
<b>Cooperation</b>									
API 33	-.01	.15	.06	.04	.20	.10	.14	<b>.79</b>	-.04
API 34	.01	.11	.17	.08	.28	.10	.14	<b>.75</b>	.05
API 32	.24	.00	.09	-.03	.28	.07	.06	<b>.58</b>	.01
<b>Seeking Challenges</b>									
API 35	.25	.15	.19	.07	.08	-.11	-.06	.14	<b>.66</b>
API 27	.09	.23	.30	.21	.06	.28	.14	-.06	<b>.58</b>
API 28	.12	.36	.29	.23	.03	.14	.07	-.08	<b>.56</b>

*Note.* I: Concentration, II: Persistence & Joy, III: Curiosity, IV: Transcendence, V: Integration & Differentiation, VI: Skills & Challenge Balance, VII: Being in the Present, VIII: Cooperation, IX: Seeking Challenges.

In addition to API subscales, summing all subscales yields a general API (APIg) score. APIg provides an overall evaluation in the autotelic personality continuum with higher scores indicating higher autotelic personality characteristics in an individual.

### 3.3.2. Internal Consistency Reliability

Table 3.4 shows reliability coefficients for APIg and API subscales. The internal consistency reliability coefficient was .92 for the APIg, and it ranged between coefficients were ranging from .88 and .67 for API subscales. The analyses indicated that internal reliability of all API factors are satisfactory.

	Internal Consistency Reliability	Test Re-test Reliability
APIg	.92	.89
Concentration	.88	.86
Persistence & Joy	.87	.85
Curiosity	.83	.78
Transcendence	.83	.70
Integration & Differentiation	.80	.79
Skill & Challenge Balance	.78	.43
Being in the Present	.67	.49
Cooperation	.71	.68
Seeking Challenges	.70	.71

### 3.3.3. Validity

APIg and all of its subscales were correlated with several theoretically related psychological constructs for assessing convergent, divergent, and discriminant validities of the inventory. Table 3.5 shows correlations among API subscales and theoretically related constructs.

In terms of convergent validity, as expected, APIg was found positively correlated with extraversion, conscientiousness, openness to experience, stretching self, and embracing novelties, positive affect, happiness, flow at work, flow at home, and flow in leisure time, optimism, presence of meaning, and life satisfaction. Unexpectedly, a moderately positive correlation was observed between APIg and agreeableness (interpreted as a culture specific result). In terms of divergent validity, as expected, APIg was found negatively correlated with neuroticism, negative valence, negative affect, depression, and trait anxiety. Lastly, no significant correlation was observed between APIg and search for meaning, and this is evaluated as an indicator of discriminant validity.

Table 3.5

*Correlations Between API Subscales and Theoretically Related Constructs*

	1	2	3	4	5	6	7	8	9	10
API (1)	1									
Concentration (2)	.66**	1								
Persistence & Joy (3)	.83**	.51**	1							
Curiosity (4)	.63**	.14**	.44**	1						
Transcendence (5)	.61**	.38**	.49**	.26**	1					
Integration & Differentiation (6)	.58**	.27**	.37**	.28**	.08*	1				
Skill Challenge Balance (7)	.41**	.11**	.29**	.19**	.14**	.21**	1			
Being in Present (8)	.49**	.07	.30**	.42**	.16**	.29**	.31**	1		
Cooperation (9)	.51**	.22**	.32**	.28**	.12**	.49**	.26**	.30**	1	.16**
Seeking Challenge (10)	.64**	.35**	.55**	.47**	.40**	.22**	.16**	.22**	.16**	1
Extraversion	.42**	.28**	.37**	.26**	.16**	.41**	.09*	.13**	.28**	.23**
Conscientiousness	.57**	.53**	.64**	.22**	.26**	.28**	.22**	.14**	.24**	.32**
Agreeableness	.47**	.12**	.41**	.35**	.20**	.42**	.24**	.31**	.39**	.20**
Neuroticism	-.20**	-.20**	-.05	-.13**	.04	-.33**	-.03	-.16**	-.16**	-.08*
Openness to Experience	.57**	.29**	.51**	.53**	.24**	.33**	.25**	.26**	.26**	.42**
Negative Valence	-.32**	-.20**	-.19**	-.14**	-.07	-.34**	-.20**	-.19**	-.29**	-.23**
Stretching	.50**	.24**	.48**	.51**	.30**	.20**	.11**	.19**	.13**	.50**
Embracing	.32**	.04	.20**	.60**	.17**	.14**	.01	.21**	.11**	.28**
Positive Affect	.53**	.32**	.54**	.37**	.34**	.24**	.20**	.23**	.21**	.36**
Negative Affect	-.31**	-.29**	-.21**	-.15**	-.03	-.36**	-.06	-.20**	-.20**	-.12**

Table 3.5 Continued.

*Correlations Between API Subscales and Theoretically Related Constructs*

	1	2	3	4	5	6	7	8	9	10
Oxford Happiness	.58**	.38**	.53**	.31**	.20**	.50**	.22**	.35**	.32**	.28**
Flow at Work	.54**	.44**	.52**	.27**	.30**	.26**	.22**	.19**	.18**	.37**
Flow at Home	.32**	.23**	.31**	.17**	.09*	.21**	.22**	.15**	.20**	.18**
Flow in Leisure	.35**	.23**	.27**	.20**	.17**	.21**	.23**	.23**	.19**	.23**
Life Orientation	.53**	.34**	.47**	.34**	.15**	.46**	.20**	.34**	.29**	.27**
Subjective Happiness	.44**	.24**	.43**	.28**	.10*	.49**	.12**	.24**	.25**	.18**
Presence of Meaning	.44**	.28**	.51**	.22**	.19**	.31**	.20**	.18**	.18**	.24**
Search of Meaning	-.04	-.19**	-.06	.16**	.01	-.12**	-.02	.12**	-.01	.03
Life Satisfaction	.46**	.33**	.47**	.19**	.20**	.32**	.19**	.25**	.26**	.21**
Depression	-.44**	-.39**	-.41**	-.18**	-.05	-.45**	-.16**	-.21**	-.24**	-.20**
Trait Anxiety	-.54**	-.45**	-.44**	-.32**	-.10**	-.48**	-.18**	-.24**	-.27**	-.34**

Note.  $N = 652$ . \* $p < .05$ , \*\* $p < .01$ .



Correlations among subscales showed that all API subscales are in the same direction, however, not necessarily related to each other. As expected, concentration subscale was positively correlated with positive affect, happiness, flow at work, flow at home, flow in leisure time, life orientation and life satisfaction; persistence and joy subscale was positively correlated with conscientiousness, openness to experience, curiosity stretching, positive affect, happiness, flow at work, flow at home, flow in leisure time, optimism, and presence of meaning; curiosity subscale was positively correlated with openness to experience, curiosity stretching, curiosity embracing, flow at work, and flow in leisure time; transcendence was positively correlated with openness to experience, positive affect, stretching curiosity, and flow at work; skill-challenge balance subscale was positively correlated with conscientiousness and openness to experience; being in the present subscale was positively correlated with openness to experience, curiosity stretching, curiosity embracing, happiness, flow at work, life orientation, and life satisfaction; cooperation subscale was found positively correlated with happiness, life orientation, and life satisfaction; seeking challenges subscale was found positively correlated with openness to experience, curiosity stretching, positive affect, happiness, flow at work, flow at home, flow in leisure time, and presence of meaning. Above mentioned positive correlations were indicators of convergent validity for the subscales.

In terms of divergent validity, all API subscales were negatively correlated with depression, trait anxiety, and negative affect. Lastly, non-significant correlations between API subscales and irrelevant psychological constructs were observed in parallel with expectations in terms of discriminant validity.

#### **3.3.4. Test-Re-Test Reliability**

The time-2 data collected from the sample showed that general API scores are stable over time. Time lag between time 1 and time 2 was 3 weeks. Test-retest reliability for the whole API was found .89, and concentration subscale yielded .86, persistence and joy subscale yielded .85, curiosity subscale yielded .78, transcendence subscale yielded .70, integration differentiation subscale yielded .79, challenge-skill balance scale yielded .43, being in present subscale yielded .49, cooperation subscale yielded .68, and need for achievement subscale yielded .71.

### 3.3.5. Confirmatory Factor Analysis

The initial factor structure derived from the first sample using principle axis factoring was tested for model fit via EQS, using the third sample. A confirmatory factor analysis (CFA) was conducted to test the model fit for “concentration” latent variable indicated by items 3, 9, 14, 22, 32, 33, 41, “persistence and joy” latent variable indicated by items 2, 4, 5, 13, 19, 20, 42, “curiosity” latent variable indicated by items 1, 6, 7, 21, 30, 38, 39, “transcendence” latent variable indicated by items 8, 25, 26, 43, 44, “integration and differentiation” latent variable indicated by items 10, 11, 12, 23, 24, “skill challenge balance” latent variable indicated by items 15, 16, 18, 27, “cooperation” latent variable indicated by items 34, 35, 36, being in present latent variable indicated by items 40,45,46,47, and lastly “challenge seeking” latent variable indicated by items 28, 29, 37. The analysis indicated a non-normality (Mardia’s  $Z = 292.07$ ), hence robust statistics were taken into consideration instead of the maximum likelihood model. The average off-diagonal absolute standardized residual was 0.06. The percentage of residuals between the  $z$  scores of -0.1 and +0.1 was 82.71 (41.55 % of residuals were between -.1 and 0 whereas 41.16 % of residuals were between 0 and .1).

Robust statistics revealed that the suggested model of API fit the data very well, Satorra-Bentler  $\chi^2(909) = 1915.62$ ,  $p < 0.00$ ,  $CFI = 0.84$ ,  $RMSEA = 0.05$ . Each of the regression coefficients were significant between indicators and latent variables.

The CFA showed a good model fit to the data. However, in order to see if there is more space to develop model fit, Lagrange Multiplier Test (LM Test) was run to see any post-hoc modification available. LM test did not suggest any significant and/or noteworthy increment in  $\chi^2$ , therefore no modifications were necessary.

### 3.4. Discussion

The aim of this study was to build an instrument of autotelic personality consisting of stable traits that drive the frequency and intensity of flow experiences. The findings demonstrated that the nine subscales of the API represent

psychometrically solid measures of concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, being in present, cooperation, and seeking challenges. Exploratory and confirmatory factor analyses were carried out in separate samples, and the 9-factor, 45-item API factor structure was verified. Convergent, divergent, and discriminant validities were evidenced through correlational analyses conducted with relevant psychological constructs. Internal reliability coefficients, item-total correlations, and test re-test correlations indicated strong psychometric properties.

The APIg, as a general quotient of autotelic personality, was found negatively correlated with neuroticism and negative valence indices of BPTI, whereas it was found positively correlated with extraversion, conscientiousness, agreeableness, and openness to experience. Parallel with Ross and Keiser (2014) and Ullen et al. (2012) studies about personality traits and flow proneness relation; neuroticism, extraversion, conscientiousness were found related with flow proneness. However, in contrast with the Ross and Keiser (2014) study, agreeableness was found positively correlated with autotelic personality in Turkish culture. Lalwani, Shavitt, and Johnson (2006) suggested that agreeableness, as an indicator of impression management, might be perceived differently in individualistic and collectivistic cultures; participants from more collectivistic cultures score higher on agreeableness domains since social desirability plays a significant role in the expression of personality in such cultural contexts. Therefore, the positive correlation found between agreeableness and autotelic personality might be due to the collectivistic nature of Turkish culture.

The APIg was found positively correlated with positive affect, happiness, flow, life orientation, presence of meaning, stretching (CEI-II subscale), embracing (CEI-II subscale), and life satisfaction, as expected. Furthermore, negative correlations between APIg and depression trait anxiety, and negative affect were observed. Such correlations are consistent with the previous literature that individuals with autotelic personality are less depressed, less anxious, experience less negative affect; happier, curious, have higher positive affect, higher optimism, and life satisfaction (Jackson et al., 2008; Abuhamdeh, 2000; Asakawa, 2010; Adlai-Gail, 1994; Ullen et al., 2012). None of the correlations were exceeding .70, indicating that APIg construct is not a similar construct with any of the correlated variables.

API inventory is comprising of 9 subscales, which are not necessarily dependent to one another. Correlations among the API subscales showed that concentration subscale is independent from curiosity, skill-challenge balance, being in present, and cooperation as indicated by low positive correlations. Besides, curiosity subscale was found independent from skill-challenge balance; transcendence was independent from integration-differentiation, being in present, and cooperation; integration-differentiation was found independent from skill-challenge balance and challenge seeking. Being composed of dissimilar traits, APIg was found a reliable and valid measure of flow proneness in the present study.

Concentration domain of API aims to capture a personal inclination towards narrowed attention. As expected and in parallel with previous literature findings about personality traits and attentional control, concentration was positively correlated with conscientiousness and openness to experience, whereas it was negatively correlated with neuroticism and negative valence (Nigg et al., 2002). Moreover, as expected, concentration was found to be positively correlated with curiosity, positive affect, happiness, flow, life orientation, presence of meaning, and life satisfaction. The present study yielded negative correlations of concentration with negative affect, depression, and trait anxiety. High anxiety (Eysenck, Derakshan, Santos & Calvo, 2007), depression and negative affect (Kitamura, Shima, Sugawara & Toda, 1996) were found negatively correlated with concentration ability by previous studies.

Persistence & joy domain of API aims to capture an inclination towards perseverance on a task regardless of frustration and fatigue. Extraversion, conscientiousness, agreeableness, and openness to experience were found to be positively correlated with persistence & joy domain of API in the present study. McGiboney and Wade (1993) found a parallel result on persistence and personality traits in an adolescent sample. Besides, happiness, positive affect, life orientation and life satisfaction were positively correlated with persistence-joy subscale whereas depression and trait anxiety were negatively correlated. Task perseverance and ability to experience joy while performing a task reflected by persistence & joy domain of API was considered as a significant predictor of flow and personal growth in the literature (Csikszentmihalyi, 1990; Nakamura & Csikszentmihalyi, 2002). The

present study had also revealed that persistence & joy subscale of API is strongly associated with flow proneness.

Curiosity domain of API aims to capture an inclination towards an increased interest about life and the environment. Among the personality traits of BPTI, openness to experience yielded the highest positive correlation with curiosity domain, yet agreeableness and extraversion were also positively correlated with curiosity in the present study. Additionally, curiosity domain exhibited the highest positive correlations with the two subscales of the CEI-II inventory compared to other subscales of API, yet not exceeding .60. Curiosity was found to be positively correlated with happiness and life orientation, presence of meaning, and life satisfaction; and negatively correlated with trait anxiety, depression, and negative affect as expected. Kashdan and Steger (2007) study revealed a positive correlation of curiosity with openness to experience, conscientiousness, extraversion, life satisfaction, and presence of meaning; whereas neuroticism was negatively correlated with curiosity. Thus, curiosity domain of API proved evidence for adequately measuring curiosity, and yielded expected associations with relevant constructs.

Transcendence domain of API aims to capture an inclination towards being motivated by meaning in life. Hanidar's (2013) study on transcendence and personality traits found that transcendence was correlated with all personality traits but not with neuroticism. In a similar vein, the present study indicated weak positive correlations of transcendence with extraversion, conscientiousness, agreeableness, and openness to experience. Piedmont (1999) suggested transcendence as the sixth factor of personality in his research because of its independent nature; transcendence subscale of API yielded low correlations with big five personality traits in the present study. As expected, transcendence was found to be positively correlated with happiness, positive affect, optimism, and presence of meaning; whereas it was negatively correlated with depression, trait anxiety, and negative affect.

Integration & differentiation domain of API aims to capture the level of self-complexity in terms of relatedness & individuation. The present study yielded positive correlations with openness to experience, conscientiousness, agreeableness; and negative correlations with neuroticism and negative valence with integration-

differentiation subscale. Besides, integration-differentiation was found positively correlated with positive affect, stretching and embracing domains of CEI-II, happiness, optimism, presence of meaning, and life satisfaction; whereas it was negatively correlated with depression, trait anxiety, negative affect, and search for meaning. The pattern of relations with the related psychological constructs indicate that integration-differentiation domain of API adequately captures self-complexity.

Skill-challenge balance subscale of API aims to capture the general ability to find tasks that are challenging, yet not exceeding one's skill level. Conscientiousness, agreeableness, and openness to experience was found to be positively correlated with this construct. Additionally, skill-challenge balance was positively correlated with positive affect, happiness, optimism, presence of meaning, and life satisfaction whereas; it was negatively correlated with depression and trait anxiety. Ability to find a balance between skills and challenges is the most significant predictor of flow state according to earlier research (Csikszentmihalyi, 1990). Thus, the present study confirmed earlier research.

Being in the present subscale of API aims to capture a general ability to be able to focus on the present rather than being occupied with past or future. Extraversion, conscientiousness, agreeableness and openness to experience were found to be positively correlated with being in present; whereas neuroticism was found negatively correlated with it. Additionally, positive affect, happiness, stretching and embracing domains of CEI-II, optimism, presence of meaning, and life satisfaction were found to be positively correlated with being in present. Depression, anxiety and negative affect were negatively correlated with being in the present. Being in the present subscale of API measures general inclination to live in the present moment; and it is considered as an important predictor of flow state.

Cooperation subscale of API aims to capture a general tendency to cooperate in order to succeed a task. Extraversion, conscientiousness, openness to experience, and agreeableness were found to be positively correlated with cooperation; while neuroticism was negatively correlated in the present research. Besides, happiness, optimism, presence of meaning, and life satisfaction were positively correlated with cooperation whereas; trait anxiety, depression, negative affect were negatively correlated. Cooperation subscale of API did not provide evidence of predicting flow

proneness at work, during maintenance, or during leisure activities in the present research. However, in contexts requiring group-work, cooperation domain is supposed to hold a significant effect for predicting flow.

Seeking challenges subscale of API aims to capture a general tendency for seeking new challenges that would help to improve available skills or virtues. Extraversion, conscientiousness, agreeableness and openness to experience were positively correlated with seeking challenges. Besides, stretching and embracing subscales of CEI-II, happiness, optimism, presence of meaning and life satisfaction were positively correlated with seeking challenges; whereas, depression, trait anxiety, and negative affect were negatively correlated with seeking challenges. Seeking challenges subscale of API reflects an inclination for growth in autotelic individuals; and it is an important predictor of flow.

The development of Autotelic Personality Inventory (API) in the present study is the first attempt to build a psychological instrument that measures a combination of positive personality traits that predict flow. Understanding the precedents of flow state is particularly important, because the increased presence of flow state is associated with higher engagement with life, which in turn leads to a good life (Nakamura & Csikszentmihalyi, 2002). Besides, increased flow frequency was considered as a precedent to personal growth (Seligman & Csikszentmihalyi, 2000). The API traits combined in the API inventory were conceptualized and clarified in accordance with previous literature that depicts the trait-like precursors of flow experience in a non-systematic nature. The initial studies presented in this chapter of the dissertation indicated a reliable, valid, and time-persistent measurement of autotelic personality; however, further data collection in various samples and contexts would contribute to the reliability and validity of the new instrument. Data obtained from other cultures would make it possible to evaluate measurement invariance across independent samples, and the psychometric properties of the API would be further evaluated.

### **3.4.1. Directions for Future Research and Limitations of the Present**

#### **Study**

Efforts to measure autotelic personality as a constellation of traits would make a fundamental contribution to flow research. Initially, it was attempted to shed light on the phenomenology of the autotelic personality by operationalizing it. What are the properties of autotelic individuals? Which personal assets and qualities make them enter and sustain flow experience? Are they really happier, more open to psychological growth, and satisfied with their lives? Besides, what are the obstacles and facilitators of developing autotelic personality? What interventions can and should be developed to facilitate the development of autotelic personality for schooling and parenting environments? Autotelic personality should be further studied to investigate such arenas. The next section of the doctoral dissertation presents a study in which associations of autotelic personality with several personal strength variables, personal growth initiative, and psychopathology is investigated.

A major limitation for the present study is the concurrence of the data collection process on 13<sup>th</sup> of May, 2014 with a mine disaster in Soma, Manisa district of Turkey took place. A coal mine explosion caused an underground mine fire that burned for 2 days; 301 people were reportedly dead in the occasion, which was the worst mine disaster in Turkey's history, and a huge catastrophe for the nation. A disaster in such great extent possibly interfered with the data collection procedure. Retest data was collected 3 weeks after the disaster day, therefore, it is assumed that the test-retest reliability procedure might be affected from the mine disaster's effect on individuals' mood. Skill-challenge balance and being in present subscales of the API inventory yielded insufficient test-retest coefficients that might be due to the mining disaster. Therefore, a replication of the test-retest study might be required for additional information on the issue.

Lastly, another limitation of the present study was the utilization of Swedish Flow Proneness Questionnaire (SFPQ) as a measure of flow propensity in the present research. Autotelic Personality Inventory was tested in relation with SFPQ within the scope of this research. Therefore, future studies utilizing experience sampling method should be realized to further investigate API's psychometric in relation with real time flow experience, rather than flow proneness. The conceptual development



of the construct appears psychometrically sound; however, complimentary Experience Sampling Method (ESM) data would provide beneficial information on the predictive power of each API subscale in the frequency and intensity of flow experiences.

## CHAPTER IV

### MAIN STUDY

#### 4.1. Rationale of the Present Study

Clinical efforts in behavioral sciences had been accumulated in understanding psychological disorders, and alleviating symptoms as described in the general introduction chapter. A great amount of knowledge have been gathered in understanding psychopathology and developing psychotherapeutic interventions up to the present moment. Such accumulation had helped mental health professionals to understand psychopathology, to build and develop clinical interventions to a great degree (Seligman, 2000). Prevention has always become a central issue in mental health research; however, intervention aspect had been developed far more extensively than prevention. Positive psychology, emerging in the last three decades, is more concerned with the promotion of psychological well-being by studying and understanding basic human strengths, optimal experiences, positive emotions, and optimal development through early stages of life. In their introductory article in *American Psychologist's* special issue, Seligman and Csikszentmihalyi (2000) highlighted the need to gain knowledge on such topics, and suggested a paradigm shift in clinical research from a disease-centered approach to a strength-based one. The main idea behind such proposition was that psychological problems are now well understood, treatments have been well-established, and psychologists should start to devote their time to make people's lives better.

Seligman and Csikszentmihalyi (2000) suggested that such transformation of paradigm can be feasible through infusing positive psychology research to mental health. As a response to such proposition, scientific research had just begun to accumulate in clinical psychology. In a similar vein, the idea behind the current research was that integrating psychopathology, psychotherapy and positive psychology would provide improvements in the study of mental health. Based on this idea, the aim of the present chapter is to follow such a proposition by integrating a human strength based approach to current models of psychopathology.

What potential benefits would be gained by infusing positive psychology to clinical psychology? Wood and Tarrrier (2010) discussed that utilizing a positive psychology perspective for understanding clinical disorders and distress would be beneficial, since the absence of positive characteristics has been shown as a risk factor for distress (Wood & Joseph, 2010), the nature of such relation can be casual (Brisette, Scheier & Carver, 2002), positive characteristics buffer the impacts of negative life events on psychological distress (Johnson, Gooding, Wood & Tarrrier, 2010), and interventions that foster personal strengths have indicated a significant potential to alleviate various forms of psychological distress (Sin & Lyubomirsky, 2009). Besides, mental health services are limited in their ability to reach majority of the people since the labelling nature of diagnostic and interventional procedures might pose a threat to potential client's self-esteem (Prochaska, 1999). Lampropoulos (2001) highlighted the effectiveness of various self-help forms, discussing that such effectiveness might be due its' nonmedical nature, function to build positive traits, and potential to serve as a self-protective survival mechanism.

#### **4.2. Positive Psychology: The Study of Pleasant, Good, and Meaningful Life**

Seligman (2002) described positive psychology research as the quest of understanding pleasant, good, and meaningful life. *Pleasant life* is characterized by the availability of positive feelings and emotions. *Good life* is mainly characterized by high levels of engagement with life; specifically the presence of flow experience when a balance between individuals skills and their tasks is available. Lastly, *meaningful life* is characterized by the derivation of a positive sense of being, belonging and meaning in life by being part of something larger and more permanent than themselves. Present research captures several aspects of pleasant, good, and meaningful life.

##### **4.2.1. Pleasant Life**

Pleasant life is mainly characterized by positive emotions about the past, present and the future according to Duckworth, Steen, and Seligman (2005). Past related positive emotions include contentment, satisfaction, and serenity; present related positive emotions include somatic pleasures (sensory pleasures, such as eating a tasty dinner, enjoying arts etc.) and complex pleasures (pleasures that require learning, such as playing a game); and future related positive emotions

include optimism, hope, and faith. Duckworth et al. (2005) described pleasant life as the one that maximizes positive emotions and minimizes negative emotions; which corresponds to hedonic well-being approaches. Seligman (2002) stated that as compared to good life and meaningful life, pleasure is the most transient element of happiness and life satisfaction; therefore, holds the least important contribution to a life worth living.

#### **4.2.2. Good Life**

Good life –also called engaged life- corresponds to a life that is characterized by immersion that can be achieved through utilizing positive traits or personal strengths of character (Duckworth et al., 2005). Among those personal strengths valor, leadership, kindness, integrity, originality, wisdom, and capacity to love were stressed by Duckworth et al. (2005). In addition to such strengths, flow theory defined a set of personal strengths within autotelic personality constellation that enable people to enter and sustain flow, a state of intense immersion. These strengths are curiosity, persistence and joy, concentration, transcendence, individuation and differentiation, ability to reach a balance between skill and tasks, seeking challenges, cooperation, and ability to be in the present, all of which would lead to more engagement, absorption, and flow.

#### **4.2.3. Meaningful Life**

Meaningful life entails stretching self beyond its boundaries by belonging or serving to something larger than the self (Duckworth et al., 2005). Duckworth et al. (2005) made a distinction between the positive institutions (institutions cultivating positive emotions and traits, such as strong families, communities, mentoring, and democracy) and disabling institutions (e.g., racism, sexism, and ageism). Accordingly, a meaningful life can be achieved by being a part of positive institutions, because they are thought to enable the best in human nature.

In order to clarify the distinction between the three domains of a life worth living, I would describe a guitar player's experience. Playing guitar provokes instant complex pleasure; therefore, a guitarist approaching to his/her guitar expects the immediate joy of playing melodies and harmonies. Such ability to enjoy the guitar indicates that the player has a capacity to derive joy from such experiences that elicit

joy. However, this doesn't necessarily imply that the player also has positive emotions neither about the past nor about the future. In addition to enjoyment of playing the guitar as a leisure activity, if the guitar player devotes his/her time to improve his/her musical abilities, such as composing harmonies, mastering techniques further, and song writing, such efforts would require a degree of immersion with the task at hand. Therefore, a good life can be achieved through immersion to guitar playing. Lastly, if the guitar player shares his/her compositions and skills with his/her community, makes albums, gives concerts, those efforts would imply a belongingness and indicates devotion to a positive institution (community). As a result, life meaning can be achieved.

### **4.3. Flow and Autotelic Personality**

#### **4.3.1. Flow Theory**

Flow, also known as the optimal experience or being in the zone, is a psychological state that occurs when a great degree of absorption is experienced with tasks that are challenging yet controllable (Csikszentmihalyi, 1990). This state was called "flow" by Csikszentmihalyi (1975) as he interviewed several experts and artists, who described this state with a metaphorical narration as being in the water current carrying them along. Flow state results from an interplay of several psychological mechanisms that enables individuals to focus their concentration on the present, merge actions and awareness, lose self-consciousness, have a sense of control about the task at hand, experience an altered perception of time, and become intrinsically motivated by the present activity. (Nakamura & Csikszentmihalyi, 2005). Carr (2004) pointed out that such immersion can only be achieved by no longer thinking of worries and frustrations of everyday life. By achieving flow state, the sense of self disappears and paradoxically emerges afterwards in a strengthened nature once the task is completed (Carr, 2004).

As Seligman (2002) and Duckworth et al. (2005) referred to it, flow experience is a central facet of a pleasant life and a good life. Beyond the hedonistic pleasures, flow state provides a complex pleasure, joy, and increases positive affectivity (Csikszentmihalyi, 1988); therefore, such pleasures arising from complexity is more significant to a pleasant life compared to hedonistic pleasures, such as eating an ice-cream. This is mostly because, such complex pleasures are

achieved through striving. Besides, flow experiences enable individuals to improve their strengths and skills, as they are challenged moderately and in harmony with their skill levels (Csikszentmihalyi, 1988); and eventually self-efficacy and self-esteem are affected positively (Carr, 2004). Therefore, it is also an essential aspect of a good life.

Flow experiences can be experienced while doing a wide range of activities, such as reading, sports, painting, singing, dancing, writing etc. (Carr, 2004). Flow state arises when the individual operates at full capacity; however, such state cannot be present very frequently, since it depends on a highly fragile balance between challenges and skills (Nakamura & Csikszentmihalyi, 2002). There may be shifts between anxiety (when the challenges begin to exceed skills), boredom (when the skills exceed the challenges), and flow (a balance between challenges and skills). Experiencing boredom or anxiety requires the person to regulate his/her skill level or the challenge in order to avoid the aversion and reenter flow (Nakamura & Csikszentmihalyi, 2002). Therefore, the ability to find a balance between skills and challenges depends on the availability of required capacities, which were granted by earlier master of skills (Nakamura & Csikszentmihalyi, 2002). Emergent motivation (Csikszentmihalyi, 1985) was coined to further explain such balance; and it was described as an output of an interplay between the environment and the individual in the sense that goals arise out of the interaction between the two; rather than a motivation being dictated by a preexisting intentional structure (i.e., psychological drive, traditions, or rules).

Flow experience has a significant effect in developing self-complexity. Most of the interviewees in Csikszentmihalyi study (1975) reported that flow experience itself is intrinsically rewarding and they seek such experiences in their life. The need to experience flow state leads to a discerning mechanism of psychological functioning that fosters flow (Nakamura & Csikszentmihalyi, 2002). Vygotsky (1978) argued that such mechanism facilitates the mastery of skills as they are moderately challenged, since optimal level of challenge stretches available skills (Vygotsky, 1978; as cited in Nakamura & Csikszentmihalyi, 2002, p.92).

Autotelic Personality as a set of stable, enduring, and positive personal characteristics (Csikszentmihalyi, 1990) that mainly predicts flow propensity is described in the next section.

### **4.3.2 Autotelic Personality**

Flow state is assumed to be experienced by everyone, however there are interpersonal differences in entering and sustaining flow state (Csikszentmihalyi, 1988). Csikszentmihalyi (1990) defined autotelic personality as a set of personal qualities that would enhance the ability to experience flow. Autotelic is a word derived from the combination of two Greek words, auto (self) and telic (motivated). Therefore, autotelic personality stands for a set of personality traits held by individuals, who are self-motivated without a need for extrinsic rewards. For an autotelic individual, doing the activity is the reward rather than a future or external reward attached to the activity (Csikszentmihalyi, 1990). Individuals holding autotelic qualities are more likely to reach the optimal experience that would make life more joyful and good; they are more motivated to seek flow than others (LeFevre, 1988).

A general curiosity towards life, persistence, and low self-centeredness are meta-skills possessed by autotelic individuals (Csikszentmihalyi, 1997). A need for achievement, enjoyment, openness to novelty, narrow concentration, integration and differentiation, and independence and cooperation were also mentioned as main traits of autotelic individuals (Csikszentmihalyi et al., 1993; Nakamura & Csikszentmihalyi, 2002). Such meta-skills are linked to individual's ability to prefer challenging situations in a confident manner (Adlai Gail, 1994).

Nakamura and Csikszentmihalyi (2002) underlined that flow research has mostly focused on the flow state rather than the autotelic personality. However, flow research has also indicated that there is an interpersonal variability in experiencing flow, therefore autotelic personality should also be investigated. Noelle-Neumann (1995) found that 35 % of his study participants reported that they rarely/never experienced a psychological state, in which they lost track of time; and 23 % of the participants stated that they experienced such state in a daily manner (Noelle-Neumann, 1995; as cited in Nakamura & Csikszentmihalyi, 2002, p.98). LeFevre (1988) found that about 40 % of the study participants were best motivated in high-skill and high-challenge situations and 40 % of the subjects were best motivated in low-skill and low-challenge situations (LeFevre, 1988; as cited in Nakamura & Csikszentmihalyi, 2002, p.98). LeFevre (1988) called the individuals who are motivated in the high-skill and high-challenge situation as autotelic individuals. (LeFevre, 1988; as cited in Nakamura & Csikszentmihalyi, 2002, p.98). Adlai-Gail

(1994) showed that autotelic individuals had well-defined future goals and high positive affectivity. Recently, an experimental approach was adopted to study autotelic personality. This approach embraces the manipulation of challenges and skills to test if it would make a difference in the flow experience. (Engeser & Rheinberg, 2008; Keller & Bless, 2008; Keller & Blomann, 2008). Engeser and Rheinberg (2008) showed that the relation between skill-challenge balance and task performance is mediated by the importance of the activity and individual achievement motive. Similarly, Keller and Bless (2008) studied autotelic personality experimentally, and they suggested that the fit between skills and task difficulty is important for intrinsic motivation to rise; but the relationship between the perceived fit and enjoyment should be investigated. Lastly, Keller and Blomann (2008) revealed that individuals who have a high internal locus of control are more sensitive to a manipulation of skills and challenges; when a balance between skills and challenges was provided experimentally, they experienced more flow. Individuals with a low internal locus of control did not experience flow; therefore, the role of internal locus of control was found critical for flow experience (Keller & Blomann, 2008).

Autotelic personality, as a set of positive personal traits, have associations with pleasurable, good, and meaningful life. Next section aims to describe the associations of autotelic personality with the pleasurable, good, and meaningful life.

#### **4.4. Autotelic Personality: Pleasurable, Good, and Meaningful Life**

##### **4.4.1. Happiness**

Happiness is considered as a central facet of psychological well-being. An exclusive definition of happiness was made by Seligman (2002) as a mental state characterized by positive emotions such as joy or serenity, and positive states such as flow and immersion. As summarized by Seligman (2004), positive psychology research findings indicate that happiness can be achieved through pleasure (bodily or psychological), engagement with life (flow), having positive relationships, having a meaningful life by being a part of something bigger, and having accomplishments. Diener, Lucas, and Oishi (2002) discussed that happiness is a key constituent of a worthy life, though other desirable characteristics are also essential.



As categorized by Diener et al. (2002), three groups of theories can be accounted for the available happiness research: (1) need and goal satisfaction theories, (2) genetic and personality disposition theories, (3) process or activity theories. The main findings of each theory cluster will be exemplified to further discuss the link between happiness and autotelic personality.

The first group of theories focuses on the elimination of the discomfort and the gratification of biological and psychological needs. Freud's pleasure principle and Maslow's hierarchy of needs can be exemplified as the pioneers of this approach (Diener et al., 2002). Several studies were conducted from this point of view. Omodei and Wearing (1990, as cited in Diener et al., 2002, p. 65) found a positive link between need satisfaction and life satisfaction; Michalos (1985, as cited in Diener et al., 2002, p. 65) discussed that happiness is negatively related to the degree of discrepancy between desired things, actual possessions, and what other significant people possess; and Higgins posited that the gap between one's ideal self and ought self leads to negative emotions (1987; as cited in Diener et al., 2002, p. 65). Thus, these theories share the assumption that reduction of tension and satisfaction of needs will cause happiness.

The second cluster of theories is based on the assumption that even if life events can influence happiness, individuals will adjust to life events and return to the biologically determined baseline points. Sandvik, Seidlitz, and Diener (1993) reported that subjective well-being is steady and comparable among people who experienced increments, decrements and stability of income over 10 years. Similarly, Costa, McCrae, and Zonderman (1987, as cited in Diener et al., 2002, p. 67) found that there is no difference in terms of general stability between people who live a predictable life and people who experience major life changes. This group of research also highlighted the hereditary components of psychological well-being. Tellegen (1988, as cited in Diener et al., 2002, p. 67) carried out a study with monozygotic and dizygotic twins who were raised apart or together: 40 % of the variability in positive affect and 55 % of variability in negative affect could be predicted by genetic make-up. Similarly, Lyubomirsky (2008) reported that 50 % of happiness is inherently determined; 40 % is due to self-control, and 10 % is due to life circumstances. In addition to genetics, personality is also considered as a significant predictor of psychological well-being. Extraversion and neuroticism accounted for the variability in psychological well-being (Diener & Lucas; 1999, as

cited in Diener et al., 2002, p. 67). Lastly, hope (Snyder et al., 1991; as cited in Diener et al., 2002, p. 67) and optimism (Scheier & Carver, 1993; as cited in Diener et al., 2002, p. 67) were found to influence psychological well-being.

The third group of theories is based on the assumption that active engagement with life brings happiness. As described earlier, Csikszentmihalyi (1975) suggested that individuals who are capable of finding interesting activities that fits with their skill level experience flow state, and being in such state itself is happiness. Similarly, Sheldon, Ryan, and Reis (1996) found that being engaged in activities with an intrinsic motivation makes people happy. In a similar vein, Emmons (1986) discussed that having goals for future and pursuing towards those goals are important indicators of psychological well-being (Emmons, 1986; as cited in Diener et al., 2002, p. 66).

#### **4.4.2. Curiosity**

Curiosity is an important human virtue that is characterized by a recognition and intense desire to explore novelties, challenges, and uncertainties (Kashdan & Silvia, 2009; Peterson, Ruch, Beerman, Park, & Seligman, 2007). Within the flow theory (Csikszentmihalyi, 1975), curiosity was considered as an indispensable component of autotelic personality and it was suggested to be positively related with the ability to enter and sustain flow state. Besides, the nature of flow state was characterized by absorption to the activity at hand by deploying the whole personal resources; this absorption with the task at hand also resembles curiosity. Such a significant human virtue enhances learning, exploring, and immersion (Loewenstein, 1994); makes individuals open to unplanned experiences and transform those experiences into opportunities (Mitchell, Levin, & Krumboltz, 1999); and it is accounted for accomplishments in life (Day & Langevin, 1969). The research on curiosity as a trait like construct is limited (Kashdan & Silvia, 2009)

#### **4.4.3. Meaning in Life**

Finding a meaning and purpose in life by being a part of something bigger than the self is a fundamental aspect of human striving despite the biological inclinations to be selfish. In spite of the psychoanalytical paradigm, Frankl (1959) stressed the importance of finding a meaning in life for a life worth living. Since

then, a great number of studies encompassed the significance of finding a meaning in life and its implications for psychology.

Baumeister and Vohs (2002) considered meaning as a tool to impose stability on life. According to Baumeister (1991), there are four main needs to be satisfied for meaning in human life: Purpose, values, a sense of efficacy, and self-worth. The core of purpose need is to draw a meaning for present events from their connection with future events (Baumeister, 1991; as cited in Baumeister & Vohs, 2002, p.610). The fulfillment of this need would enable one to see the present activity as a path that leads toward the future. Purpose need was sorted into two types (Baumeister & Vohs, 2002) as goals (present activities acquire meaning by translating the present situation to the desired future) and fulfillments (a present orientation towards a subjective anticipation of future fulfillment). The satisfaction of purpose need would make the present meaningful as the future is anchored to the present

The need for values is another essential component of life meaning. The acquisition of values would enable individuals to experience a sense of positivity, and justification of present action in life (Baumeister & Vohs, 2002). Moral decisions, evaluating actions if they are right or wrong, and shaping actions could be possible by having values in life. Besides, values provide a base for self-verification; guilt, anxiety, regret and stress can be minimized with actions that are governed by values.

The need for efficacy accounts for the belief about the self that one could make a difference in the course of life (Baumeister & Vohs, 2002). Efficacy is of crucial importance, without its presence having purpose and values in life would not end up in a meaningful life: A lack of control on the ongoing events or things can provoke a personal crisis that would diminish mental and physical health (Baumeister, 1998, as cited in Baumeister & Vohs, 2002, p.610)

The last need to be satisfied for a meaningful life is self-worth. The fulfillment of this need can be possible by finding reasons that one is good and worthy (Baumeister & Vohs, 2002). In order to satisfy the need of self-worth, one can find ways to regard himself/herself as superior to others according to Wood (1989), or it can be pursued through belonging to a group or category that the individual regards as worthy according to Turner (1975; as cited in Baumeister & Vohs, 2002, p.611).

Autotelic individuals are likely to succeed a meaningful life, since their personality characteristics would possibly serve for the fulfillment of these four main needs for a meaningful life to varying degrees. In terms of satisfying the need for purpose, autotelic individuals tend to actively seek new challenges and persist on the present activity; even though they are driven by intrinsic rewards rather than the external ones, they are in need of success (Csikszentmihalyi, 1997; Csikszentmihalyi et al., 1993). Similarly, the need for efficacy could be fulfilled by autotelic individuals, as they have high concentration abilities, and self-complexity, and they are in need of achievement (Csikszentmihalyi, 1997; Csikszentmihalyi et al., 1993). These personal characteristics were linked to sense of control over the present situation (Adlai Gail, 1994).

Based on the flow theory assumptions and findings, it might be speculated that: in terms of satisfying the need for self-worth; high complexity, independence, ability to cooperate, and low self-centeredness properties of autotelic individual can help one to acquire a well-balanced and stable self-worth both by means of individual pursuit and group membership. In terms of the need for values; autotelic individuals would be likely to satisfy this need as they have complexity and low self-centeredness. Besides, autotelic individuals were thought to find a meaning in life without being highly contingent upon the purposes, values, and assets related to self-worth and self-efficacy provided by the modern life (Baumann, 2012). They are capable of finding tasks that are intrinsically motivating to satisfy needs for a meaningful life. Despite the fact that, modern life offers work environments that provide various tasks, rewards and goals for a purposeful life; fulfillments such as marriage; routes for self-efficacy like work, family, hobbies, volunteer work; the consensus about values is weakened due to the diversity and multiplicity of lifestyles in the modern day (Baumeister, 2002). Since autotelic individuals are driven by intrinsic motivation (Baumann, 2012), it can be speculated that they might be more likely to satisfy the requirements of a meaningful life in the present research.

## **4.5. Autotelic Personality and Psychopathology**

### **4.5.1. Depression**

In psychology, depression term is often used to describe temporary or relatively long lasting mood states such as being upset, disappointed, or similar negative emotions following an unpleasant experience (Hammen, 2003). Such negative mood state might vary in duration of a few moments to years. The spectrum of depression as a clinical disorder includes changes in mood, physical functioning, and quality of thinking, self-care, behaviors, and overall functioning (Hammen, 2003).

A change from previous functioning in a negative direction due to depressed mood and loss of interest or pleasure is the central aspect of clinical depression according to the fifth edition of Diagnostic and Statistical Manual of Psychiatric Disorders (APA, 2013). Global functioning is decreased due to reports of sadness/emptiness, decreased interest or pleasure in almost all activities of the daily life, significant weight change that is not due to a dietary change, a change in appetite, difficulty to fall asleep or hypersomnia, psychomotor agitation or retardation, fatigue or loss of energy nearly every day, feelings of worthlessness or excessive or inappropriate guilt nearly every day, diminished ability to think or concentrate, indecisiveness, recurrent thoughts of death, suicidal ideation or suicide attempt (APA, 2013). These symptoms cause significant distress or impairment in social, professional or other important areas of functioning; and they are not due to the effects of substances or general medical conditions (APA, 2013).

Beck (1967) revealed the general properties of depressive thinking and suggested causality between such thinking and depression; self-critical, pessimistic, helpless, and hopeless interpretations of self and the world. More recently, cognitive perspective of depression has become one of the significant models for both understanding and treating depression; however cognitive perspective has not provide sufficient understanding of causalities and origin of depression by itself (Hammen, 2003). Therefore, complementary studies from a positive psychology perspective might contribute a lot to the recent knowledge of depression, which is mostly gathered from a disease based cognitive perspective. The cognitive model highlights the significance of dysfunctional attitudes and rumination as a general vulnerability for the development, maintenance, and relapse of depression (Beck,

1967). Dysfunctional attitudes encompass negative and rigid assumptions about self that involve high standards of evaluation, perfectionism, and interpersonal approval (Weissman & Beck, 1978; Zuroff, Blatt, Sanislow, Bondi, & Pilkonis, 1999; as cited in Ramel, Goldin, Carmona, & McQuaid, 2004, p.433); whereas rumination is characterized by focusing the attention to negative emotional states, and repetitively thinking about causes, meanings, and consequences (Nolen-Hoeksema, 1991; as cited in Ramel et al., 2004, p.433). In positive psychology, mindfulness based approaches have been developed for the treatment of depression. Ramel et al. (2004) proposed a mindfulness based intervention, comprising of meditation and psychoeducation about mindfulness, targeting dysfunctional attitudes and rumination. They found that such intervention successfully leads to decreases in ruminative thinking and dysfunctional attitudes. Similarly, Kuyken et al. (2008) found that cognitive therapy accompanied with a mindfulness intervention is more successful for alleviating depressive symptomatology, treating depression, and preventing relapse as compared to cognitive therapy alone. Kingston, Dooley, Bates, Lawlor, and Malone (2007) showed that mindfulness based cognitive therapy is particularly successful for eliminating ruminative thinking. Mindfulness based cognitive therapy (Kingston et al., 2007; Kuyken et al., 2008; Ramel et al., 2004) is characterized by integrating the meditative practices and attitudes that cultivate mindfulness to the traditional cognitive therapy. Such integration enhances cognitive therapy to a great degree, since it contains teachings on how to think rather than what to think.

There is no research on the relationship between depression and autotelic personality in the literature. However, ability to concentrate –reflected the concentration domain of autotelic personality– is known to be decremented under depressive mood (Rock, Roiser, Riedel, & Blackwell, 2014). Besides, persistence and joy –another domain of autotelic personality– is vanished in depression (APA, 2013). A general disinterest towards the environment (APA, 2013) in depression also implies that curiosity domain of autotelic personality might be negatively related to depression. Previous research has also shown that depression is negatively related to transcendence (Ellerman & Reed, 2001), integration- differentiation (Linville, 1987), being in the present (Nolen-Hoeksema, 1991), and cooperation (Surbey, 2011). Besides, depressive individuals tend not to strive for challenges; their perception of

own skills are negatively biased (APA, 2013). Thus, almost all dimensions of autotelic personality tend to be negatively associated with depression.

#### **4.5.2 Anxiety**

Anxiety is an uneasy feeling/an unpleasant emotion rooted in fear or apprehension of future events, past events, or ruminations about self; and it is usually accompanied by several physiological symptoms, such as increased blood pressure, palpitating heart, sweating, trembling extremities, and pupil dilation (Getzfeld, 2006; Thackery, 2003). American Psychiatric Association (2000) uses the term anxiety for “apprehensive anticipation of future danger or misfortune accompanied by a feeling of dysphoria or somatic symptoms of tension”. It is an emotional reaction that resembles an exaggerated fear that differentiates from fear and occurs as a result of a real danger (Getzfeld, 2006). Anxiety can occur in varying degrees when people feel threatened by real or anticipated danger; psychologists differentiates normal anxiety and neurotic anxiety in terms of appropriateness of fear response elicited by the situation (Getzfeld, 2006). Anxiety might interfere with an individual’s ability to maintain his/her life, job, responsibilities (Thackery, 2003).

The fifth edition of Diagnostic and Statistical Manual of Psychiatric Disorders (APA, 2013) classifies anxiety disorders with regard to descriptive features of the inappropriate fear in different contexts. Separation anxiety disorder is characterized by an intense anxiety of separation with people or environments, to which individuals has a strong emotional attachment; specific phobias are characterized by irrational fear of exposure to specific objects or situations; social anxiety disorder is characterized by irrational fears with regard to real or perceived scrutiny from others; panic disorder is characterized by panic attacks where intense fear of a sudden onset accompanied with bodily and cognitive symptoms; agoraphobia is characterized by intense and irrational fears regarding to dangers of the environments, uncontrollable social situations, and unfamiliar places; generalized anxiety disorder is characterized by excessive, and often irrational fear evoked by an unrealistic apprehension of events or activities; selective mutism is characterized by the tendency to not to speak in specific situations or to specific people due to shyness or social anxiety; and substance/medication-induced anxiety disorder is characterized by anxiety symptoms caused by the effects of a psychoactive substance (APA, 2013).

Anxiety was studied and elaborated by several schools of psychological research such as psychoanalysis, behaviorism, and cognitivism (Strongman, 1995). Anxiety was elaborated within psychoanalytical perspective as an avoidance of overstimulation due to an oversensitivity determined by birth trauma, early infancy experiences, possible loss or withdrawal of mother, fears of castration; anxiety is inherited or learned during or right after birth (Freud, 1916; Freud, 1927; as cited in Strongman, 1995, p.4). Behavioral researchers considered anxiety as a function of learning to avoid noxious stimuli; fear becomes attached to a neutral stimulus, becomes a source of motivation and reinforcement mostly during childhood, and therefore, provides a setting to develop anxiety in later life (Mowrer, 1953; Dollard & Miller, 1950; as cited in Strongman, 1995, p.5). Within cognitive perspective Eysenck (1990; as cited in Strongman, 1995, p. 5) highlighted the interpersonal differences in stress susceptibility that might be due to memory organization and biases and cognitive appraisals of ambiguity; whereas Öhman (1993; as cited in Strongman, 1995, p.7) underlined significance of the interplay between information processing strategies and biological systems in producing anxiety.

In flow theory, flow state is experienced when a perceived balance between challenges and personal skills are matching (Csikszentmihalyi, 1975). Anxiety is a non-flow state, where the challenges exceed the personal skills. Besides, individuals with high trait anxiety might have a negative perception of their abilities to meet the challenges of the task (Csikszentmihalyi, 1975). Kimiecik and Stein (1992) discussed that anxiety is one of the significant personal variable underlying non-flow states. A negative relation between flow and anxiety has also been demonstrated by a number of studies (Jackson, Kimiecik, Ford, & Marsh, 1998; Koehn, 2013; Fullagar, Knight, & Sovern, 2013). Anxiety generated by extreme arousal is associated with a “disintegrated” attention rather than a focused attention depicted in flow states (Izard, 1977; as cited in Fullagar et al., 2013, p.240). Thus, as in the depression, the dimensions of autotelic personality and anxiety seem to be negatively associated with each other.



### **4.5.3 Worry**

Worry resembles the cognitive side of anxiety as uncontrollable series of negative and emotional thoughts and images concerning with possible future threats or dangers (Borkovec, 2002). Specifically, worry is described as the cognitive component of the generalized anxiety disorder in DSM V (APA, 2013). However, major depression also encompasses worry frequently (Chelminski & Zimmerman, 2003; as cited in McLaughlin, Borkovec, & Sibrava, 2007, p. 24). Regardless of insignificance and low intensity of a danger sign, individuals with high worry tend to focus their attention to such signs of danger (Mathews & MacKintosh, 2000), especially when they are under stress; and such attentive process might trigger a vicious cognitive cycle that leads to excessive anxiety. This repetitive cycle regarding to thoughts about possible future threats is a determinant of worry (Borkovec, Robinson, Pruzinsky, & DePree, 1983).

Worry has several effects on affect states and cognitive activity. McLaughlin et al. (2007) found that worry significantly increases negative affect, decreases positive affect, tends to generate greater anxiety, and it is more associated with thought than imagery. Moreover, Borkovec and Roemer (1995) revealed that worry is associated with a preparation for the worst that might happen, and avoidance/prevention of negative consequences.

Within the flow theory perspective, worry is experienced when medium difficulty tasks are handled with low skills (Csikszentmihalyi, 1997). Moreover, worry leads attention to focus on self or threats; however, flow state is a complete absorption with the task at hand with no self-awareness. Since autotelic personality implies a high concentration with the task at hand, absence of self-awareness, low self-centeredness, openness to novelty, and high self-complexity (Csikszentmihalyi, 1997; Nakamura & Csikszentmihalyi, 2002); worry might jeopardize individuals' inclination to prefer challenging situations.

### **4.5.4 Obsessions and Compulsions**

Obsessions are thoughts, images, or emotions, which are unwelcomed, uncontrollable and persistent, leading to significant distress. They are dissimilar to delusional thoughts since obsessions seem unnatural to those who have them, and typically involve fears of contamination, doubts about own behavior, imagery reifications of violent behaviors or sexual acts (Haycock, 2003). When obsessional

thoughts, images, or emotions lead to distress and worry; compulsive behaviors (repetitive, excessive, and meaningless activities or mental exercises) might be performed as an attempt to avoid unpleasant feelings (Haycock, 2003). The nature of compulsive activities are unpleasant, specifically determined, repeated, and irrational (Haycock, 2003).

Taken together, obsessions and compulsions might point to obsessive compulsive disorder (OCD). OCD was classified under anxiety disorders in DSM-IV-TR (APA, 2000), however DSM-V (APA, 2013) introduced a new category named obsessive compulsive and related disorders due to the increasing evidence that these disorders are related to one another and distinct from other anxiety disorders. In this newly introduced category, obsessive compulsive disorder is accompanied by hoarding disorder and excoriating disorder (APA, 2013).

Diagnostic criteria for OCD in DSM-V (APA, 2013) entail the presence of obsessions (recurrent, persistent, intrusive, inappropriate, non-realistic thoughts and images; the person attempts to overlook, suppress, or neutralize them with some other thought and act; the person recognizes that obsessions are a creation of his or her own mind), compulsions (repetitive behaviors or mental acts that are performed in reaction to an obsession; inflexible rules apply for the execution of compulsive behaviors; they object preventing or reducing distress caused by obsessions however they are not logically connected with what they are intended to counteract or prevent); the recognition that obsessions and compulsions are disproportionate and arbitrary. Moreover, obsessions and compulsions lead to significant distress, are time consuming, and interfere with person's normal routine, occupational, social and interpersonal functioning.

Theoretical perspectives that are developed to understand obsessive compulsive disorder within cognitive perspective designate dysfunctional cognitive processing, dysfunctional beliefs, and appraisals that predict obsessive compulsive symptomatology (Taylor, Abramowitz, & McKay, 2009). Inductive reasoning, executive functioning, and specific learning and memory mechanisms might be deficient or abnormal in individuals with OCD even after successful treatment of OCD symptoms (Nielen & Den Boener, 2003). Salkovskis (1996) highlighted the central role of intrusive thoughts, images, or impulses that can be appraised as posing

a threat to the space of personal responsibility. Intrusions might facilitate the development of obsessions if person appraises them as a fact that would lead to serious consequences within his or her responsibility area (Salkovskis, 1996). As a result of such appraisal of intrusive material into consciousness, distress is experienced and individuals tend to suppress the intrusive material by replacing it with something good or by attempting to prevent possible serious consequences (Salkovskis, 1996). Compulsions are persistent and excessive efforts that specifically target the elimination of distress; they are reinforced by the instant distress reduction and they inhibit individuals with OCD to understand that their appraisals are unrealistic (Salkovskis, 1985). Rachman (1997) proposed that dysfunctional appraisals are not limited to responsibility; a set of dysfunctional beliefs are also related to OCD. Excessive responsibility (believing that one has a unusual supremacy or duty to prevent negative outcomes), over-importance of thoughts (mere presence of thought indicates the significance of that thought), need to control thoughts (believing that one can entirely control thoughts, and doing so is essential), overestimation of threat (undesirable consequences are most likely to occur), perfectionism (mistakes are intolerable), and intolerance for uncertainty (believing that it's possible to be absolutely certain) are some of those dysfunctional beliefs.

Being intruded by unwanted cognitive material (Taylor et al., 2009), immediate automatic behavioral activation to diminish distress (Salkovskis, 1996), biased appraisal of responsibility (Salkovskis, 1996), and above mentioned dysfunctional beliefs regarding to responsibilities, thoughts, threats, perfectionism, and intolerance for uncertainty might contradict with a curious, attentive, persistent, concentrated, independent, highly cooperative, and challenge seeking autotelic constellation of personality traits (Nakamura & Csikszentmihalyi, 2002).

#### **4.6. Autotelic Personality and Personal Growth Initiative**

Personal growth initiative (PGI) is described as a set of mechanisms or processes that aids an active and intentional engagement that leads to personal growth (Robitschek, 1998; Robitschek, Ashton, Spering, Geiger, Byers, & Schotts, 2012). Set of mechanisms or processes might function as a cluster of skills that involves behavioral and cognitive components (Robitschek et al., 2012). The PGI

approach designates four fundamental skills, which are *readiness for change* (i.e., a cognitive component of preparedness for making a self-change), *planfulness* (i.e., a cognitive component pointing knowledge and implementation of the planning process to make self-change), *using resources* (i.e., a behavioral component that implies the use of resources available in the environment), *intentional behavior* (i.e., a behavioral component that corresponds to a purposeful engagement in actions that facilitates self-change) (Robitschek et al., 2012).

PGI approach is similar to yet distinctively different from several theories of motivation and personal transformation. It differentiates from self-determination theory (Deci & Ryan, 2002) and flow theory (Csikszentmihalyi, 1975), since PGI implies a strategic use of skills rather than intrinsic motivation or drives. Similarly, PGI differentiates from the general goal setting theory (Klockner & Hicks, 2008), since it implies personal growth rather than general goal setting, and it goes beyond simply putting goals and plans by intentionally taking action (Robitschek et al., 2012).

Personal growth initiative approach promises important contributions to psychotherapy, since it can be an overall assessment of an individual's inclination and general readiness for personal change. Different from the transtheoretical model (Prochaska, 2008), PGI does not only consider individuals' readiness for change; but also explores specialized cognitive structures and behavioral assets that facilitate personal change. Clients with better developed personal growth skills might be advantageous and might make better use of psychotherapy than their counterparts. Therefore, assessment of PGI at the start of a psychological intervention might be favorable for the process of therapy (Robitschek et al., 2012). Besides, recently Thoen and Robitschek (2013) had developed and tested the efficiency of a one-week intervention that aims to improve overall PGI by educating clients about personal growth and assigning activities. They showed that PGI can be improved significantly by such intervention. This intervention, which was designed to improve PGI, aimed to develop personal virtues and strengths as suggested by Seligman (2000), rather than targeting weaknesses or deficiencies of individuals. Such distinctive property of the intervention was due to PGI's positive framework rather than being rooted in the disease model of psychology.

A number of studies revealed the link between personal growth initiative and several psychological variables as summarized in Thoen and Robitschek (2013) study. PGI was found to be positively related with positive mental health (Vaingankar et al., 2011; as cited in Thoen & Robitschek, 2013, p. 150); self-efficacy (Ogunyemi & Mabekoje, 2007; as cited in Thoen & Robitschek, 2013, p. 150); self-compassion, curiosity, happiness, and optimism (Neff, Rude & Kirkpatrick, 2007; as cited in Thoen & Robitschek, 2013, p. 150); higher psychological well-being (Robitschek, 1999; Robitschek & Keyes, 2009; as cited in Thoen & Robitschek, 2013, p. 150); lower depressive symptoms (Robitschek & Anderson, 2011; Robitschek & Kashubeck, 1999; as cited in Thoen & Robitschek, 2013, p. 150), improved healthy coping (Robitschek et al., 2012; Robitschek & Kashubeck, 1999; as cited in Thoen & Robitschek, 2013, p. 150), greater satisfaction with life (Stevic & Ward, 2008; as cited in Thoen & Robitschek, 2013, p. 150), and higher inclination towards seeking psychological help (Oluyinka, 2011; as cited in Thoen et al., 2013, p. 150).

Despite above mentioned preliminary observed correspondences between autotelic personality and PGI there are no studies examining directly the relation between autotelic personality traits and personal growth initiative domains. The relation between autotelic personality and personal growth initiative is particularly important since they share some similarities: (1) both are improvable and they promise personal growth; (2) they are contingent upon a need for success and related to self-efficacy; (3) autotelic personality constellation might correspond to a general readiness for personal growth; (4) they both involve the active use of resources; and maybe most importantly (5) both theories highlight the significance of an intentional and active engagement with life (Robitschek, 1998; Robitschek et al., 2012; Csikszentmihalyi et al., 2002)

An active engagement with the task at hand is the core of flow experience, and increased frequency of this experience is often associated with development of skills, increased self-complexity and self-efficacy, higher intrinsic motivation, low stress and trait anxiety, and high perceived ability (Csikszentmihalyi, 1997; Jackson, Kimiecik, 2008). Commitment and achievement in academic work, higher self-esteem, increased resilience, sense of fulfillment and life satisfaction, well-defined future goals, and personal expressiveness were found to be positively related with flow frequency (Abuhamdeh, 2000; Asakawa, 2010; Adlai-Gail, 1994). In parallel,

active and intentional engagement is the core of personal growth initiative and research findings mentioned in the preceding paragraphs indicate the particular importance to study the link between these two constructs.

#### **4.7. Aims of the Present Study**

In the light of the reviewed literature in the present section, the aim of the current research was to explore the relation of autotelic personality and its domains with a set of personal strengths that encompass pleasurable (happiness), good (curiosity, flow propensity), and meaningful life (presence of meaning); and with a set of psychopathology variables including depression, anxiety, worry, and obsessive compulsive symptomatology. More specifically, the present study aims to:

- 1) Examine if flow proneness is predicted by different domains of autotelic personality and flow proneness is different among autotelic and non-autotelic individuals.
- 2) Examine if autotelic personality domains predict flow during work, maintenance, and leisure time activities
- 3) Examine if autotelic, average, and non-autotelic individuals differ in terms of happiness, curiosity, presence of meaning
- 4) Examine the predictive role of autotelic personality domains in personal strength variables
- 5) Examine if autotelic, average, and non-autotelic individuals differ in terms of their depression, anxiety, worry, and obsessive compulsive symptom levels
- 6) Examine the predictive role of autotelic personality domains in psychopathology variables
- 7) Examine if autotelic, average, and non-autotelic individuals differ in terms of personal growth initiative domains.
- 8) Examine the predictive role of autotelic personality domains in personal growth initiative domains.

## **4.8. Method**

### **4.8.1. Overview**

The present study aims to investigate the newly developed autotelic personality construct's association with three clusters of variables: a set of personal strength variables (i.e., curiosity, flow proneness, presence of life meaning, and subjective happiness); a set of psychopathology variables (i.e., depression, worry, anxiety, and obsessive compulsive symptomatology); and a set of personal growth initiative variables (i.e., readiness for change, planfulness, using resources, and intentional behavior).

### **4.8.2. Participants**

Seven hundred and three participants were reached initially. A drop-out rate of 40 % was observed in the data collection phase. Data screening was made with the remaining participants, and 379 participants remained for further analyses. Mean age of the participants was 24.90 ( $SD = 7.5$ ). The sample consisted of 80 (21.1 %) males and 299 (78.9 %) females. One (.3 %) participant had completed primary school, 195 (51.5 %) participants had a high school diploma, and 98 (25.9 %) participants had an undergraduate degree, 55 (14.5 %) had a master's degree, and 30 (7.9 %) participants were currently enrolled in or graduated from a Ph.D. program. One-hundred and twenty two participants (32.19 %) were employed and 257 participants (67.81 %) were unemployed. One-hundred and sixty seven (44.1 %) participants reported history of psychiatric help, whereas 212 (55.9 %) participants had never sought help from a mental health professional. Table 4.1 provides descriptive properties of the participants recruited in the present research.

Table 4.1.  
*Descriptive properties the study samples*

	<i>M</i>	<i>SD</i>	<i>N</i>	<i>%</i>	<i>Min-Max</i>
<b>Sample 3</b>					
Age	24.90	7.50	379		17-63
Gender					
Male			80	21.1	
Female			299	78.9	
Education					
Primary School			1	.3	
High School			195	51.5	
Undergraduate			98	25.9	
M.S.			55	14.5	
Ph.D.			30	7.9	
Employment status					
Unemployed			122	32.2	
Employed			257	67.8	
Ever consulted mental health professional					
Yes			167	44.1	
No			212	55.9	

### 4.8.3. Materials

#### 4.8.3.1. Demographic Information Form

A number of questions were asked to participants to acquire information about their age, gender, marital status, education level, history of psychiatric help and diagnosis.

#### 4.8.3.2. Autotelic Personality Inventory (API)

Autotelic Personality Inventory (API) is a 9-factor, 45-item inventory that aims to capture the theoretically described autotelic personality domains: concentration, persistence and joy, curiosity, transcendence, integration-



differentiation, skill-challenge balance, being in the present, cooperation, and seeking challenges. API was developed within the scope of the present dissertation study in 2015. API items were formed in a 5-point Likert scale ranging from 1 (*never*) to 5 (*everyday or almost everyday*). Ten individual scores are calculated from API, nine scores for each of the subscale and a general API quotient was calculated by summing means of 9 subscales. Concentration subscale aims to reflect a general experience of focusing attention to the task at hand with 7 items; persistence and joy subscale aims to capture an inclination towards perseverance on a task regardless of frustration and fatigue with 7 items; curiosity subscale reflects an inclination towards an increased interest about life and surroundings of the self with 7 items; transcendence subscale aims to capture an inclination towards being motivated by meaning in life with 5 items; integration-differentiation subscale aims to capture the level of complexity within interpersonal context with 5 items; skill-challenge balance subscale aims to capture the general ability to find tasks that are challenging, yet not exceeding one's skill level with 4 items; being in the present subscale aims to capture a general ability to be able to focus on the present rather than being occupied with past or future with 4 items; cooperation subscale aims to capture a general tendency to cooperate in order to succeed a task with 3 items; lastly seeking challenges subscale aims to capture a general tendency for seeking new challenges that would help to improve available skills or virtues with 3 items. The internal consistency of the API general ( $\alpha = .92$ ), concentration ( $\alpha = .88$ ), persistence and joy ( $\alpha = .87$ ), curiosity ( $\alpha = .83$ ), transcendence ( $\alpha = .83$ ), integration and differentiation ( $\alpha = .80$ ), skill–challenge balance ( $\alpha = .78$ ), being in the present ( $\alpha = .67$ ), cooperation ( $\alpha = .71$ ), and seeking challenges ( $\alpha = .70$ ) subscales were found acceptable. Additionally, test-retest reliability of the API general ( $r = .89$ ), concentration ( $r = .86$ ), persistence and joy ( $r = .85$ ), curiosity ( $r = .78$ ), transcendence ( $r = .70$ ), integration and differentiation ( $r = .79$ ), skill–challenge balance ( $r = .43$ ), being in the present ( $r = .49$ ), cooperation ( $r = .68$ ), seeking challenges ( $r = .71$ ) were found acceptable. Internal consistency coefficients were also derived from the present sample and acceptable values were observed: API general ( $\alpha = .92$ ), concentration ( $\alpha = .87$ ), persistence and joy ( $\alpha = .88$ ), curiosity ( $\alpha = .84$ ), transcendence ( $\alpha = .83$ ), integration and differentiation ( $\alpha = .82$ ), skill – challenge balance ( $\alpha = .75$ ), being in the present ( $\alpha = .71$ ), cooperation ( $\alpha = .65$ ), seeking challenges ( $\alpha = .74$ ).

#### **4.8.3.3. Curiosity and Exploration Inventory- II (CEI-II)**

CEI-II is a valid and reliable instrument that aims to measure trait-like curiosity. It was developed by Kashdan & Silvia (2009). It is a 10-item, 2-factor scale. The 5-item stretching subscale assesses the orientation for seeking novel and challenging objects, events, and ideas with the aim of integrating these experiences and information. The 5-item embracing subscale reflects the ability to self-regulate attention to let immersion in these novel and challenging activities. The internal consistency reliability of the CEI-II ( $\alpha = .86$ ), stretching subscale ( $\alpha = .79$ ) and embracing subscale ( $\alpha = .76$ ) were acceptable in the original study. This scale was adapted to Turkish culture within the scope of the present doctoral dissertation. A 7-item, 2-factor solution was yielded with CEI-II in the Turkish sample. Three items loaded onto the embracing subscale, whereas 4 items loaded onto the stretching subscale. The internal consistency of CEI-II ( $\alpha = .75$ ), stretching ( $\alpha = .71$ ), and embracing ( $\alpha = .73$ ) subscales were found acceptable in Turkish culture. Internal consistency coefficients were also derived from the present sample and acceptable values were observed: CEI-II ( $\alpha = .80$ ), stretching ( $\alpha = .78$ ), and embracing ( $\alpha = .70$ ).

#### **4.8.3.4. Meaning in Life Questionnaire (MLQ)**

MLQ (Steger, Frazier, Oishi & Kaler, 2006) is an instrument capturing meaning in life with two components, namely search for meaning and the presence of meaning. Meaning in life was defined as the sense and significance experienced with regard to one's being and existence (Steger et al., 2006). Each of the components (subscales) are measured by 5 items adding up to 10 items in total. Presence of meaning subscale measures the extent to which respondents feel their lives have meaning, whereas the search for meaning subscale measures the extent to which respondents strive to find meaning and understanding in their lives. The scale was designed in a 7-point Likert-type fashion ranging from 1 (*absolutely true*) to 7 (*absolutely untrue*). The internal consistency of presence of meaning subscale ( $\alpha = .86$ ) and search for meaning subscale ( $\alpha = .87$ ) was found acceptable in the original study. Adaptation of MLQ to Turkish culture was made within the scope of the present doctoral dissertation and acceptable internal consistency coefficients were yielded for the presence of meaning ( $\alpha = .90$ ) and search for meaning ( $\alpha = .91$ ).

subscales. Internal consistency was also examined in the present study and both presence of meaning ( $\alpha = .90$ ) and search for meaning ( $\alpha = .92$ ) subscales proved internal reliability.

#### **4.8.3.5 Subjective Happiness Scale (SHS)**

SHS (Lyubomirsky & Lepper, 1999) is a 4-item, 7-point Likert type scale that aims to quantize “subjective happiness” in a global and inclusive manner. Psychometric characteristics of the SHS indicated that, despite it is a short questionnaire with a single factor, it effectively measures happiness. The internal consistency reliability of the scale was found acceptable in the original study ( $\alpha = .93$ ). Adaptation of SHS to Turkish culture was made within the scope of the present doctoral dissertation and an acceptable internal consistency ( $\alpha = .88$ ) was obtained. The internal consistency of SHS was also examined in the present study and it was found acceptable ( $\alpha = .87$ ).

#### **4.8.3.6. Swedish Flow Proneness Questionnaire (SFPQ)**

SFPQ (Ullen et al., 2012) was used as an indicator for flow proneness in daily life. It is a 22-item self-report measure developed to estimate an individual's proneness to experience flow, and it consists of three subscales (7 items each) assessing flow proneness during work, leisure, and maintenance activities. One additional item assesses current employment, as the work sub-scale was administered only to working individuals. The items are measured on a 5-point Likert scale ranging from 1 (*never*) to 5 (*everyday*). The items capture flow experience on above three domains based on Csikszentmihalyi's (1997) criteria; i.e., a subjective sense of concentration, balance between skills, challenge of a task, explicit goals, clear feedback, sense of control, lack of boredom. The internal consistency of the scale was found acceptable in the original study ( $\alpha = .87$ ). SFPQ was adapted to Turkish culture within the scope of the present doctoral dissertation, and an acceptable internal consistency ( $\alpha = .85$ ) was obtained. In the present sample, the internal consistency of SFPQ was also acceptable ( $\alpha = .86$ ).

#### **4.8.3.7. Beck Depression Inventory (BDI)**

BDI is a 21-item self-report inventory that aims to measure cognitive, emotional, and motivational symptoms of depression (Öner, 1997). It was developed by Beck, Rush, Shaw, and Emery (1978). Respondents are asked to report how they felt over the last week by choosing the most suitable statement among 4 statements in each item. Each item is scored from 0 to 3. It was adapted to Turkish culture by Hisli (1988); an acceptable internal consistency coefficient ( $\alpha = .74$ ) was yielded. In the present sample, the internal consistency coefficient for BDI ( $\alpha = .90$ ) was also acceptable.

#### **4.8.3.8. State - Trait Anxiety Inventory (STAI)**

STAI is a 40-item, 4-point Likert type scale ranging from 1 (*not at all*) to 4 (*very much so*). It aims to measure how anxious a person generally feels, and how anxious a person feels in a specific moment in time. It was developed by Spielberger, Gorsuch, and Lushene (1970). STAI has two subscales namely, state and trait anxiety subscales. Each of these subscales consists of 20 items. The test-retest reliability of the scale ranged from .16 to .54 for state anxiety subscale and from .73 to .86 for trait anxiety subscale (Spielberger et al., 1970). The internal consistency for the state anxiety subscale varied between .83 and .92; and for the trait anxiety subscale it varied between .86 and .92 (Spielberger et al., 1970). The Turkish adaptation of STAI was done by Öner and LeCompte (1985) with clinical and nonclinical samples. In Turkish adaptation study (Öner & LeCompte, 1985), test-retest reliability was between .71 and .86 for trait anxiety inventory, and between .26 and .68 for state anxiety inventory. The internal consistency was between .83 and .87 for trait anxiety subscale, and the internal consistency of state anxiety subscale ranged from .94 to .96 (Öner & LeCompte, 1985). In the present study, only the trait subscale of the inventory was used ( $\alpha = .88$ ).

#### **4.8.3.9. Penn State Worry Questionnaire (PSWQ)**

PSWQ is a 16-item self-report scale developed by Meyer, Miller, Metzger, and Borkovec (1990). Respondents' trait-like worry is assessed on a 5-point Likert-type scale ranging from "*not at all typical of me*" to "*very typical of me*". The PSWQ

had Cronbach's alphas ranging between .88 and .95. It was adapted to Turkish culture by Yılmaz, Gençöz, and Wells (2008) in a non-clinical sample. The adapted scale yielded high internal consistency ( $\alpha = .91$ ). For the present sample, the internal consistency of PSWQ was .94.

#### **4.8.3.10. Padua Inventory-Washington State University Revision (PI-WSUR)**

The PI-WSUR (Burns, Keortge, Formea & Sternberger, 1996) is a short version of the Padua Inventory (Sanavio, 1988). It aims to measure the frequency and intensity of obsessions and compulsions on a 39-item, 5-point Likert scale ranging from 0 (*not at all*) to 4 (*very much*). It consists of 5 subscales that capture obsessional thoughts of harm to self/others (7 items), obsessional impulses of harm to self/others (9 items), contamination obsessions and washing compulsions (10 items), checking compulsions (10 items), and dressing/grooming compulsions (3 items). The original PI-WSUR study showed acceptable reliability ( $\alpha = .92$ ). The adaptation of PI-WSUR to Turkish culture was made by Yorulmaz, Dirik, Karancı, and Burns (2006), and acceptable reliability ( $\alpha = .93$ ) was demonstrated in the Turkish sample. The internal consistency of the PI-WSUR was investigated in the present study and a high ( $\alpha = .93$ ) internal reliability was found.

#### **4.8.3.11. Personal Growth Initiative Scale – II (PGIS-II)**

PGIS-II (Robitschek et al., 2012) is a 16-item, 6-point Likert type scale that aims to measure growth initiative in 4 domains: readiness for change (4 items), planfulness (5 items), using resources (3 items), and intentional behavior (4 items). The scores on the items range from 0 (*strongly disagree*) to 5 (*strongly agree*). The internal reliabilities of PGIS-II ( $\alpha = .92$ ), readiness for change ( $\alpha = .81$ ), planfulness ( $\alpha = .89$ ), using resources ( $\alpha = .82$ ), and intentional behavior ( $\alpha = .83$ ) were found acceptable in the original study. Yalçın and Malkoç (2013) adapted the PGIS-II to Turkish culture. The internal consistency of the Turkish PGIS-II ( $\alpha = .91$ ), readiness for change ( $\alpha = .83$ ), planfulness ( $\alpha = .87$ ), using resources ( $\alpha = .61$ ), and intentional behavior ( $\alpha = .84$ ) were also found acceptable. The internal consistency coefficients derived from the present sample were acceptable, too: PGIS-II ( $\alpha = .93$ ), readiness for change ( $\alpha = .87$ ), planfulness ( $\alpha = .90$ ), using resources ( $\alpha = .69$ ), and intentional behavior ( $\alpha = .89$ ).

## **4.9. Procedure**

All ethical permissions were granted from Middle East Technical University (METU) Ethics Committee for Studying with Human Subjects. Participants of the study were reached through a world-wide-web based data collection tool (Qualtrics) between 26<sup>th</sup> September and 22<sup>th</sup> of November, 2014. The study was announced at the courses given at the Department of Psychology in 2014 fall semester and through social media channels. Participants were informed prior to their participations to the study, and their consents were acquired. The order of questionnaires were counter-balanced. The questionnaire set was completed in approximately 30 minutes.

## **4.10. Results**

### **4.10.1. Data Screening**

Univariate descriptive properties of the variables were inspected in terms of out of range values, standard deviations, means, ranges, and missing data via SPSS 20. The distribution of values were examined and compared to the assumptions of multivariate analysis. The ranges, standard deviations, and means of each variable were inspected for possible univariate and multivariate outliers. There were no missing values in the data since the participants were required to respond each item in the survey. The skewness and kurtosis values of each variable were derived from the descriptive statistics of the SPSS. No transformations were made after inspecting the histograms with normal curves. Data screening revealed that the central assumptions of multivariate statistics were met.

### **4.10.2. Preliminary Analyses**

#### **4.10.2.1. Demographics and Study Variables**

Table 1 summarizes the descriptive properties of the variables and Table 2 summarizes the correlations among the study variables. In addition to examining the correlations among the variables and investigating the descriptive properties; univariate analysis of variance was carried out with study variables to see if there is a

difference among different sexes, presence or absence of a romantic affair, and different educational levels.

The levels of demographic variables (i.e., gender, presence or absence of romantic relationship, and education) were compared in terms of personal strength variables (i.e., subjective happiness, presence of meaning, flow proneness, and curiosity), psychopathology variables (i.e., depression, worry, trait anxiety, obsessive compulsive symptoms), personal growth initiative domains (i.e., readiness, planfulness, using resources, and intentional behavior), and autotelic personality (AP) domains (i.e., concentration, persistence and joy, curiosity, transcendence, balance between challenges and skills, integration and differentiation, cooperation, being in the present, and seeking challenges).

In terms of personal strength variables, males and females did not differentiate on subjective happiness, presence of meaning, curiosity, and flow proneness. Similarly, in terms of psychopathology variables, males and females were not significantly different from each other on depression, obsessive compulsive symptoms, and trait anxiety; however, there was a significant difference on worry: females ( $m = 49.38$ ,  $sd = 12.98$ ) reported more worry than males ( $m = 44.62$ ,  $sd = 12.45$ ),  $F(1,377) = 8.60$ ,  $p < .005$ . In terms of AP domains no gender difference was observed in concentration, curiosity, transcendence, balance between skills and challenges. However, males and females were significantly different from each other on integration and differentiation, being in the present, cooperation, seeking challenges, and persistence and joy domains. Females ( $m = 3.85$ ,  $sd = 3.85$ ) scored higher on integration and differentiation domain than males ( $m = 3.59$ ,  $sd = 3.50$ ),  $F(1,377) = 9.10$ ,  $p < .005$ ; females ( $m = 4.17$ ,  $sd = 4.37$ ) scored higher on being in the present domain than males ( $m = 3.96$ ,  $sd = 3.96$ ),  $F(1,377) = 6.7$ ,  $p < .01$ ; females ( $m = 3.82$ ,  $sd = 3.82$ ) scored higher on cooperation domain than males ( $m = 3.54$ ,  $sd = 3.54$ ),  $F(1,377) = 9.08$ ,  $p < .005$ ; females ( $m = 3.93$ ,  $sd = 3.93$ ) scored higher in persistence and joy domain than males ( $m = 3.77$ ,  $sd = 3.72$ ),  $F(1,377) = 6.51$ ,  $p < .01$ ; whereas males ( $m = 3.52$ ,  $sd = 3.52$ ) scored higher in seeking challenges domain than females ( $m = 3.28$ ,  $sd = 3.28$ ):  $F(1,377) = 4.61$ ,  $p < .05$ . In terms of personal growth initiation domains; no significant differences were observed between the levels of gender on planfulness and preparedness domains. However, females ( $m = 17.48$ ,  $sd = 17.48$ ) scored higher on intentional behavior domain than males ( $m = 16.26$ ,  $sd = 16.26$ ),  $F(1,377) = 6.60$ ,  $p < .05$ ; females ( $m = 12.18$ ,  $sd = 12.20$ ) scored

higher on using resources domain than males ( $m = 10.63$ ,  $sd = 10.63$ ),  $F(1,377) = 20.80$ ,  $p < .001$ .

The levels of having a romantic partner did not differentiate on any of the AP domains, personal strength variables, and personal growth initiative domains. In terms of psychopathology variables participants with and without a romantic partner did not significantly differentiate from each other on worry and anxiety; however, depression scores of participants with ( $m = 30.18$ ,  $sd = 8.26$ ) and without ( $m = 32.73$ ,  $sd = 9.19$ ) a romantic partner significantly differed,  $F(1,377) = 7.48$ ,  $p < .01$ . Similarly, obsessive compulsive symptoms were higher in participants without a romantic partner ( $m = 70.71$ ,  $sd = 18.67$ ) compared to their counterparts ( $m = 65.32$ ,  $sd = 18.96$ ),  $F(1,377) = 7.44$ ,  $p < .01$ .

Among the education levels no significant differences were observed on personal strength variables, namely subjective happiness, presence of meaning, curiosity, and flow proneness. Similarly, depression, anxiety, worry, and obsessive compulsive symptoms of the participants with different educational levels were not significantly different from each other. In terms of autotelic personality; participants of the different educational levels did not differ on concentration, persistence and joy, curiosity, integration and differentiation, cooperation, and being in the present domains of API. However, they significantly differed on general AP quotient; high school graduates ( $m = 32.08$ ,  $sd = 4.14$ ) scored significantly lower than the university students/graduates ( $m = 32.08$ ,  $sd = 4.56$ ), masters students/graduates ( $m = 33.68$ ,  $sd = 4.52$ ), and PhD students/graduates ( $m = 33.78$ ,  $sd = 3.95$ ),  $F(3,375) = 4.60$ ,  $p < .01$ . Also, on transcendence domain of AP; a significant difference between high school graduates ( $m = 2.77$ ,  $sd = .83$ ) and masters students/graduates ( $m = 3.20$ ,  $sd = 1.02$ ) was observed,  $F(3,375) = 4.73$ ,  $p < .01$ . Furthermore, in terms of ability to find challenges balanced with skills, high school graduates ( $m = 3.94$ ,  $sd = .62$ ) scored significantly lower than university students/graduates ( $m = 4.14$ ,  $sd = .60$ ), masters students/graduates ( $m = 4.07$ ,  $sd = .60$ ), PhD students/graduates ( $m = 4.15$ ,  $sd = .57$ ),  $F(3,375) = 3.24$ ,  $p < .05$ . In terms of challenge seeking; high school graduates ( $m = 3.94$ ,  $sd = .87$ ) scored significantly lower than university students/graduates ( $m = 4.14$ ,  $sd = .85$ ), masters students/graduates ( $m = 4.07$ ,  $sd = .89$ ), PhD students/graduates ( $m = 4.15$ ,  $sd = .90$ ),  $F(3,375) = 6.50$ ,  $p < .001$ . Lastly, in terms of personal growth initiative domains there were no statistically significant differences among education levels in the present study.



Table 4.2  
*Descriptive Properties of the Study Variables*

	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>SD</i>
Subjective Happiness	379	1.00	7.00	4.44	1.39
API Concentration	379	1.00	5.00	3.03	.85
API Persistence & Joy	379	1.00	5.00	3.88	.73
API Curiosity	379	1.29	5.00	3.99	.69
API Transcendence	379	1.00	5.00	2.93	.93
API Integration & Differentiation	379	1.00	5.00	3.78	.95
API Balance	379	1.50	5.00	4.03	.60
API Cooperation	379	1.00	5.00	3.76	.74
API Being in the Present	379	2.00	5.00	4.12	.65
API Seeking Challenges	379	1.00	5.00	3.33	.89
API General Quotient	379	15.93	43.55	32.87	4.36
Search for Meaning	379	1.00	7.00	4.51	1.47
Presence of Meaning	379	1.00	7.00	4.60	1.42
Depression	379	21.00	67.00	31.73	8.91
Stretching Self	379	1.25	5.00	3.65	.77
Embracing Novelties	379	1.00	5.00	2.78	.88
Contamination	379	1.00	4.70	2.05	.71
Dressing / Grooming	379	1.00	5.00	1.70	.86
Checking	379	1.00	4.40	1.90	.66
Harm Thoughts	379	1.00	4.43	1.73	.64
Harm Impulses	379	1.00	4.44	1.32	.50
Obsessive Compulsive Symptoms	379	40.00	159.00	68.60	18.94
Readiness for Change	379	4.00	24.00	17.63	3.49
Planfulness for Change	379	5.00	30.00	21.56	4.65
Using Resources for Change	379	3.00	18.00	11.86	2.79
Intentional Behaviors	379	4.00	24.00	17.22	3.81
Personal Growth Initiative	379	7.00	24.00	17.07	3.08
Trait Anxiety	379	27.00	75.00	46.51	8.87
Worry	379	16.00	78.00	48.37	13.01
Flow at work	379	1.43	4.71	3.41	.61
Flow at maintenance	379	1.43	5.00	3.37	.64
Flow during leisure time	379	1.14	5.00	3.77	.64
General flow	379	4.57	13.86	10.55	1.36

#### 4.10.2.2. Bivariate Correlations among the Study Variables

Pearson product-moment correlations were computed among the variables of the present study. As expected, autotelic personality general quotient was moderately and positively correlated with all personal strength variables, namely subjective happiness ( $r = .43, p < .01$ ), presence of meaning ( $r = .52, p < .01$ ), stretching self ( $r = .68, p < .01$ ), embracing novelties ( $r = .41, p < .01$ ), flow proneness at work ( $r = .63, p < .01$ ), flow proneness for maintenance ( $r = .21, p < .01$ ), flow proneness for leisure activities ( $r = .41, p < .01$ ). Similarly as expected, autotelic personality general quotient was negatively correlated with all psychopathology variables, namely depression ( $r = -.42, p < .01$ ), trait anxiety ( $r = -.45, p < .01$ ), worry ( $r = -.28, p < .01$ ), and obsessive compulsive symptoms ( $r = -.24, p < .01$ ). In terms of personal growth initiative, autotelic personality general quotient revealed moderate positive correlations with readiness for change ( $r = .55, p < .01$ ), planfulness ( $r = .57, p < .01$ ), using resources ( $r = .41, p < .01$ ), intentional behavior ( $r = .66, p < .01$ ), and general personal growth initiative ( $r = .67, p < .01$ ). All of the correlations of autotelic personality with personal strength variables, psychopathology variables, and personal growth initiative domains were in expected directions and magnitudes.

As expected, subjective happiness was positively correlated with presence of meaning ( $r = .49, p < .01$ ), stretching self ( $r = .30, p < .01$ ), embracing novelties ( $r = .20, p < .01$ ), flow proneness ( $r = .39, p < .01$ ), and personal growth initiative ( $r = .51, p < .01$ ). There were negative correlations between subjective happiness and depression ( $r = -.65, p < .01$ ), trait anxiety ( $r = -.68, p < .01$ ), worry ( $r = -.39, p < .01$ ), and obsessive compulsive symptoms ( $r = -.33, p < .01$ ).

Presence of meaning was positively correlated with autotelic personality general quotient ( $r = .52, p < .01$ ), as expected. Similarly, personal growth initiative was also positively correlated with presence of meaning ( $r = .59, p < .01$ ). Among the psychopathology variables, depression ( $r = -.54, p < .01$ ) and trait anxiety ( $r = -.50, p < .01$ ) yielded similar moderate negative correlations with presence of meaning; worry ( $r = -.20, p < .01$ ) and obsessive compulsive symptoms ( $r = -.25, p < .01$ ) yielded weak correlations with presence of meaning.

In terms of curiosity domains, stretching self was moderately positively correlated with flow proneness ( $r = .45, p < .01$ ) and personal growth initiative ( $r = .58, p < .01$ ), whereas it was moderately negatively correlated with depression ( $r = -.33, p < .01$ ), trait anxiety ( $r = -.32, p < .01$ ), and weakly negatively correlated with

worry ( $r = -.18, p < .01$ ). Embracing novelties domain of curiosity was weakly correlated to flow proneness ( $r = .17, p < .01$ ) and personal growth initiative ( $r = .24, p < .01$ ), and weakly negatively correlated with depression ( $r = -.12, p < .05$ ), trait anxiety ( $r = -.18, p < .01$ ), and worry ( $r = -.19, p < .01$ ).

Flow proneness yielded moderately positive correlation with personal growth initiative ( $r = .60, p < .01$ ), negative moderate correlations with depression ( $r = -.56, p < .01$ ) and trait anxiety ( $r = -.49, p < .01$ ); and negative weak correlations with obsessive compulsive symptoms ( $r = -.24, p < .01$ ) and worry ( $r = -.25, p < .01$ ).

All correlations among the study variables are provided in Table 2.

Table 4.3  
*Correlations among all Variables of the Study*

	1	2	3	4	5	6	7
1. SHS	(.87)						
2. MLQ-P	.49**	(.92)					
3. CEI-S	.30**	.42**	(.78)				
4. CEI-E	.20**	.16**	.53**	(.70)			
5. FP-W	.37**	.56**	.48**	.19**	(.81)		
6. FP-M	.16**	.21**	.11*	.05	.20**	(.82)	
7. FP-L	.32**	.40**	.38**	.12*	.42**	.21**	(.86)
8. FP-T	.39**	.53**	.45**	.17**	.74**	.66**	.76**
9. API-GP	.43**	.52**	.68**	.41**	.63**	.21**	.41**
10. API-CON	.28**	.44**	.37**	.07	.56**	.16**	.34**
10. API-PJ	.41**	.55**	.65**	.27**	.65**	.19**	.40**
12. API-CUR	.20**	.21**	.59**	.63**	.29**	.09	.22**
13. API-TRA	.12*	.27**	.42**	.26**	.31**	.01	.19**
14. API-INT&DIF	.48**	.35**	.25**	.15**	.32**	.25**	.27**
15. API-BAL	.19**	.32**	.36**	.10	.43**	.24**	.34**
16. API-COO	.31**	.25**	.22**	.19**	.29**	.13*	.20**
17. API-PRE	.26**	.28**	.41**	.30**	.27**	.16**	.19**
18. API-CHAL	.16**	.28**	.58**	.36**	.42**	.02	.21**
19. BDI	-.65**	-.54**	-.33**	-.12*	-.49**	-.31**	-.43**
20. PADUA	-.33**	-.25**	-.04	.06	-.17**	-.15**	-.21**
21. STAI-T	-.68**	-.50**	-.32**	-.18**	-.45**	-.23**	-.39**
22. PENN	-.39**	-.20**	-.18**	-.19**	-.22**	-.13*	-.18**
23. READI	.44**	.49**	.48**	.22**	.48**	.23**	.40**
24. PLAN	.50**	.57**	.47**	.17**	.58**	.24**	.45**
25. RESOUR	.34**	.37**	.26**	.09	.32**	.18**	.26**
26. INTEN	.40**	.49**	.69**	.30**	.57**	.14**	.42**
27. PGI	.51**	.59**	.58**	.24**	.60**	.24**	.47**

Table 4.3

*Correlations among all Variables of the Study*

	8	9	10	11	12	13	14
8. FP-T	(.86)						
9. API-GP	.57**	(.92)					
10. API-CON	.49**	.65**	(.87)				
10. API-PJ	.57**	.81**	.55**	(.88)			
12. API-CUR	.27**	.59**	.10**	.45**	(.84)		
13. API-TRA	.23*	.57**	.35**	.46**	.28**	(.83)	
14. API-INT&DIF	.38**	.56**	.36**	.39**	.20**	.05**	(.83)
15. API-BAL	.46**	.55**	.32**	.43	.21**	.23**	.21**
16. API-COO	.28**	.62**	.34**	.40**	.27**	.09*	.57**
17. API-PRE	.28**	.57**	.15**	.37**	.46**	.28**	.24**
18. API-CHAL	.29**	.67**	.35**	.51**	.47**	.37	.15**
19. BDI	-.56**	-.42**	-.42**	-.42*	-.14**	-.09**	-.41**
20. PADUA	-.24**	-.24**	-.24	-.15	-.04**	.03**	-.32**
21. STAI-T	-.49**	-.45**	-.40**	-.38**	-.15**	-.06**	-.48**
22. PENN	-.25**	-.28**	-.23**	-.09**	-.14**	.02*	-.30**
23. READĪ	.52**	.55**	.38**	.51**	.32**	.27**	.34**
24. PLAN	.58**	.57**	.47**	.56**	.26**	.26**	.40**
25. RESOUR	.35**	.41**	.29**	.42	.13**	.12**	.37**
26. INTEN	.51**	.66**	.37**	.68**	.46**	.37**	.36**
27. PGI	.60**	.67**	.46**	.66**	.36**	.31**	.44**

Table 4.3

*Correlations among all Variables of the Study*

	15	16	17	18	19	20	21
15. API-BAL	(.75)						
16. API-COO	.20**	(.71)					
17. API-PRE	.34**	.27**	(.65)				
18. API-CHAL	.32**	.22**	.28**	(.73)			
19. BDI	-.29**	-.25**	-.21**	-.16*	(.90)		
20. PADUA	-.12**	-.29**	-.11	-.10	.48**	(.93)	
21. STAI-T	-.33**	-.28**	-.23**	-.25**	.76**	.49**	(.85)
22. PENN	-.27**	-.22**	-.19**	-.19**	.45**	.40*	.68**
23. READĪ	.43**	.30**	.29**	.30**	-.52**	-.24**	-.47**
24. PLAN	.38**	.33**	.27**	.31**	-.62**	-.29**	-.56**
25. RESOUR	.21**	.38**	.20**	.14	-.29**	-.19**	-.23**
26. INTEN	.38**	.27**	.39**	.46**	-.38**	-.12**	-.37**
27. PGI	.43**	.38**	.35**	.38**	-.56**	-.26**	-.51**

Table 4.3

*Correlations among all Variables of the Study*

	22	23	24	25	26	27
22. PENN	(.93)					
23. READI	-.26**	(.87)				
24. PLAN	-.27**	.84**	(.90)			
25. RESOUR	.00**	.42**	.43**	(.68)		
26. INTEN	-.16**	.63**	.62**	.48**	(.89)	
27. PGI	-.22**	.89**	.91**	.66**	.83**	(.93)

Note 1. \*Correlation is significant at the 0.05 level (2-tailed), \*\*Correlation is significant at the 0.01 level (2-tailed)

Note 2. SHS: Subjective Happiness Scale, MLQ-P: Presence of Meaning, CEI-S: Stretching Self, CEI-E: Embracing Novelties, FP-W: Flow at work, FP-M: Flow at maintenance, FP-L: Flow during leisure time, FP-T: General flow, API-GP: API General Quotient, API-Con: API Concentration, API-PJ: API Persistence & Joy, API-Cur: API Curiosity, API-Tra: API Transcendence, API-Int&Dif: API Integration & Differentiation, API-Bal: API Balance, API-Coo: API Cooperation, API-Pre: API Being in the Present, API-Chal: API Seeking Challenges, BDI: Depression, PADUA: Obsessive Compulsive Symptoms, STAI-T: Trait Anxiety, PENN: Worry, ReadI: Readiness for Change, Plan: Planfulness for Change, Resour: Using Resources for Change, Inten: Intentional Behaviors, PGI: Personal Growth Initiative.

Note 3. Scores shown within the parentheses on the diagonal represent the Cronbach's alpha coefficients of the variables

### 4.10.3. Main Analyses

In this section, associations of autotelic personality with personal strength, psychopathology, and personal growth initiative was elaborately investigated with multivariate analysis of variance tests, univariate regressions, and structural equation modelling with latent variables only.

#### 4.10.3.1 Results Regarding to Autotelic Personality and Personal Strength Variables

##### 4.10.3.1.1 Multivariate Analysis of Variance (MANOVA)

Subjective happiness, presence of meaning, stretching self, and embracing novelties variables were investigated in relation with three groups derived from autotelic personality, namely non-autotelic, moderate autotelic, and high autotelic groups. Multivariate analysis of variance (MANOVA) was run via SPSS 20. Autotelic personality general quotient with three groups was assigned as the independent variable, and subjective happiness, presence of meaning, stretching self, and embracing novelties were taken as continuous dependent variables. The results revealed significant differences among the groups of autotelic personality on subjective happiness ( $F(2, 376) = 42.34, p < .001, Wilk's \Lambda = 0.542, partial \eta^2 = .18$ );

presence of meaning ( $F(2, 376) = 51.80, p < .001, Wilk's \Lambda = 0.542, partial \eta^2 = .22$ ); stretching self ( $F(2, 376) = 109.10, p < .001, Wilk's \Lambda = 0.542, partial \eta^2 = .37$ ); and embracing self ( $F(2, 376) = 29.30, p < .001; Wilk's \Lambda = 0.542, partial \eta^2 = .14$ ). Table 4.4 summarizes mean scores and standard deviations of subjective happiness, presence of meaning, stretching self, and embracing novelties regarding to three groups of autotelic personality. Post hoc analysis revealed that the mean differences among the three groups of autotelic personality were significant for each of the variable. MANOVA results are summarized in Table 4.4.

Table 4.4

*Multivariate Analysis of Variance for Autotelic Personality and Personal Strength Variables*

	Autotelic Personality						One-way MANOVA			
	Non ( $n = 126$ )		Moderate ( $n = 127$ )		High ( $n = 126$ )		<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Subjective Happiness	3.63 <sub>a</sub>	1.35	4.64 <sub>b</sub>	1.21	5.04 <sub>c</sub>	1.21	2,376	42.34	.18	.001
Presence of Meaning	3.69 <sub>a</sub>	1.47	4.88 <sub>b</sub>	1.20	5.23 <sub>c</sub>	1.09	2,376	51.79	.22	.001
Stretching Self	3.05 <sub>a</sub>	.68	3.73 <sub>b</sub>	.56	4.18 <sub>c</sub>	.58	2,376	109.10	.37	.001
Embracing Novelties	2.38 <sub>a</sub>	.78	2.80 <sub>b</sub>	.86	3.16 <sub>c</sub>	.81	2,376	29.30	.14	.001

Note 1.  $Wilk's \Lambda (8, 746) = .54, p < .001, \eta^2 = .26$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test.

Similarly, different flow domains (i.e., flow at work, flow during maintenance, and flow during leisure activities) were investigated in relation with three groups derived from autotelic personality, namely non-autotelic, moderate autotelic, and high autotelic groups. Multivariate analysis of variance (MANOVA) was run via SPSS 20. Autotelic personality general quotient with three groups was assigned as the independent variable, and flow at work, flow during maintenance, and flow during leisure activities were taken as continuous dependent variables. The results revealed significant differences among the groups of autotelic personality on flow at work ( $F(2, 376) = 88.41, p < .001, Wilk's \Lambda = 0.657, partial \eta^2 = .18$ ); flow during maintenance ( $F(2, 376) = 6.16, p < .001, Wilk's \Lambda = 0.657, partial \eta^2 = .03$ ); and flow during leisure activities ( $F(2, 376) = 28.37, p < .001, Wilk's \Lambda = 0.657,$

*partial*  $\eta^2 = .13$ ). Table 4.5 summarizes mean scores and standard deviations of flow at work, flow during maintenance, and flow during leisure activities regarding to three groups of autotelic personality. Post hoc analysis revealed that the mean differences among the three groups of autotelic personality were significant for each of the independent variable. MANOVA results were summarized in Table 4.5.

Table 4.5

*Multivariate Analysis of Variance for Autotelic Personality and Flow Domains*

	Autotelic Personality						One-way MANOVA			
	Non ( <i>n</i> = 126)		Moderate ( <i>n</i> = 127)		High ( <i>n</i> = 126)		<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Flow at Work	2.96 <sub>a</sub>	.59	3.45 <sub>b</sub>	.46	3.80 <sub>c</sub>	.45	2,376	88.91	.32	.001
Maintenance Flow	3.20 <sub>a</sub>	.67	3.43 <sub>b</sub>	.61	3.47 <sub>c</sub>	.61	2,376	6.16	.03	.01
Leisure Flow	3.48 <sub>a</sub>	.70	3.79 <sub>b</sub>	.52	4.04 <sub>c</sub>	.56	2,376	28.37	.13	.001

Note 1. *Wilk's A* (6, 748) = .66, *p* < .001,  $\eta^2 = .19$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test.

Another multivariate analysis of variance was carried out to see if autotelic personality domains' scores differ among low flow proneness, moderate flow proneness, and high flow proneness groups. A general flow proneness score was calculated by adding flow at work, flow during maintenance, and flow during leisure time activities, and then a categorical flow proneness variable with above mentioned three groups was computed. Concentration, persistence and joy, curiosity, transcendence, integration and differentiation, ability to find a balance between challenges and skills, cooperation, being in the present, and challenge seeking domains of autotelic personality were taken as continuous dependent variables. The results revealed significant differences on concentration ( $F(2, 376) = 43.29, p < .001, Wilk's A = 0.642, partial \eta^2 = .19$ ), persistence and joy ( $F(2, 376) = 59.86, p < .001, Wilk's A = 0.642, partial \eta^2 = .24$ ), curiosity ( $F(2, 376) = 13.49, p < .001, Wilk's A = 0.642, partial \eta^2 = .07$ ), transcendence ( $F(2, 376) = 6.86, p < .001, Wilk's A = 0.642, partial \eta^2 = .04$ ), integration and differentiation ( $F(2, 376) = 27.84, p < .001, Wilk's A = 0.642, partial \eta^2 = .13$ ), ability to find a balance between challenges and skills

$(F(2, 376) = 34.65, p < .001, \text{Wilk's } \Lambda = 0.642, \text{partial } \eta^2 = .16)$ , cooperation  $(F(2, 376) = 14.63, p < .001, \text{Wilk's } \Lambda = 0.642, \text{partial } \eta^2 = .07)$ , being in the present  $(F(2, 376) = 12.38, p < .001, \text{Wilk's } \Lambda = 0.642, \text{partial } \eta^2 = .06)$ , and challenge seeking  $(F(2, 376) = 15.16, p < .001, \text{Wilk's } \Lambda = 0.642, \text{partial } \eta^2 = .08)$  among low flow proneness, moderate flow proneness, and high flow proneness groups. Post hoc analysis revealed that concentration domain of API significantly differed among the three groups flow proneness, namely low flow proneness ( $m = 2.58, sd = .77$ ), moderate flow proneness ( $m = 3.13, sd = .74$ ), and high flow proneness ( $m = 3.45, sd = .78$ ). Similarly, persistence and joy domain of API was significantly different among the flow proneness groups, namely low flow proneness ( $m = 3.44, sd = .76$ ), moderate flow proneness ( $m = 4.01, sd = .60$ ), and high flow proneness ( $m = 4.27, sd = .48$ ). Likewise, integration and differentiation domain of API was significantly different among the three groups of flow proneness, namely low flow proneness ( $m = 3.36, sd = .98$ ), moderate flow proneness ( $m = 3.88, sd = .86$ ), and high flow proneness ( $m = 4.15, sd = .78$ ). In terms of skill and challenge balance domain of API, significant differences among all three groups of low flow proneness ( $m = 3.79, sd = .62$ ), moderate flow proneness ( $m = 3.98, sd = .52$ ), and high flow proneness ( $m = 4.35, sd = .51$ ) were observed. Likewise, in terms of seeking challenges domain of API, significant differences among three groups, namely low flow proneness ( $m = 3.05, sd = .88$ ), moderate flow proneness ( $m = 3.34, sd = .91$ ), and high flow proneness ( $m = 3.64, sd = .78$ ) were obtained. In terms of curiosity, there were significant mean differences between low flow proneness ( $m = 3.76, sd = .73$ ) and moderate flow proneness ( $m = 4.09, sd = .64$ ), and low flow proneness ( $m = 3.76, sd = .76$ ) and high flow proneness ( $m = 4.16, sd = .61$ ); however, the mean difference between moderate flow proneness ( $m = 4.09, sd = .64$ ) and high flow proneness ( $m = 4.16, sd = .61$ ) was not significant. In terms of transcendence, there were significant mean differences between low flow proneness ( $m = 2.72, sd = .94$ ) and moderate flow proneness ( $m = 2.97, sd = .89$ ), and low flow proneness ( $m = 2.72, sd = .94$ ) and high flow proneness ( $m = 3.14, sd = .92$ ); however the mean difference between moderate flow proneness ( $m = 2.97, sd = .89$ ) and high flow proneness ( $m = 3.14, sd = .92$ ) was not significant. In terms of cooperation, low flow proneness ( $m = 3.51, sd = .75$ ) was significantly different from moderate flow proneness ( $m = 3.87, sd = .68$ ) and high flow proneness ( $m = 3.96, sd = .71$ ); however, the mean difference between moderate flow proneness ( $m = 3.87, sd = .68$ ) and high flow



proneness ( $m = 3.96, sd = .71$ ) was not significant. In terms of being in the present, high flow proneness ( $m = 4.34, sd = .52$ ) was significantly different from moderate flow proneness ( $m = 4.10, sd = .64$ ) and low flow proneness ( $m = 3.95, sd = .71$ ); however, the mean difference between low flow proneness ( $m = 3.95, sd = .71$ ) and moderate flow proneness ( $m = 4.10, sd = .61$ ) was not significant. MANOVA results were summarized in Table 4.6.

Table 4.6

*Multivariate Analysis of Variance for General Flow Proneness and Autotelic Personality Domains*

	General Flow Proneness						One-way MANOVA			
	Low ( $n = 142$ )		Moderate ( $n = 115$ )		High ( $n = 122$ )		<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Concentration	3.63 <sub>a</sub>	.77	3.12 <sub>b</sub>	.75	3.45 <sub>c</sub>	.78	2,376	43.29	.19	.001
Persistence & Joy	3.44 <sub>a</sub>	.76	4.01 <sub>b</sub>	.60	4.28 <sub>c</sub>	.48	2,376	59.86	.24	.001
Curiosity	3.76 <sub>a</sub>	.73	4.09 <sub>b</sub>	.64	4.16 <sub>c</sub>	.61	2,376	13.49	.07	.001
Transcendence	2.72 <sub>a</sub>	.94	2.97 <sub>b</sub>	.89	3.14 <sub>c</sub>	.92	2,376	6.87	.04	.001
Integration & Differentiation	3.36 <sub>a</sub>	.98	3.89 <sub>b</sub>	.86	4.16 <sub>c</sub>	.78	2,376	27.84	.13	.001
Skill–Challenge Balance	3.79 <sub>a</sub>	.61	3.98 <sub>b</sub>	.53	4.35 <sub>c</sub>	.51	2,376	34.65	.16	.001
Cooperation	3.51 <sub>a</sub>	.75	3.87 <sub>b</sub>	.68	3.96 <sub>c</sub>	.71	2,376	14.63	.07	.001
Being in the Present	3.95 <sub>a</sub>	.71	4.10 <sub>b</sub>	.64	4.34 <sub>c</sub>	.52	2,376	12.38	.07	.001
Challenge Seeking	3.05 <sub>a</sub>	.88	3.34 <sub>b</sub>	.91	3.64 <sub>c</sub>	.77	2,376	15.16	.08	.001

Note 1. *Wilk's A* (18, 736) = .64,  $p < .001$ ,  $\eta^2 = .20$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test.

#### 4.10.3.1.2. Linear Regression Analyses

A series of linear regression analyses were carried out to estimate the predictive power of nine autotelic personality domains for general flow proneness, flow at work, flow during maintenance, flow during leisure activities, subjective happiness, presence of meaning, and general curiosity. Nine domains of the autotelic personality were included in each of the regression equations; several domains did not predict the dependent variable, therefore adjusted  $R^2$ 's were taken into consideration to capture the accurate explained variances.

Initially, a univariate regression analysis equation was run with general flow proneness as dependent variable and nine autotelic personality domains (i.e., concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the present, and seeking challenges) as the independent variables. The analysis revealed that four domains of autotelic personality explained 43 % of the variance in general flow proneness (adjusted  $R^2 = .43$ ,  $F(9, 369) = 32.50$ ,  $p < .001$ ). Concentration ( $\beta = .23$ ,  $p < .001$ ), persistence & joy ( $\beta = .31$ ,  $p < .001$ ), integration & differentiation ( $\beta = .15$ ,  $p < .01$ ), skill–challenge balance ( $\beta = .24$ ,  $p < .001$ ) were identified as positive predictors of general flow proneness.

In order to define predictors of flow proneness specifically at work, during maintenance activities, and during leisure activities; three separate linear regression analyses were run with nine autotelic personality domains (i.e., concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the present, and seeking challenges) as the independent variables. It was found that three domains of autotelic personality explained 49 % of variance in flow proneness at work (*adjusted*  $R^2 = .49$ ,  $F(9, 369) = 41.90$ ,  $p < .001$ ). Concentration ( $\beta = .27$ ,  $p < .001$ ), persistence & joy ( $\beta = .40$ ,  $p < .001$ ), and skill–challenge balance ( $\beta = .14$ ,  $p < .001$ ) were identified as positive predictors of flow proneness at work. For flow proneness during maintenance, it was found that two domains of autotelic personality explained 10 % of the variance (*adjusted*  $R^2 = .10$ ,  $F(9, 369) = 5.49$ ,  $p < .001$ ). Integration & differentiation ( $\beta = .19$ ,  $p < .01$ ) and skill – challenge balance ( $\beta = .18$ ,  $p < .01$ ) were identified as positive predictors of flow proneness during maintenance activities. Lastly, four domains of autotelic personality explained 21 % of the variance in flow proneness during leisure activities (*adjusted*  $R^2 = .21$ ,  $F(9, 369) = 12.23$ ,  $p < .001$ ). Concentration ( $\beta = .17$ ,  $p < .01$ ), persistence & joy ( $\beta = .20$ ,  $p < .05$ ), integration & differentiation ( $\beta = .12$ ,  $p < .05$ ), and skill–challenge balance ( $\beta = .20$ ,  $p < .001$ ) were identified as positive predictors of general flow proneness.

The predictive roles of autotelic personality domains (i.e., concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the present, and seeking challenges) in subjective happiness was also tested with a univariate linear regression analysis. The

analysis revealed that three domains of autotelic personality explains 28 % of the variance in subjective happiness (*adjusted R*<sup>2</sup> = .28, *F*(9, 369) = 17.51, *p* < .001). Persistence & joy ( $\beta = .28, p < .001$ ), integration & differentiation ( $\beta = .36, p < .001$ ), and being in the present ( $\beta = .11, p < .05$ ) were identified as positive predictors of subjective happiness.

Another univariate linear regression with presence of meaning as the dependent variable and nine autotelic personality domains (i.e., concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the present, and seeking challenges) as the independent variables was run. Presence of meaning was predicted by three domains of autotelic personality explaining 35 % of the variance (*adjusted R*<sup>2</sup> = .35, *F*(9, 369) = 23.13, *p* < .001). Persistence & joy ( $\beta = .40, p < .01$ ), integration & differentiation ( $\beta = .15, p < .001$ ), and concentration ( $\beta = .18, p < .01$ ) were identified as the positive predictors of presence of meaning.

Lastly, a univariate regression analysis was run with general curiosity as the dependent variable and nine autotelic personality domains (i.e., concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the present, and seeking challenges) as the independent variables. The results of the analysis showed that four domains of autotelic personality explains 60 % of the variance in general curiosity (*adjusted R*<sup>2</sup> = .60, *F*(9, 369) = 63.62, *p* < .001). Persistence & joy ( $\beta = .11, p < .05$ ), curiosity ( $\beta = .57, p < .001$ ), transcendence ( $\beta = .10, p < .01$ ), and challenge seeking ( $\beta = .17, p < .001$ ) were identified as positive predictors of general curiosity.

Table 4.7

*Univariate Linear Regression Analyses for Predicting Personal Strength Variables with Autotelic Personality Domains*

	<u>Subjective Happiness</u> $R^2 = .43, F = 32.50, p < .01$	<u>Presence of Meaning</u> $R^2 = .35, F = 23.13, p < .001$	<u>General Curiosity</u> $R^2 = .60, F = 63.62, p < .001$
Concentration		$\beta = .18, t = 3.18, p < .01$	
Persistence & Joy	$\beta = .28, t = 4.18, p < .001$	$\beta = .40, t = 6.24, p < .01$	$\beta = .11, t = 2.17, p < .05$
Curiosity			$\beta = .57, t = 13.38, p < .001$
Transcendence			$\beta = .10, t = 2.66, p < .01$
Integration & Differentiation	$\beta = .36, t = 6.43, p < .001$	$\beta = .15, t = 2.77, p < .001$	
Skill–Challenge Balance			
Cooperation			
Being in the Present	$\beta = .11, t = 2.17, p < .05$		
Challenge Seeking			$\beta = .17, t = 4.07, p < .001$

Table 4.8

*Univariate Linear Regressions for Predicting Flow Proneness with Autotelic Personality Domains*

	<u>General Flow</u>	<u>Flow (Work)</u>	<u>Flow (Maintenance)</u>	<u>Flow (Leisure)</u>
	$R^2 = .43, F = 32.50, p < .001$	$R^2 = .49, F = 41.90, p < .001$	$R^2 = .10, F = 5.49, p < .001$	$R^2 = .21, F = 12.23, p < .001$
Concentration	$\beta = .23, t = 4.60, p < .001$	$\beta = .27, t = 5.76, p < .001$		$\beta = .17, t = 2.78, p < .01$
Persistence & Joy	$\beta = .31, t = 5.28, p < .001$	$\beta = .40, t = 7.20, p < .001$		$\beta = .20, t = 2.80, p < .05$
Curiosity				
Transcendence				
Integration & Differentiation	$\beta = .15, t = 3.08, p < .01$		$\beta = .19, t = 2.96, p < .01$	$\beta = .12, t = 1.96, p < .05$
Skill – Challenge Balance	$\beta = .24, t = 5.31, p < .001$	$\beta = .14, t = 3.31, p < .001$	$\beta = .18, t = 3.13, p < .01$	$\beta = .20, t = 3.74, p < .001$
Cooperation				
Being in the Present				
Challenge Seeking				

#### 4.10.3.1.3. Structural Equation Modeling with Latent Variables

##### 4.10.3.1.3.1. Path Analysis: Autotelic Personality and Flow Proneness

A path analysis with latent variables only was performed via EQS 6.2 with nine autotelic personality domains (i.e., concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the present, and seeking challenges) and three flow proneness domains (i.e., flow proneness at work, flow proneness during maintenance activities, and flow proneness during leisure activities). Based on earlier analyses, a conceptual model predicting flow proneness at work, during maintenance activities, and during leisure activities with autotelic personality domains was tested using structural equation modelling approach. It was expected that, flow proneness at work latent variable would be predicted by all domains of autotelic personality; flow proneness during maintenance latent variable would be predicted by concentration, persistence & joy, integration & differentiation, skill – challenge balance, and being in the present; and lastly flow proneness during leisure activities would be predicted by concentration, persistence & joy, curiosity, integration & differentiation, and skill–challenge balance.

According to the analysis, *Mardia's Z* was equal to 23.72, which indicated a non-normality of the data. Therefore, robust statistics were taken into consideration while interpreting the results. Distribution of standardized residuals were within limits; the percentage of residuals between the *z* scores of -0.1 and +0.1 was 98.72 (17.95 % of the residuals were between -0.1 and 0.0, whereas 80.77 % of the residuals were between 0.0 and 0.1). Of the remaining residuals, 1.78 % fell between the values 0.1 and 0.2. Fit indices suggested that the proposed model fit the data well, *Satorra-Bentler*  $\chi^2(10) = 23.31, p < .001, CFI = 0.99, RMSEA = 0.06, CI [0.03, 0.09]$ .

All paths between predictor latent variables and predicted latent variables were significant in the model. Flow at work was predicted by concentration ( $\beta = .79$ ), persistence & joy ( $\beta = .84$ ), curiosity ( $\beta = .43$ ), transcendence ( $\beta = .51$ ), integration & differentiation ( $\beta = .48$ ), skill-challenge balance ( $\beta = .51$ ), cooperation ( $\beta = .52$ ), being in the present ( $\beta = .41$ ), and seeking challenges ( $\beta = .60$ ); flow during maintenance was predicted by concentration ( $\beta = .07$ ), persistence & joy ( $\beta = .09$ ), curiosity ( $\beta = .03$ ), integration & differentiation ( $\beta = .19$ ), skill – challenge

balance ( $\beta = .18$ ), and being in the present ( $\beta = .07$ ); and lastly, flow proneness during leisure activities was predicted by concentration ( $\beta = .17$ ), persistence & joy ( $\beta = .20$ ), curiosity ( $\beta = .10$ ), integration & differentiation ( $\beta = .11$ ), and skill – challenge balance ( $\beta = .20$ ).

Lagrange Multiplier Test (LM Test) was run to see if a post-hoc modification would develop the model fit, and no significant increments in  $\chi^2$  or other fit indices were suggested by LM Test.

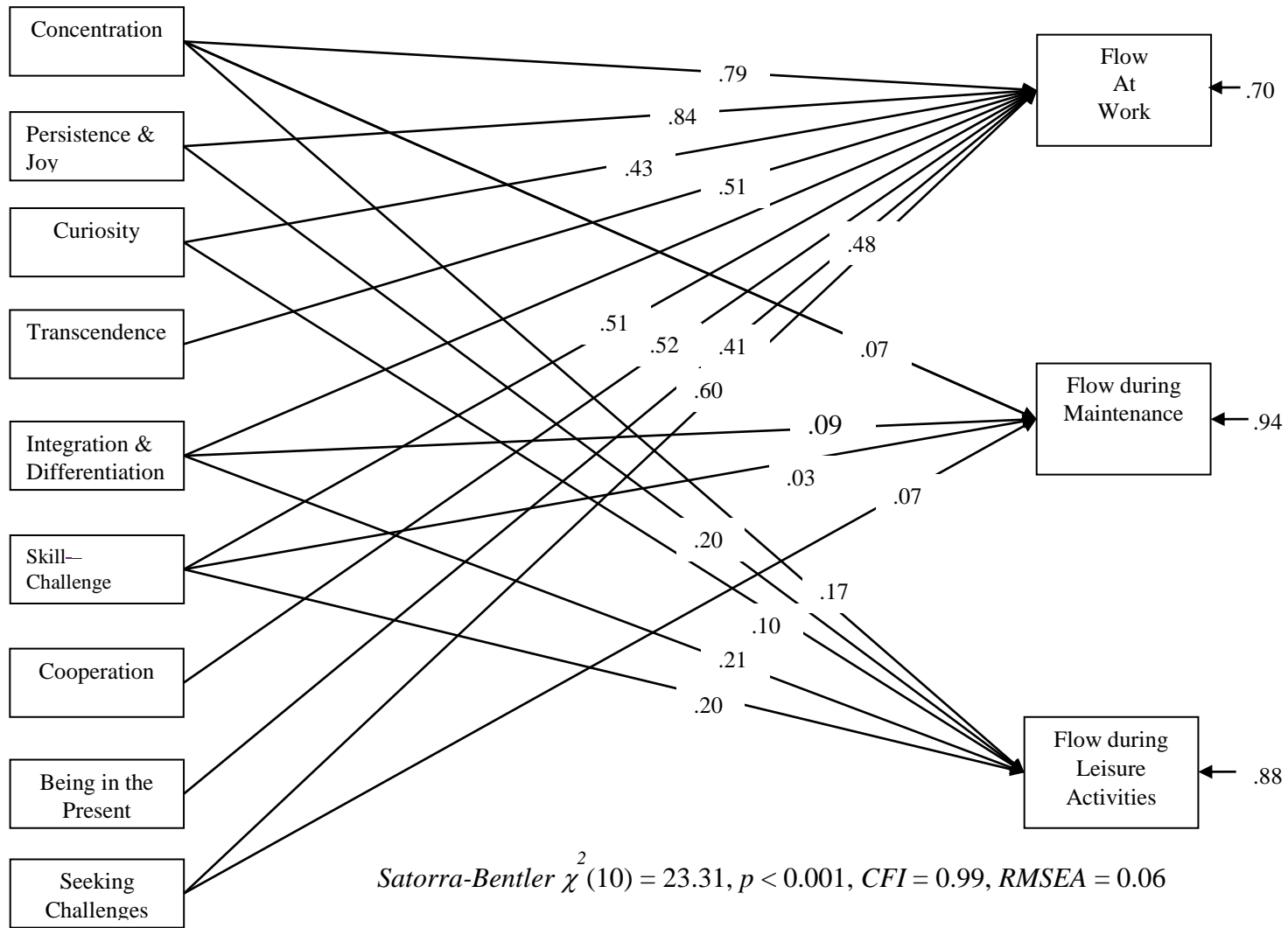


Figure 4.1 Path Model for Predicting Flow Domains



#### **4.10.3.1.3.2. Path Analysis: Autotelic Personality, Subjective Happiness, Presence of Meaning, and General Curiosity**

Based on the preliminary variance and regression analyses, a path analysis with latent variables of autotelic personality domains (i.e., concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the present, and seeking challenges), subjective happiness, presence of meaning, and general curiosity was performed in EQS 6.2. In other words, based on earlier analyses presented before, a conceptual model for predicting subjective happiness, presence of meaning, and general curiosity with autotelic personality domains was tested using structural equation modeling approach. It was hypothesized that, subjective happiness latent variable would be predicted persistence & joy and integration & differentiation domains of autotelic personality; presence of meaning latent variable would be predicted by concentration, persistence & joy, integration & differentiation, and being in the present domains of autotelic personality; and lastly general curiosity would be predicted by persistence & joy, curiosity, transcendence, and challenge seeking domains of autotelic personality.

According to analysis *Mardia's Z* was 5.94, indicating non-normality of the data. Therefore, robust statistics were taken into consideration while interpreting the results. Distribution of standardized residuals were within limits; the percentage of residuals between the *z* scores of -0.1 and +0.1 was 98.18 (5.45 % of residuals were between -0.1 and 0.0, whereas 92.73 % of residuals were between 0.0 and 0.1). Among the remaining residuals 1.82 % fell between the values 0.2 and 0.3. Fit indices suggested that the proposed model fit the data well, *Satorra-Bentler*  $\chi^2(15) = 49.80, p < 0.001, CFI = 0.97, RMSEA = 0.08, CI [0.06, 0.10]$ .

All paths between predictor latent variables and predicted latent variables were significant in the model. Subjective happiness was predicted by persistence & joy ( $\beta = .24$ ) and integration & differentiation ( $\beta = .36$ ); presence of meaning was predicted by concentration ( $\beta = .18$ ), persistence & joy ( $\beta = .38$ ), integration & differentiation ( $\beta = .11$ ), and being in the present ( $\beta = .08$ ); and lastly general curiosity was predicted by persistence & joy ( $\beta = .11$ ), curiosity ( $\beta = .58$ ), transcendence ( $\beta = .11$ ), and challenge seeking ( $\beta = .16$ ).

Lagrange Multiplier Test (LM Test) was run to see if a post-hoc modification would develop the model fit; however, no significant increments in  $\chi^2$  or other fit indices were suggested by LM Test.

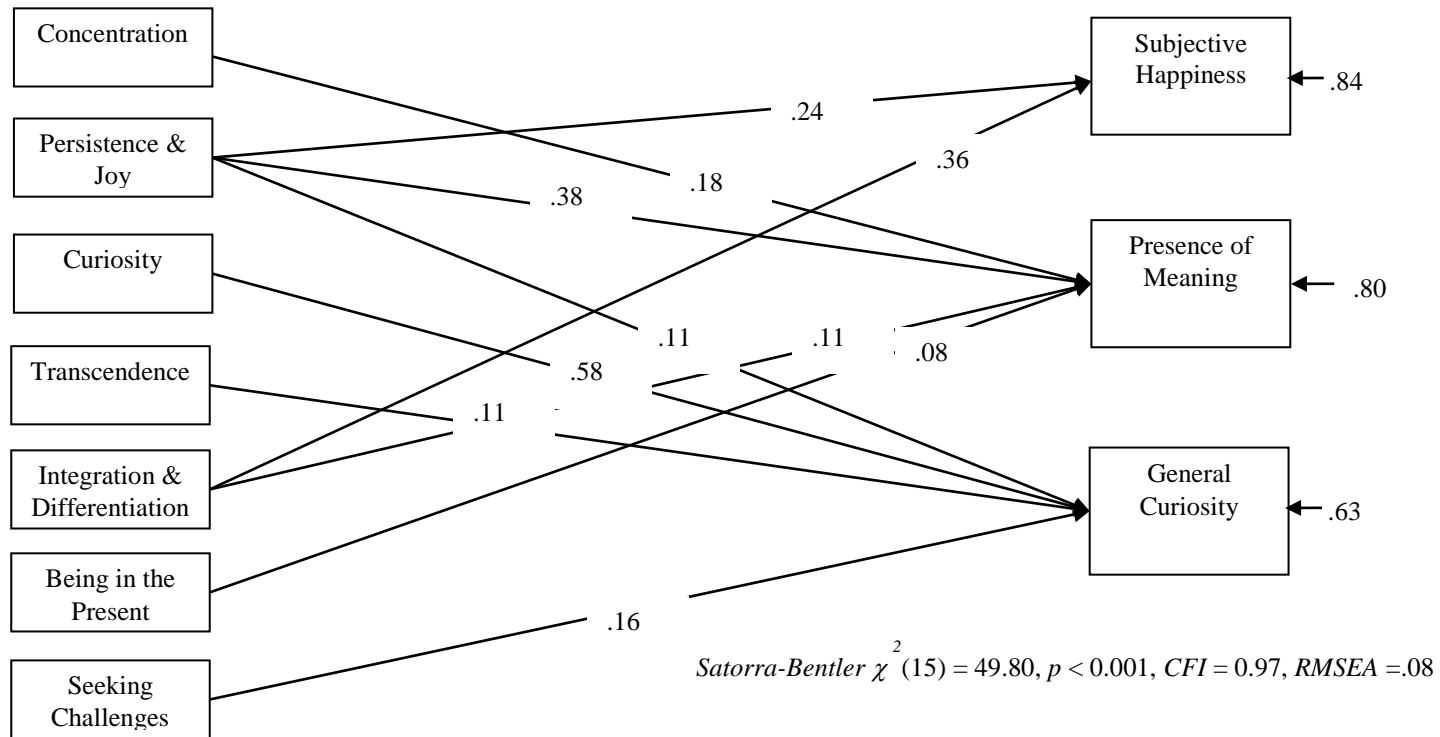


Figure 4.2. Path Model for Predicting Personal Strengths

#### 4.10.3.2. Results Regarding to Autotelic Personality and Psychopathology

##### Variables

Depression, trait anxiety, worry, and obsessive compulsive symptoms were investigated in relation with autotelic personality general quotient, and domains of autotelic personality in this section of the study. For this purpose ten separate MANOVAs were carried out with autotelic personality general quotient, concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the present, and seeking challenges domains of autotelic personality.

Initially, a MANOVA was run via SPSS 20. Autotelic personality general quotient with three groups (non-autotelic, moderate autotelic, and high autotelic) was assigned as the independent variable; and depression, trait anxiety, worry, and obsessive compulsive symptoms were treated as continuous dependent variables. Analysis results revealed significant differences among the three groups of autotelic personality in terms of depression,  $F(2, 376) = 35.63, p < .001, Wilk's \Lambda = .78, partial \eta^2 = .16$ ; trait anxiety,  $F(2, 376) = 47.27, p < .001, Wilk's \Lambda = .78, partial \eta^2 = .20$ ; worry,  $F(2, 376) = 17.29, p < .001, Wilk's \Lambda = .78, partial \eta^2 = .08$ ; and obsessive compulsive symptoms,  $F(2, 376) = 13.38, p < .001, Wilk's \Lambda = .78, partial \eta^2 = .07$ . Table 4.8 summarizes mean scores and standard deviations of depression, trait anxiety, worry, and obsessive compulsive symptoms in the three groups of autotelic personality. Post hoc analysis revealed that, obsessive compulsive symptoms were significantly different among three groups, namely non-autotelic personality ( $m = 75.18, sd = 21.05$ ), moderate autotelic personality ( $m = 67.13, sd = 17.90$ ), and high autotelic personality ( $m = 63.50, sd = 15.70$ ). In terms of depression, non-autotelic personality ( $m = 36.76, sd = 10.58$ ) was significantly different from moderate autotelic personality ( $M = 29.43, SD = 6.80$ ) and high autotelic personality ( $m = 29.02, sd = 6.57$ ); however, the mean difference between moderate autotelic personality ( $m = 29.43, sd = 6.80$ ) and high autotelic personality ( $m = 29.02, sd = 6.57$ ) was not significant. Similarly, in terms of trait anxiety, non-autotelic personality ( $m = 52.04, sd = .871$ ) was significantly different from moderate autotelic personality ( $m = 44.62, sd = 7.27$ ) and high autotelic personality ( $m = 42.87, sd = 7.81$ ); however the mean difference between moderate autotelic personality ( $m = 44.62, sd = 7.27$ ) and high autotelic personality ( $m = 42.87, sd = 7.81$ ) was not significant. Lastly, in terms of worry, there were significant mean

differences between non-autotelic personality ( $m = 53.28, sd = 13.04$ ) and moderate autotelic personality ( $m = 47.75, sd = 12.03$ ); and non-autotelic personality ( $m = 53.28, sd = 13.04$ ) and high autotelic personality ( $m = 44.10, sd = 12.35$ ). However, the mean difference between moderate autotelic personality ( $m = 47.75, sd = 12.03$ ) and high autotelic personality ( $m = 44.10, sd = 12.35$ ) was not significant.

Table 4.9

*Multivariate Analysis of Variance for Autotelic Personality and Psychopathology Variables*

	Autotelic Personality						One-way MANOVA			
	Non ( $n = 126$ )		Moderate ( $n = 127$ )		High ( $n = 126$ )		<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Depression	36.76 <sub>a</sub>	10.58	29.43 <sub>b</sub>	6.80	29.02 <sub>b</sub>	6.58	2,376	35.63	.16	.001
Anxiety	52.04 <sub>a</sub>	8.71	44.62 <sub>b</sub>	7.27	42.87 <sub>b</sub>	7.81	2,376	47.27	.20	.001
Worry	53.28 <sub>a</sub>	13.04	47.76 <sub>b</sub>	12.03	44.10 <sub>c</sub>	12.40	2,376	17.29	.08	.001
Obsessive Compulsive Symptoms	75.18 <sub>a</sub>	21.05	67.13 <sub>b</sub>	17.91	63.50 <sub>b</sub>	15.71	2,376	13.38	.07	.001

Note 1. *Wilk's A* (8, 746) = .78,  $p < .001$ ,  $\eta^2 = .12$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test

In order to test the differences among the groups within concentration domain of autotelic personality, a MANOVA was run via SPSS 20. Autotelic personality concentration domain with three groups (i.e., low concentration, moderate concentration, high concentration) was assigned as the independent variable, and depression, trait anxiety, worry, and obsessive compulsive symptoms were entered as continuous dependent variables. Analysis results revealed significant differences among three groups of concentration domain of AP in terms of depression,  $F(2, 376) = 33.37, p < .001, Wilk's A = .83, partial \eta^2 = .15$ ; trait anxiety,  $F(2, 376) = 30.63, p < .001, Wilk's A = .83, partial \eta^2 = .14$ ; worry,  $F(2, 376) = 11.93, p < .001, Wilk's A = .83, partial \eta^2 = .06$ ; and obsessive compulsive symptoms,  $F(2, 376) = 9.39, p < .001, Wilk's A = .83, partial \eta^2 = .05$ . Table 4.9 summarizes mean scores and standard deviations of depression, trait anxiety, worry, and obsessive compulsive symptoms in three groups of concentration domain. Post hoc analysis revealed that depression, worry and anxiety were significantly different among three levels of the concentration domain. In terms of obsessive compulsive symptoms, although high

concentration level ( $m = 63.05, sd = 14.98$ ) was significantly different from moderate concentration level ( $m = 68.96, sd = 19.14$ ) and low concentration level ( $m = 73.35, sd = 20.73$ ), the mean difference between low concentration level ( $m = 73.35, sd = 20.73$ ) and moderate concentration level ( $m = 68.96, sd = 19.14$ ) was not significant.

Table 4.10

*Multivariate Analysis of Variance for API Concentration and Psychopathology Variables*

	API Concentration						One-way MANOVA			
	Non ( $n = 126$ )		Moderate ( $n = 136$ )		High ( $n = 117$ )		<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Depression	36.37 <sub>a</sub>	10.41	30.68 <sub>b</sub>	7.16	27.97 <sub>c</sub>	6.59	2,376	33.37	.15	.001
Anxiety	50.77 <sub>a</sub>	8.75	45.96 <sub>b</sub>	8.56	42.55 <sub>c</sub>	7.25	2,376	30.63	.14	.001
Worry	52.06 <sub>a</sub>	13.01	48.60 <sub>b</sub>	13.08	44.15 <sub>c</sub>	11.71	2,376	11.93	.06	.001
Obsessive Compulsive Symptoms	73.35 <sub>a</sub>	20.73	68.96 <sub>a</sub>	19.14	63.06 <sub>b</sub>	14.98	2,376	9.39	.05	.001

Note 1. *Wilk's A* (8, 746) = .83,  $p < .001$ ,  $\eta^2 = .09$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test

In order to test the differences among the groups within persistence & joy domain of autotelic personality, a MANOVA was run via SPSS 20. Autotelic personality persistence & joy domain with three groups (low, moderate, high) was assigned as the independent variable, and depression, trait anxiety, worry, and obsessive compulsive symptoms were entered as continuous dependent variables. Analysis results revealed that significant differences among three groups of persistence & joy domain in terms of depression,  $F(2, 348) = 20.42, p < .001$ , *Wilk's A* = .84, *partial*  $\eta^2 = .11$ ; trait anxiety,  $F(2, 348) = 23.89, p < .001$ , *Wilk's A* = .84, *partial*  $\eta^2 = .12$ ; and obsessive compulsive symptoms,  $F(2, 348) = 4.14, p < .05$ , *Wilk's A* = .84, *partial*  $\eta^2 = .03$ . However, worry did not differ among three groups of persistence & joy domain,  $F(2, 348) = 1.87, p > .05$ , *Wilk's A* = .84, *partial*  $\eta^2 = .01$ . Table 4.10 summarizes mean scores and standard deviations of depression, trait anxiety, worry, and obsessive compulsive symptoms for the three groups of persistence & joy domain. Post hoc analysis revealed that trait anxiety scores were significantly different among the three levels of the persistence & joy domain. In terms of depression, although low persistence & joy level ( $m = 34.92, sd = 9.93$ ) was significantly different from moderate ( $m = 30.38, sd = 8.65$ ) and high persistence &

joy groups ( $m = 28.31, sd = 5.89$ ), the mean difference between moderate ( $m = 30.38, sd = 8.65$ ) and high persistence & joy ( $m = 28.31, sd = 5.89$ ) groups was not significant. In terms of obsessive compulsive symptoms, there was a significant mean difference between low persistence & joy ( $m = 71.89, sd = 19.19$ ) and high persistence & joy ( $m = 65.10, SD = 17.30$ ) groups; however, the mean difference between moderate persistence & joy group ( $M = 67.35, SD = 19.65$ ) and high persistence & joy group ( $M = 65.10, SD = 17.30$ ), and the mean difference between low persistence & joy ( $M = 71.89, SD = 19.19$ ) and moderate persistence & joy ( $M = 67.35, SD = 19.65$ ) groups were not significant.

Table 4.11

*Multivariate Analysis of Variance for API Persistence & Joy and Psychopathology Variables*

	API Persistence & Joy						One-way MANOVA			
	Low ( $n = 151$ )		Moderate ( $n = 92$ )		High ( $n = 108$ )		<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Depression	34.92 <sub>a</sub>	9.93	30.38 <sub>b</sub>	8.64	28.31 <sub>b</sub>	5.89	2,348	20.42	.11	.001
Anxiety	49.97 <sub>a</sub>	8.77	45.48 <sub>b</sub>	8.38	42.87 <sub>c</sub>	7.69	2,348	23.89	.12	.001
Worry	49.66 <sub>a</sub>	13.21	48.43 <sub>a</sub>	13.11	46.49 <sub>a</sub>	12.71	2,348	1.87	.01	.16
Obsessive Compulsive Symptoms	71.89 <sub>a</sub>	19.19	67.35 <sub>a</sub>	19.65	65.10 <sub>b</sub>	17.30	2,348	4.14	.03	.05

Note 1. *Wilk's A* (8, 690) = .84,  $p < .001$ ,  $\eta^2 = .09$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test

In order to test the differences among the levels of curiosity domain of autotelic personality, a MANOVA was run via SPSS 20. Autotelic personality curiosity domain with three groups (low, moderate, high) was assigned as the independent variable, and depression, trait anxiety, worry, and obsessive compulsive symptoms were the continuous dependent variables. Analysis results revealed significant differences among the three groups of curiosity domain in terms of depression,  $F(2, 379) = 3.45, p < .05, Wilk's A = .96, partial \eta^2 = .02$ ; trait anxiety,  $F(2, 379) = 4.78, p < .005, Wilk's A = .96, partial \eta^2 = .03$ ; and worry,  $F(2, 379) = 4.78, p < .01, Wilk's A = .96, partial \eta^2 = .03$ . However, obsessive compulsive symptoms, did not yield significant difference among the levels of curiosity,  $F(2, 379) = .94, p > .05, Wilk's A = .96, partial \eta^2 = .0$ . Table 4.11 summarizes mean

scores and standard deviations of depression, trait anxiety, worry, and obsessive compulsive symptoms regarding for the three groups of curiosity domain. Post hoc analysis revealed that in terms of depression, there was only a significant mean difference between low curiosity level ( $m = 33.31$ ,  $sd = 9.76$ ) and high curiosity level ( $m = 39.50$ ,  $sd = 8.56$ ). Similarly, in terms of trait anxiety there was only a significant difference between low curiosity level ( $m = 48.19$ ,  $sd = 8.85$ ) and high curiosity level ( $m = 44.63$ ,  $sd = 8.92$ ). Lastly in terms of worry, the mean difference between low curiosity level ( $m = 50.11$ ,  $sd = 13.17$ ) and high curiosity level ( $m = 45.50$ ,  $sd = 12.84$ ) was significant.

Table 4.12

*Multivariate Analysis of Variance for API Curiosity and Psychopathology Variables*

	API Curiosity						One-way MANOVA			
	Low ( $n = 131$ )		Moderate ( $n = 122$ )		High ( $n = 126$ )		df	F	$\eta^2$	p
	M	SD	M	SD	M	SD				
Depression	33.31 <sub>a</sub>	9.76	31.31 <sub>a</sub>	8.10	30.50 <sub>b</sub>	8.56	2,376	3.45	.02	.05
Anxiety	48.19 <sub>a</sub>	8.86	46.64 <sub>a</sub>	8.51	44.63 <sub>b</sub>	8.92	2,376	5.33	.03	.393
Worry	50.11 <sub>a</sub>	13.17	49.48 <sub>a</sub>	12.60	45.50 <sub>b</sub>	12.84	2,376	4.78	.03	.01
Obsessive Compulsive Symptoms	70.22 <sub>a</sub>	19.52	68.50 <sub>a</sub>	18.06	67.00 <sub>a</sub>	19.18	2,376	.94	.01	.01

Note 1. *Wilk's A* (8, 746) = .96,  $p < .05$ ,  $\eta^2 = .02$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test

In order to test the differences among the groups within transcendence domain of autotelic personality, a MANOVA was run via SPSS 20. Autotelic personality transcendence domain with three groups (low, moderate, high) was assigned as the independent variable, and depression, trait anxiety, worry, and obsessive compulsive symptoms were entered as the continuous dependent variables. Analysis results revealed that a significant difference of depression among the levels of transcendence variable,  $F(2, 376) = 3.21$ ,  $p < .05$ , *Wilk's A* = .96, *partial*  $\eta^2 = .02$ . However, trait anxiety,  $F(2, 376) = 1.53$ ,  $p > .05$ , *Wilk's A* = .96, *partial*  $\eta^2 = 0$ ; worry,  $F(2, 376) = .10$ ,  $p > .05$ , *Wilk's A* = .96, *partial*  $\eta^2 = 0$ ; and obsessive compulsive symptoms,  $F(2, 376) = .45$ ,  $p > .05$ , *Wilk's A* = .96, *partial*  $\eta^2 = 0$  did not differ among the three groups of transcendence domain. Table 4.12 summarizes mean scores and standard deviations of depression, trait anxiety, worry, and

obsessive compulsive symptoms for to three groups of transcendence domain. Post hoc analysis revealed that in terms of depression, there was a significant mean difference between low transcendence level ( $m = 33.31, sd = 9.98$ ) and moderate transcendence level ( $m = 30.71, sd = 8.36$ ); however, there were no significant differences between moderate transcendence level ( $m = 30.71, sd = 8.36$ ) and high transcendence level ( $m = 31.19, sd = 8.03$ ); and between low transcendence ( $m = 33.31, sd = 9.98$ ) level and high transcendence level ( $m = 31.19, sd = 8.03$ ).

Table 4.13

*Multivariate Analysis of Variance for API Transcendence and Psychopathology Variables*

	API Transcendence						One-way MANOVA			
	Low ( $n = 129$ )		Moderate ( $n = 143$ )		High ( $n = 107$ )		<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Depression	33.32 <sub>a</sub>	9.98	30.71 <sub>b</sub>	8.36	31.19 <sub>b</sub>	8.03	2,376	3.21	.02	.05
Anxiety	47.43 <sub>a</sub>	9.73	46.50 <sub>a</sub>	8.41	45.40 <sub>a</sub>	8.31	2,376	1.53	.00	.22
Worry	48.23 <sub>a</sub>	13.60	48.74 <sub>a</sub>	12.77	48.06 <sub>a</sub>	12.70	2,376	.10	.00	.91
Obsessive Compulsive Symptoms	68.25 <sub>a</sub>	19.82	69.73 <sub>a</sub>	18.89	67.51 <sub>a</sub>	18.00	2,376	.64	.00	.64

Note 1. *Wilk's A* (8, 746) = .96,  $p < .05$ ,  $\eta^2 = .02$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test

In order to test the differences among the levels of integration & differentiation domain of autotelic personality a MANOVA was run via SPSS 20. Autotelic personality integration & differentiation domain with three groups (low, moderate, high) was assigned as the independent variable, and depression, trait anxiety, worry, and obsessive compulsive symptoms were entered as the continuous dependent variables. Analysis results revealed that among three groups of integration & differentiation domain there were significant differences in terms of depression,  $F(2, 379) = 30.59, p < .001, Wilk's A = .79, partial \eta^2 = .14$ ; trait anxiety,  $F(2, 379) = 41.92, p < .001, Wilk's A = .79, partial \eta^2 = .18$ ; worry,  $F(2, 379) = 15.02, p < .001, Wilk's A = .79, partial \eta^2 = .07$ ; and obsessive compulsive symptoms,  $F(2, 379) = 17.18, p < .001; Wilk's A = .79, partial \eta^2 = .09$ . Table 4.13 summarizes mean scores and standard deviations of depression, trait anxiety, worry, and obsessive compulsive symptoms for the three groups of integration & differentiation domain.



Post hoc analysis revealed that, depression, trait anxiety, and obsessive compulsive symptoms were significantly different among the three levels of the integration & differentiation domain. Although, in terms of worry, there were significant mean differences between low integration & differentiation group ( $m = 52.94, sd = 13.34$ ) and moderate integration & differentiation group ( $m = 46.10, sd = 11.04$ ); and low integration & differentiation group ( $m = 52.94, sd = 13.34$ ) and high integration & differentiation group ( $m = 45.25, sd = 12.94$ ); the mean difference between moderate integration & differentiation group ( $m = 46.10, sd = 11.04$ ) and high integration & differentiation group ( $m = 45.25, sd = 12.94$ ) was not significant.

Table 4.14

*Multivariate Analysis of Variance for Integration & Differentiation Domain of API and Psychopathology Variables*

	API Integration & Differentiation						One-way MANOVA			
	Low ( $n = 141$ )		Moderate ( $n = 116$ )		High ( $n = 122$ )		<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Depression	36.04 <sub>a</sub>	10.19	29.55 <sub>b</sub>	7.70	28.83 <sub>b</sub>	6.07	2,376	30.59	.14	.001
Anxiety	51.30 <sub>a</sub>	8.44	44.71 <sub>b</sub>	7.80	42.66 <sub>c</sub>	7.77	2,376	41.92	.18	.001
Worry	52.94 <sub>a</sub>	13.34	46.10 <sub>b</sub>	11.04	45.25 <sub>b</sub>	12.94	2,376	15.02	.07	.001
Obsessive Compulsive Symptoms	75.02 <sub>a</sub>	20.44	67.84 <sub>b</sub>	18.73	61.90 <sub>c</sub>	14.50	2,376	17.18	.08	.001

Note 1. *Wilk's A* (8, 746) = .79,  $p < .001$ ,  $\eta^2 = .11$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test

In order to test the differences among the groups of skill–challenge balance domain of autotelic personality, a MANOVA was run via SPSS 20. Autotelic personality skill–challenge balance domain with three groups (low, moderate, high) was assigned as the independent variable, and depression, trait anxiety, worry, and obsessive compulsive symptoms were entered as continuous dependent variables. Analysis results revealed significant differences among the three groups of skill–challenge balance domain in terms of depression,  $F(2, 379) = 11.53, p < .001$ , *Wilk's A* = .90, *partial*  $\eta^2 = .06$ ; trait anxiety,  $F(2, 379) = 17.06, p < .001$ , *Wilk's A* = .90, *partial*  $\eta^2 = .08$ ; worry,  $F(2, 379) = 10.32, p < .001$ , *Wilk's A* = .90, *partial*  $\eta^2 = .05$ ; and obsessive compulsive symptoms,  $F(2, 379) = 4.08, p < .05$ , *Wilk's A* = .90,

*partial*  $\eta^2 = .02$ . Table 4.14 summarizes mean scores and standard deviations of depression, trait anxiety, worry, and obsessive compulsive symptoms for the three groups of skill-challenge balance domain. Post hoc analysis revealed that in terms of depression the mean differences between low skill-challenge balance group ( $m = 34.53, sd = 10.14$ ) and moderate skill-challenge balance group ( $m = 30.65, sd = 7.72$ ); low skill-challenge balance group ( $m = 34.53, sd = 10.14$ ) and high skill-challenge balance group ( $m = 29.52, sd = 7.74$ ) were statistically significant; however, the mean difference between moderate skill-challenge balance group ( $m = 30.65, sd = 7.72$ ) and high skill-challenge balance level ( $m = 29.52, sd = 7.74$ ) was not significant. In terms of trait anxiety, low skill-challenge balance group ( $m = 49.76, sd = 8.81$ ) was significantly different from moderate skill-challenge balance group ( $m = 45.51, sd = 8.15$ ) and high skill-challenge balance group ( $m = 43.59, sd = 8.60$ ); however, the mean difference between moderate skill-challenge balance level ( $m = 45.51, sd = 8.15$ ) and high skill-challenge balance level ( $m = 43.59, sd = 8.60$ ) was not significant. In terms of worry, the mean difference between low skill-challenge balance group ( $m = 51.96, sd = 12.75$ ) and moderate skill-challenge balance level ( $m = 47.73, sd = 12.51$ ); low skill-challenge balance level ( $m = 51.96, sd = 12.75$ ) and high skill-challenge balance level ( $m = 44.57, sd = 12.87$ ); however, the mean difference between moderate skill-challenge balance group ( $m=47.73, sd=12.51$ ) and high skill-challenge balance group ( $m = 44.57, sd = 12.87$ ) was not significant. Lastly, in terms of obsessive compulsive symptoms, the mean difference between low skill-challenge balance group ( $m = 72.00, sd = 20.65$ ) and moderate skill-challenge balance group ( $m = 65.54, sd = 15.71$ ) was significant; however high skill-challenge group ( $m = 68.21, sd = 19.95$ ) was not different from low skill-challenge balance group ( $m = 72.00, sd = 20.65$ ) and moderate skill-challenge balance group ( $m = 65.54, sd = 15.71$ ).

Table 4.15

*Multivariate Analysis of Variance for API Skill–Challenge Balance and Psychopathology Variables*

	API Skill–Challenge Balance						One-way MANOVA			
	Low ( <i>n</i> = 136)		Moderate ( <i>n</i> = 138)		High ( <i>n</i> = 105)		<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Depression	34.53 <sub>a</sub>	10.14	30.66 <sub>b</sub>	7.72	29.52 <sub>b</sub>	7.74	2,376	11.53	.06	.001
Anxiety	49.76 <sub>a</sub>	8.80	45.51 <sub>b</sub>	8.15	43.59 <sub>b</sub>	8.60	2,376	17.06	.08	.001
Worry	51.96 <sub>a</sub>	12.74	47.74 <sub>b</sub>	12.52	44.57 <sub>b</sub>	12.87	2,376	10.32	.05	.001
Obsessive Compulsive Symptoms	72.00 <sub>a</sub>	20.65	65.54 <sub>b</sub>	15.71	68.21 <sub>a</sub>	19.95	2,376	4.08	.02	.05

Note 1. *Wilk's A* (8, 746) = .90,  $p < .001$ ,  $\eta^2 = .05$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test

In order to test the differences among the groups of cooperation domain of autotelic personality, a MANOVA was run via SPSS 20. Autotelic personality cooperation domain with three groups (low, moderate, high) was assigned as the independent variable, and depression, trait anxiety, worry, and obsessive compulsive symptoms were entered as the continuous dependent variables. Analysis results revealed significant mean differences among three groups of cooperation domain in terms of depression,  $F(2, 379) = 10.84$ ,  $p < .001$ , *Wilk's A* = .90, *partial*  $\eta^2 = .06$ ; trait anxiety,  $F(2, 379) = 13.06$ ,  $p < .001$ , *Wilk's A* = .90, *partial*  $\eta^2 = .07$ ; worry,  $F(2, 379) = 11.72$ ,  $p < .001$ , *Wilk's A* = .90, *partial*  $\eta^2 = .06$ ; and obsessive compulsive symptoms,  $F(2, 379) = 13.83$ ,  $p < .001$ , *Wilk's A* = .90, *partial*  $\eta^2 = .07$ . Table 4.15 summarizes mean scores and standard deviations of depression, trait anxiety, worry, and obsessive compulsive symptoms for three groups of cooperation domain. Post hoc analysis revealed that worry means were significantly different among low ( $m = 51.80$ ,  $sd = 13.26$ ), moderate ( $m = 47.90$ ,  $sd = 12.12$ ), and high ( $m = 44.42$ ,  $sd = 12.29$ ) levels of the cooperation domain. In terms of depression, low cooperation level ( $m = 34.23$ ,  $sd = 10.43$ ) was significantly different from moderate cooperation level ( $m = 30.22$ ,  $sd = 7.09$ ) and high cooperation level ( $m = 29.84$ ,  $sd = 7.36$ ); however, the mean difference between moderate cooperation level ( $m = 30.22$ ,  $sd = 7.09$ ) and high cooperation level ( $m = 29.84$ ,  $sd = 7.36$ ) was not significant in terms of depression. In terms of obsessive compulsive symptoms, low cooperation level ( $m = 74.30$ ,  $sd = 21.45$ ) was significantly different from moderate cooperation level ( $m = 66.70$ ,  $sd = 15.92$ ) and high cooperation level ( $m = 62.95$ ,  $sd = 15.71$ );

however, the mean difference between moderate cooperation level ( $m = 66.70$ ,  $sd = 15.92$ ) and high cooperation level ( $m = 62.95$ ,  $sd = 15.71$ ) was not significant. Similarly, in terms of trait anxiety, low cooperation level ( $m = 49.08$ ,  $sd = 9.09$ ) was significantly different from moderate cooperation level ( $m = 45.75$ ,  $sd = 8.23$ ) and high cooperation level ( $m = 43.87$ ,  $sd = 8.24$ ); however the mean difference between moderate cooperation level ( $m = 45.75$ ,  $sd = 8.23$ ) and high cooperation level ( $m = 43.87$ ,  $sd = 8.24$ ) was not significant in terms of trait anxiety.

Table 4.16

*Multivariate Analysis of Variance for API Cooperation and Psychopathology Variables*

	API Cooperation						One-way MANOVA			
	Low ( $n = 155$ )		Moderate ( $n = 102$ )		High ( $n = 122$ )		$df$	$F$	$\eta^2$	$p$
	$M$	$SD$	$M$	$SD$	$M$	$SD$				
Depression	34.23 <sub>a</sub>	10.43	30.22 <sub>b</sub>	7.09	29.84 <sub>b</sub>	7.36	2,376	10.84	.06	.001
Anxiety	49.08 <sub>a</sub>	9.09	45.75 <sub>b</sub>	8.24	43.87 <sub>b</sub>	8.24	2,376	13.04	.07	.001
Worry	51.80 <sub>a</sub>	13.26	47.90	12.12	44.42 <sub>c</sub>	12.29	2,376	11.72	.06	.001
Obsessive Compulsive Symptoms	74.30 <sub>a</sub>	21.45	66.70	15.92	62.95 <sub>b</sub>	15.71	2,376	13.83	.07	.001

Note 1.  $Wilk's \Lambda (8, 746) = .90$ ,  $p < .001$ ,  $\eta^2 = .05$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test

In order to test the differences among the levels of being in the present domain of autotelic personality, a MANOVA was run via SPSS 20. Autotelic personality being in the present domain with three groups (low, moderate, high) was assigned as the independent variable, and depression, trait anxiety, worry, and obsessive compulsive symptoms were entered as continuous dependent variables. Analysis results revealed significant mean differences on depression,  $F(2, 379) = 8.00$ ,  $p < .001$ ,  $Wilk's \Lambda = .94$ ,  $partial \eta^2 = .04$ ; trait anxiety,  $F(2, 379) = 10.19$ ,  $p < .001$ ,  $Wilk's \Lambda = .94$ ,  $partial \eta^2 = .05$ ; and worry,  $F(2, 379) = 7.52$ ,  $p < .001$ ,  $Wilk's \Lambda = .94$ ,  $partial \eta^2 = .04$  among the three groups of being in the present domain of AP. However obsessive compulsive symptoms,  $F(2, 379) = 2.16$ ,  $p > .05$ ,  $Wilk's \Lambda = .94$ ,  $partial \eta^2 = .01$  did not significantly differentiate among the three groups of being in the present domain. Table 4.16 summarizes mean scores and standard deviations of depression, trait anxiety, worry, and obsessive compulsive symptoms for the three groups of being in the present domain. Post hoc analysis revealed that in terms of

depression, low being in the present group ( $m = 34.28, sd = 10.20$ ) was significantly different from moderate being in the present group ( $m = 30.55, sd = 8.10$ ) and high being in the present group ( $m = 30.33, sd = 7.66$ ); however, the mean difference between moderate being in the present group ( $m = 30.55, sd = 8.10$ ) and high being in the present group ( $m = 30.33, sd = 7.66$ ) was not significant. Similarly, in terms of trait anxiety, low being in the present group ( $m = 49.35, sd = 8.47$ ) was significantly different from moderate being in the present group ( $m = 45.18, sd = 8.31$ ) and high being in the present group ( $m = 44.95, sd = 9.41$ ); however, the mean difference between moderate being in the present group ( $m = 45.18, sd = 8.31$ ) and high being in the present group ( $m = 44.95, sd = 9.41$ ) was not significant. In terms of worry, there were significant mean differences between low being in the present level ( $m = 51.90, sd = 12.26$ ) and moderate being in the present level ( $m = 47.16, sd = 12.38$ ); low being in the present level ( $m = 51.90, sd = 12.26$ ) and high being in the present level ( $m = 45.77, sd = 14.03$ ); however the mean difference between moderate being in the present level ( $m = 47.16, sd = 12.38$ ) and high being in the present level ( $m = 45.77, sd = 14.03$ ) was not significant.

Table 4.17

*Multivariate Analysis of Variance for API Being in the Present and Psychopathology Variables*

	API Being in the Present						One-way MANOVA			
	Low ( $n = 126$ )		Moderate ( $n = 155$ )		High ( $n = 98$ )		<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Depression	34.28 <sub>a</sub>	10.20	30.55 <sub>b</sub>	8.10	30.30 <sub>b</sub>	7.66	2,376	8.00	.04	.001
Anxiety	49.35 <sub>a</sub>	8.47	45.18 <sub>b</sub>	8.31	44.95 <sub>b</sub>	9.41	2,376	10.19	.05	.001
Worry	51.90 <sub>a</sub>	12.26	47.16 <sub>b</sub>	12.38	45.77 <sub>b</sub>	14.04	2,376	7.52	.04	.001
Obsessive Compulsive Symptoms	71.44 <sub>a</sub>	20.43	67.34 <sub>a</sub>	16.05	66.94 <sub>a</sub>	20.88	2,376	2.16	.01	.117

Note 1. *Wilk's A* (8, 746) = .94,  $p < .01$ ,  $\eta^2 = .03$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test

In order to test the differences among the groups of seeking challenges domain of autotelic personality, a MANOVA was run via SPSS 20. Autotelic personality seeking challenges domain with three groups (low, moderate, high) was assigned as the independent variable, and depression, trait anxiety, worry, and

obsessive compulsive symptoms were entered as continuous dependent variables. Analysis results revealed significant differences among three groups of seeking challenges domain in terms of depression,  $F(2, 379) = 3.70, p < .05, Wilk's \Lambda = .95, partial \eta^2 = .02$ ; trait anxiety,  $F(2, 379) = 7.76, p < .001, Wilk's \Lambda = .95, partial \eta^2 = .04$ ; worry,  $F(2, 379) = 5.81, p < .01; Wilk's \Lambda = .95, partial \eta^2 = .03$ ; and obsessive compulsive symptoms,  $F(2, 379) = 3.86, p < .05; Wilk's \Lambda = .95, partial \eta^2 = .02$ .

Table 4.17 summarizes mean scores and standard deviations of depression, trait anxiety, worry, and obsessive compulsive symptoms for the three groups of seeking challenges domain. Post hoc analysis revealed that in terms of depression, there were significant mean differences between low seeking challenges group ( $m = 32.97, sd = 10.02$ ) and high seeking challenges group ( $m = 30.00, sd = 8.17$ ); however, moderate seeking challenges group ( $m = 31.75, sd = 7.64$ ) did not significantly differ from low and high seeking challenges groups. Similarly, in terms of trait anxiety, there were significant mean differences between low ( $m = 48.36, sd = 9.60$ ) and high ( $m = 44.14, sd = 8.06$ ) seeking challenges groups; however, moderate seeking challenges group ( $m = 46.28, sd = 8.00$ ) did not significantly differ from low and high seeking challenges groups. In terms of worry, low seeking challenges group ( $m = 50.92, sd = 13.48$ ) was significantly different from moderate seeking challenges group ( $m = 47.48, sd = 12.59$ ) and high seeking challenges group ( $m = 45.70, sd = 12.16$ ); however, the mean difference between moderate seeking challenges group ( $m = 47.48, sd = 12.59$ ) and high seeking challenges group ( $m = 45.70, sd = 12.16$ ) was not significant. Lastly, in terms of obsessive compulsive symptoms, there were significant mean differences between low seeking challenges group ( $m = 70.61, sd = 19.32$ ) and high seeking challenges group ( $m = 64.50, sd = 17.91$ ); moderate seeking challenges group ( $m = 69.95, sd = 18.94$ ) and high seeking challenges group ( $m = 64.50, sd = 17.91$ ); however, the mean difference between low seeking challenges ( $m = 70.61, sd = 19.32$ ) and moderate seeking challenges ( $m = 69.95, sd = 18.94$ ) groups was not significant.

Table 4.18

*Multivariate Analysis of Variance for API Seeking Challenges and Psychopathology Variables*

	API Seeking Challenges						One-way MANOVA			
	Low (n = 157)		Moderate (n = 109)		High (n = 113)		df	F	$\eta^2$	p
	M	SD	M	SD	M	SD				
Depression	32.97	10.02	31.75	7.64	30.00	8.17	2,376	3.70	.02	.05
Anxiety	48.36	9.60	46.28	7.10	44.14	8.06	2,376	7.76	.04	.001
Worry	50.92	13.48	47.48	12.59	45.67	12.16	2,376	5.81	.03	.01
Obsessive Compulsive Symptoms	70.61	19.32	69.95	18.94	64.50	17.91	2,376	3.86	.02	.05

Note 1. *Wilk's A* (8, 746) = .95,  $p < .05$ ,  $\eta^2 = .03$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test

### 4.10.3.3. Results Regarding to Autotelic Personality and Personal Growth Initiative

#### 4.10.3.3.1. Multivariate Analysis of Variance (MANOVA)

Personal Growth Initiative domains, namely readiness, planfulness, using resources, and intentional behaviors, were investigated in relation with three groups derived from autotelic personality (i.e., non-autotelic, moderate autotelic, and high autotelic groups) to test if there are statistically significant differences among the levels of autotelic personality on the domains of personal growth initiative. Multivariate analysis of variance (MANOVA) was run via SPSS 20; autotelic personality general quotient with three groups was assigned as the independent variable, and readiness, planfulness, using resources, and intentional behaviors were entered as continuous dependent variables. The MANOVA analysis resulted in a significant multivariate effect for the assumed group differences, *Wilk's A* (8, 746) = .58,  $p < .001$ ,  $\eta^2 = .24$ . Univariate results revealed significant differences among three groups of autotelic personality in terms of readiness  $F(2, 379) = 56.04$ ,  $p < .001$ , *Wilk's A* = .58, *partial*  $\eta^2 = .23$ ; planfulness,  $F(2, 379) = 76.91$ ,  $p < .001$ , *Wilk's A* = .58, *partial*  $\eta^2 = .29$ ; using resources,  $F(2, 379) = 28.12$ ,  $p < .001$ , *Wilk's A* = .58, *partial*  $\eta^2 = .13$ ; and intentional behavior,  $F(2, 379) = 104.88$ ,  $p < .001$ , *Wilk's A* = .58, *partial*  $\eta^2 = .36$ . Table 4.18 summarizes mean scores and standard deviations of readiness, planfulness, using resources, and intentional behaviors in the groups of autotelic personality. Post hoc analysis revealed that the mean differences among the three groups of autotelic personality were significant for readiness, planfulness, and

intentional behavior domains of personal growth initiative. In terms of using resources, there were significant mean differences between non-autotelic group ( $m = 10.48, sd = 2.74$ ) and moderate autotelic group ( $m = 12.24, sd = 2.38$ ); non-autotelic group ( $m = 10.48, sd = 2.74$ ) and high autotelic group ( $m = 12.85, sd = 2.69$ ); however, the mean difference between moderate autotelic group ( $m = 12.24, sd = 2.38$ ) and high autotelic group ( $m = 12.85, sd = 2.69$ ) was not significant.

Table 4.19

*Multivariate Analysis of Variance for Autotelic Personality and Personal Growth Initiative*

	Autotelic Personality						One-way MANOVA			
	Non ( $n = 126$ )		Moderate ( $n = 127$ )		High ( $n = 126$ )		<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Readiness	15.45 <sub>a</sub>	3.68	17.92 <sub>b</sub>	2.67	19.52 <sub>c</sub>	2.76	2,376	56.04	.23	.001
Planfulness	18.13 <sub>a</sub>	4.99	22.50 <sub>b</sub>	3.22	24.06 <sub>c</sub>	3.34	2,376	76.91	.29	.001
Using Resources	10.48 <sub>a</sub>	2.74	12.24 <sub>b</sub>	2.38	12.85 <sub>b</sub>	2.69	2,376	28.12	.13	.001
Intentional Behaviors	14.18 <sub>a</sub>	3.86	17.82 <sub>b</sub>	2.50	19.67 <sub>c</sub>	2.64	2,376	104.88	.36	.001

Note 1. *Wilk's A* (8, 746) = .58,  $p < .001$ ,  $\eta^2 = .24$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test

In order to test mean differences among low, medium, and high personal growth initiative groups in terms of the domains of autotelic personality (i.e., concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the present, and seeking challenges), another multivariate analysis of variance was carried out. Personal growth initiative with three groups was assigned as the independent variable, and concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the present, and seeking challenges were entered as continuous dependent variables. The MANOVA analysis resulted in a significant multivariate effect for the assumed group differences, *Wilk's A* (18, 736) = .58,  $p < .001$ ,  $\eta^2 = .24$ . Univariate results revealed significant differences among three levels of personal growth initiative in terms of concentration,  $F(2, 379) = 36.99, p < .001, Wilk's A = .58, partial \eta^2 = .16$ ; persistence & joy,  $F(2, 379) = 91.53, p < .001, Wilk's A = .58, partial \eta^2 = .33$ ;



curiosity,  $F(2, 379) = 25.18, p < .001, Wilk's \Lambda = .58, partial \eta^2 = .12$ ;  
transcendence,  $F(2, 379) = 17.31, p < .001, Wilk's \Lambda = .58, partial \eta^2 = .08$ ;  
integration & differentiation,  $F(2, 379) = 42.15, p < .001, Wilk's \Lambda = .58, partial \eta^2 = .18$ ;  
skill–challenge balance,  $F(2, 379) = 27.30, p < .001, Wilk's \Lambda = .58, partial \eta^2 = .13$ ;  
cooperation,  $F(2, 379) = 24.55, p < .001, Wilk's \Lambda = .58, partial \eta^2 = .12$ ;  
being in the present,  $F(2, 379) = 20.57, p < .001, Wilk's \Lambda = .58, partial \eta^2 = .10$ ;  
and seeking challenges,  $F(2, 379) = 30.82, p < .001, Wilk's \Lambda = .58, partial \eta^2 = .14$ .

Table 4.19 summarizes mean scores and standard deviations of concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill–challenge balance, cooperation, being in the present, and seeking challenges for three levels of personal growth initiative. Post hoc analysis revealed that, the mean differences among the three levels of personal growth variable were significant for each of the continuous variable. MANOVA results were summarized in Table 4.19.

Table 4.20

*Multivariate Analysis of Variance for Personal Growth Initiative and Autotelic Personality Domains*

	Personal Growth Initiative						One-way MANOVA			
	Low ( $n = 135$ )		Moderate ( $n = 126$ )		High ( $n = 118$ )		df	F	$\eta^2$	p
	M	SD	M	SD	M	SD				
Concentration	2.60 <sub>a</sub>	.81	3.11	.73	3.43	.79	2,376	36.99	.16	.001
Persistence & Joy	3.36 <sub>a</sub>	.75	4.01 <sub>b</sub>	.49	4.35 <sub>c</sub>	.49	2,376	91.53	.33	.001
Curiosity	3.71 <sub>a</sub>	.74	4.01 <sub>b</sub>	.61	4.29 <sub>c</sub>	.57	2,376	25.18	.12	.001
Transcendence	2.61	.89	2.95 <sub>b</sub>	.87	3.28 <sub>c</sub>	.93	2,376	17.31	.68	.001
Integration & Differentiation	3.25	.96	3.97 <sub>b</sub>	.84	4.19 <sub>c</sub>	.75	2,376	42.15	.18	.001
Skill–Challenge Balance	3.76 <sub>a</sub>	.64	4.10	.54	4.27 <sub>c</sub>	.50	2,376	27.30	.13	.001
Cooperation	3.46	.76	3.79 <sub>b</sub>	.65	4.08 <sub>c</sub>	.67	2,376	24.55	.12	.001
Being in the Present	3.87 <sub>a</sub>	.71	4.16 <sub>b</sub>	.59	4.37 <sub>c</sub>	.54	2,376	20.57	.10	.001
Challenge Seeking	2.92	.87	3.40 <sub>b</sub>	.88	3.73 <sub>c</sub>	.72	2,376	30.82	.14	.001

Note 1.  $Wilk's \Lambda (18, 736) = .58, p < .001, \eta^2 = .24$

Note 2. The mean scores that do not share the same subscript on the same row are significantly different from each other at .05 alpha level of Tukey's HSD test

#### 4.10.3.3.2 Univariate Linear Regressions

A number of linear regressions were carried out to estimate the predictive roles of nine autotelic personality domains in personal growth initiative domains, namely readiness, planfulness, using resources, and intentional behaviors. Nine domains of the autotelic personality were included in each of the regression equations. Since several domains did not exhibit any predictive effect on the dependent variable, adjusted  $R^2$ 's were taken into consideration to capture the accurate explained variances.

Initially, a univariate regression analysis was run with readiness domain of personal growth initiative as the dependent variable and nine autotelic personality domains (i.e., concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the present, and seeking challenges) as the independent variables. In this analysis, it was found that four domains of autotelic personality explained 33 % of the variance in readiness domain (*adjusted*  $R^2 = .33$ ,  $F(9, 369) = 22.05$ ,  $p < .001$ ). Persistence & joy ( $\beta = .23$ ,  $p < .001$ ), curiosity ( $\beta = .13$ ,  $p < .05$ ), integration & differentiation ( $\beta = .14$ ,  $p < .05$ ), skill–challenge balance ( $\beta = .23$ ,  $p < .001$ ) were identified as positive predictors of readiness domain of personal growth initiative.

In order to define predictors of planfulness domain of personal growth initiative, a univariate regression analysis was run with planfulness domain of personal growth initiative as the dependent variable and nine autotelic personality domains (i.e., concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the present, and seeking challenges) as the independent variables. In this analysis, it was found that four domains of autotelic personality explained 38 % of the variance in planfulness domain (*adjusted*  $R^2 = .38$ ,  $F(9, 369) = 26.77$ ,  $p < .001$ ). Concentration ( $\beta = .18$ ,  $p < .001$ ), persistence & joy ( $\beta = .32$ ,  $p < .001$ ), integration & differentiation ( $\beta = .16$ ,  $p < .01$ ), and skill–challenge balance ( $\beta = .14$ ,  $p < .01$ ) were identified as positive predictors of planfulness domain of personal growth initiative.

In order to define predictors of using resources domain of personal growth initiative, a univariate regression analysis equation was run with using resources domain of personal growth initiative as dependent variable and nine autotelic personality domains as concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the

present, and seeking challenges as independent variables. In this analysis, it was found that three domains of autotelic personality explained 24 % of the variance in using resources (*adjusted R*<sup>2</sup> = .24, *F* (9, 369) = 14.36, *p* < .001). Persistence & joy ( $\beta = .35, p < .001$ ), integration & differentiation ( $\beta = .13, p < .05$ ), cooperation ( $\beta = .19, p < .001$ ) were identified as positive predictors of using resources domain of personal growth initiative.

In order to define predictors of intentional behaviors domain of personal growth initiative, a univariate regression analysis was run with intentional behaviors domain of personal growth initiative as the dependent variable and nine autotelic personality domains (i.e., concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the present, and seeking challenges) as the independent variables. In this analysis, it was found that four domains of autotelic personality explained 52 % of the variance in intentional behaviors domain (*adjusted R*<sup>2</sup> = .52, *F*(9, 369) = 46.15, *p* < .001). Persistence & joy ( $\beta = .48, p < .001$ ), curiosity ( $\beta = .14, p < .01$ ), integration & differentiation ( $\beta = .16, p < .001$ ), and cooperation ( $\beta = -.11, p < .05$ ) were identified as predictors of intentional behaviors domain of personal growth initiative.

Table 4.21

*Univariate Linear Regressions for Predicting Personal Growth Initiative Domains with Autotelic Personality Domains*

	<u>Readiness</u> $R^2 = .33, F = 22.05, p < .001$	<u>Planfulness</u> $R^2 = .38, F = 26.77, p < .001$	<u>Using Resources</u> $R^2 = .24, F = 14.36, p < .001$	<u>Intentional Behavior</u> $R^2 = .52, F = 46.15, p < .001$
Concentration		$\beta = .18, t = 3.42, p < .001$		
Persistence & Joy	$\beta = .23, t = 3.49, p < .001$	$\beta = .32, t = 5.13, p < .001$	$\beta = .35, t = 5.09, p < .001$	$\beta = .48, t = 8.82, p < .001$
Curiosity	$\beta = .13, t = 2.31, p < .05$			$\beta = .14, t = 2.91, p < .01$
Transcendence				
Integration & Differentiation	$\beta = .14, t = 2.51, p < .05$	$\beta = .16, t = 3.08, p < .01$	$\beta = .13, t = 2.32, p < .05$	$\beta = .16, t = 3.46, p < .001$
Skill–Challenge Balance	$\beta = .23, t = 4.84, p < .001$	$\beta = .14, t = 2.99, p < .01$		
Cooperation			$\beta = .19, t = 3.25, p < .001$	$\beta = -.11, t = -2.41, p < .05$
Being in the Present				

*Note.* Only significant results were presented in the table

#### 4.10.3.3. Structural Equation Modelling with Latent Variables

A path analysis with latent variables only was performed via EQS 6.2 with nine autotelic personality domains (i.e., concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the present, and seeking challenges) and four personal growth initiative domains (i.e., readiness, planfulness, using resources, and intentional behavior). Based on earlier analyses presented in this section, a conceptual model for predicting readiness, planfulness, using resources, and intentional behaviors domains of personal growth initiative with autotelic personality domains was tested using structural equation modelling approach. It was hypothesized that readiness latent variable would be predicted by persistence & joy, curiosity, integration & differentiation, and skill–challenge balance domains of autotelic personality; planfulness latent variable would be predicted by concentration, persistence & joy, integration & differentiation, skill–challenge balance domains of autotelic personality; using resources domain of personal growth initiative would be predicted by persistence & joy, integration & differentiation, and cooperation domains of autotelic personality; and lastly, intentional behaviors domain of personal growth initiative would be predicted by persistence & joy, curiosity, skill–challenge balance, and cooperation domains of autotelic personality.

According to the analysis, *Mardia's Z* was 441.44, which indicated a non-normality of the data. Thus, robust statistics were taken into consideration while interpreting the results. Distribution of standardized residuals were within limits; the percentage of residuals between the *z* scores of -0.1 and +0.1 was 82.05 (46.29 % of residuals were between -0.1 and 0.0, whereas 35.76 % of residuals were between 0.0 and 0.1). Of the remaining residuals, 6.20 % fell between -0.1 and -0.2, 2.61 % fell between 0.1 and 0.2, 1.31 % fell between 0.2 and 0.3, and .57 % fell between 0.4 and 0.5. Fit indices suggested that the proposed model fit the data well, *Satorra-Bentler*  $\chi^2(1096) = 2462, p < 0.001, CFI = 0.83, RMSEA = 0.06, CI [0.05, 0.06]$ .

All paths between predictor latent variables and predicted latent variables were significant in the model. Readiness was predicted by persistence & joy ( $\beta = .20$ ), curiosity ( $\beta = .47$ ), integration & differentiation ( $\beta = .31$ ), and skill–challenge balance ( $\beta = .32$ ); planfulness was predicted by concentration ( $\beta = .28$ ), persistence & joy ( $\beta = .34$ ), and integration & differentiation ( $\beta = .63$ ), skill–challenge balance ( $\beta = .42$ ); using resources was predicted by persistence & joy ( $\beta = .41$ ), integration

& differentiation ( $\beta = .34$ ), and cooperation ( $\beta = .18$ ); and lastly, intentional behaviors was predicted by persistence & joy ( $\beta = .71$ ), curiosity ( $\beta = .16$ ), skill–challenge balance ( $\beta = .08$ ), and cooperation ( $\beta = .20$ ).

Lagrange Multiplier Test (LM Test) was run to see if a post-hoc modification would develop the model fit; however, no significant increments in  $\chi^2$  or other fit indices were suggested by LM Test.

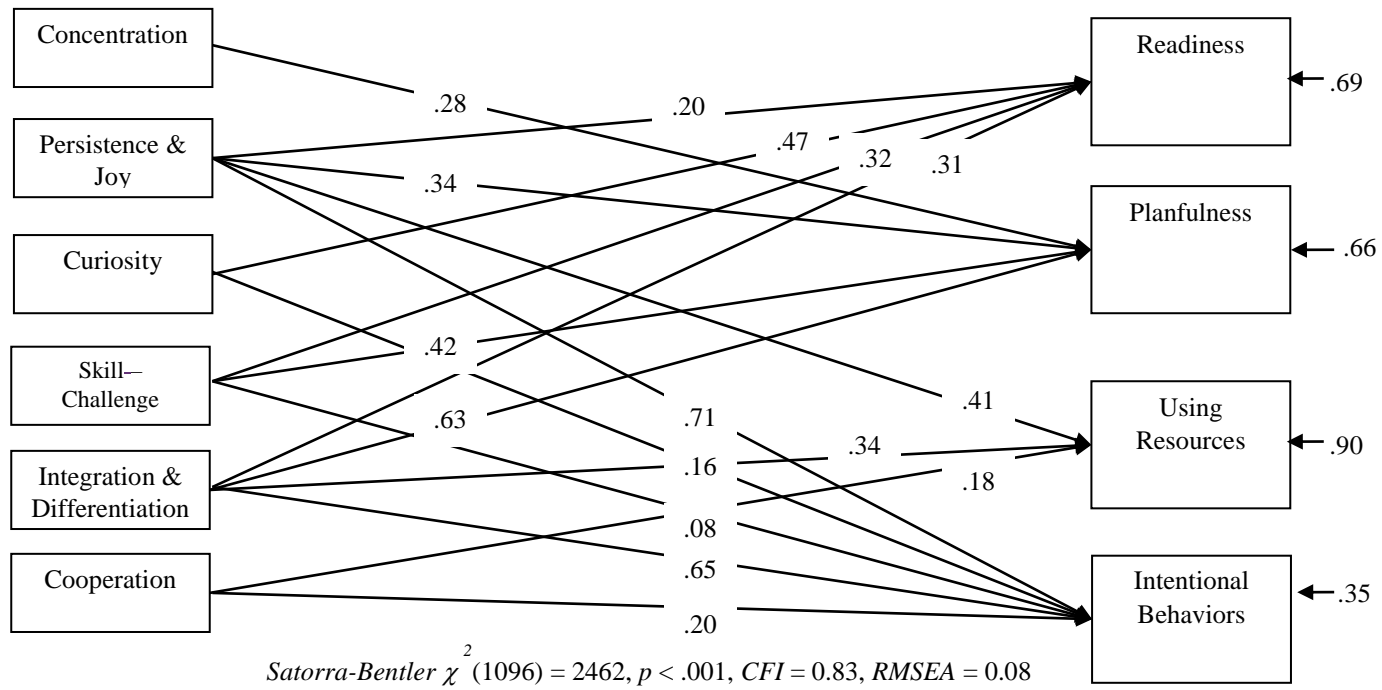


Figure 4.3. Path Model for Predicting Personal Growth Initiative

#### 4.10.4. Ad Hoc Analyses: Hierarchical Regressions for Predicting Personal Strength, Psychopathology, and Personal Growth Initiative

A series of hierarchical regressions were carried out to investigate the predictive power of autotelic personality and general flow proneness on presence of meaning, subjective happiness, curiosity, depression, worry, anxiety, obsessive compulsive symptoms, and personal growth initiative.

##### 4.10.4.1. Hierarchical Regression Analyses for Personal Strength Variables

Four hierarchical regression analyses were carried out to predict presence of meaning, subjective happiness, and curiosity. Initially, a hierarchical regression analysis was performed using presence of meaning as the criterion; and autotelic personality general quotient as the first step predictor, accompanied by general flow proneness at the second step of the analysis. In the first step, autotelic personality general quotient explained 27 % of the variance in presence of meaning (*adjusted R*<sup>2</sup> = .27, *F*(1, 377) = 142.09, *p* < .001). Autotelic personality general quotient ( $\beta = .52$ , *p* < .001) was positively associated with presence of meaning. The addition of general flow proneness in the second step led to an increment in explained variance by 8 %, (*adjusted R*<sup>2</sup> = .36, *F*(1, 376) = 47.68, *p* < .001). General flow proneness ( $\beta = .35$ , *p* < .001) was positively associated with presence of meaning.

Table 4.22

*Hierarchical Regression Analysis for Predicting Presence of Meaning*

	$\Delta F$	<i>df</i>	<i>t</i>	$\beta$	$\Delta R^2$
First Step	142.09*	1,377			
Autotelic personality		377	11.92	.52	.27
Second Step	47.68*	1,376			
Flow proneness		376	6.91	.35	.08

Note. \**p* < .001

Another hierarchical regression analysis was performed using subjective happiness as the criterion; and autotelic personality general quotient as the first step predictor accompanied by general flow proneness at the second step of the analysis. In the first step, autotelic personality general quotient explained 18 % of the variance



in subjective happiness ( $adjusted R^2 = .18, F(1, 377) = 83.62, p < .001$ ). Autotelic personality general quotient ( $\beta = .43, p < .001$ ) was positively associated with subjective happiness. The addition of general flow proneness in the second step led to an increment in explained variance by 3 %, ( $adjusted R^2 = .21, F(1, 376) = 15.29, p < .001$ ). General flow proneness ( $\beta = .22, p < .001$ ) was positively associated with subjective happiness.

Table 4.23

*Hierarchical Regression Analysis for Predicting Subjective Happiness*

	$\Delta F$	$df$	$t$	$\beta$	$\Delta R^2$
First Step	83.62*	1,377			
Autotelic personality		377	5.40	.43	.18
Second Step	15.29*	1,376			
Flow proneness		376	3.91	.22	.03

Note. \* $p < .001$

The third hierarchical regression analysis was performed using general curiosity as the criterion; and autotelic personality general quotient as the first step predictor accompanied by general flow proneness at the second step of the analysis. In the first step, autotelic personality general quotient explained 36 % of the variance in general curiosity ( $adjusted R^2 = .36, F(1, 377) = 212.652, p < .001$ ). Autotelic personality general quotient ( $\beta = .60, p < .001$ ) was positively associated with general curiosity. The addition of general flow proneness in the second step did not lead significant change in the explained variance ( $adjusted R^2 = .36, F(1, 376) = .4, p > .05$ ).

Table 4.24

*Hierarchical Regression Analysis for Predicting General Curiosity*

	$\Delta F$	$df$	$t$	$\beta$	$\Delta R^2$
First Step	212.65*	1,377			
Autotelic personality		377	14.58	.60	.36
Second Step	.41	1,376			
Flow proneness		376	-.64	-.03	.00

Note. \* $p < .001$

In the last hierarchical regression, a general quotient of personal strength was computed through summation of presence of meaning, subjective happiness, and curiosity scores. The internal consistency among personal strength variables were found as  $\alpha = .62$ . The analysis was performed using general quotient of personal strength as the criterion, and autotelic personality general quotient as the first step predictor accompanied by general flow proneness at the second step of the analysis. In the first step, autotelic personality general quotient explained 41 % of the variance in general quotient of personal strength ( $adjusted R^2 = .41$ ,  $F(1, 377) = 266.45$ ,  $p < .001$ ). Autotelic personality general quotient ( $\beta = .64$ ,  $p < .001$ ) was positively associated with general quotient of personal strength. The addition of general flow proneness in the second step led to an increment in the explained variance by 5 % ( $adjusted R^2 = .46$ ,  $F(1, 376) = 37.44$ ,  $p < .001$ ). General flow proneness ( $\beta = .28$ ,  $p < .001$ ) was positively associated with general quotient of personal strength.

Table 4.25

*Hierarchical Regression Analysis for Predicting Personal Strength*

	$\Delta F$	$df$	$t$	$\beta$	$\Delta R^2$
First Step	266.45*	1,377			
Autotelic personality		377	16.32	.64	.41
Second Step	37.44*	1,376			
Flow proneness		376	6.12	.28	.05

Note. \* $p < .001$

#### 4.10.4.2. Hierarchical Regression Analyses for Psychopathology

Five hierarchical regression analyses were carried out to predict depression, worry, anxiety, and obsessive compulsive symptoms. Initially, a hierarchical regression analysis was performed using depression as the criterion, and autotelic personality general quotient as the first step predictor accompanied by general flow proneness at the second step of the analysis. In the first step, autotelic personality general quotient explained 27 % of the variance in depression (*adjusted R*<sup>2</sup> = .27, *F*(1, 377) = 142.09, *p* < .001). Autotelic personality general quotient ( $\beta = .52$ , *p* < .001) was positively associated with depression. The addition of general flow proneness in the second step led to an increment in the explained variance by 8 % (*adjusted R*<sup>2</sup> = .35, *F*(1, 376) = 47.68, *p* < .001). General flow proneness ( $\beta = .35$ , *p* < .001) was positively associated with depression.

Table 4.26

##### *Hierarchical Regression Analysis for Predicting Depression*

	$\Delta F$	<i>df</i>	<i>t</i>	$\beta$	$\Delta R^2$
First Step	80.33*	1,377			
Autotelic personality		377	-8.96	-.42	.18
Second Step	86.92*	1,376			
Flow proneness		376	-9.32	-.48	.16

*Note.* \**p* < .001

Similarly, a hierarchical regression analysis was performed by utilizing trait anxiety as the criterion; and autotelic personality general quotient as the first step predictor, accompanied by general flow proneness during the second step of the analysis. In the first step, autotelic personality general quotient explained 20 % of the variance in trait anxiety, (*adjusted R*<sup>2</sup> = .20, *F*(1, 377) = 95.2, *p* < .001). Autotelic personality general quotient ( $\beta = -.45$ , *p* < .001) was negatively associated with trait anxiety. The addition of general flow proneness in the second step led to an increment in explained variance by 8 %, (*adjusted R*<sup>2</sup> = .28, *F*(1, 376) = 43.78, *p* < .001). General flow proneness ( $\beta = -.25$ , *p* < .001) was negatively associated with trait anxiety.

Table 4.27

*Hierarchical Regression Analysis for Predicting Trait Anxiety*

	$\Delta F$	$df$	$t$	$\beta$	$\Delta R^2$
First Step	142.09*	1,377			
Autotelic personality		377	11.92	.52	.27
Second Step	47.68*	1,376			
Flow proneness		376	6.91	.35	.08

Note. \* $p < .001$

Another hierarchical regression analysis was performed by utilizing worry as the criterion, and autotelic personality general quotient as the first step predictor accompanied by general flow proneness at the second step of the analysis. In the first step, autotelic personality general quotient explained 8 % of the variance in worry ( $adjusted R^2 = .08$ ,  $F(1, 377) = 32.26$ ,  $p < .001$ ). Autotelic personality general quotient ( $\beta = -.28$ ,  $p < .001$ ) was negatively associated with worry. The addition of general flow proneness in the second step led to an increment in the explained variance by 1 % ( $adjusted R^2 = .09$ ,  $F(1, 376) = 4.49$ ,  $p < .05$ ). General flow proneness ( $\beta = -.13$ ,  $p < .05$ ) was negatively associated with worry.

Table 4.28

*Hierarchical Regression Analysis for Predicting Worry*

	$\Delta F$	$df$	$t$	$\beta$	$\Delta R^2$
First Step	32.26**	1,377			
Autotelic personality		377	-5.68	-.28	.08
Second Step	4.49*	1,376			
Flow proneness		376	-2.12	-.13	.01

Note. \* $p < .05$ , \*\* $p < .001$

One more hierarchical regression analysis was performed using obsessive compulsive symptoms as the criterion, and autotelic personality general quotient as the first step predictor accompanied by general flow proneness at the second step of the analysis. In the first step, autotelic personality general quotient explained 5 % of

the variance in obsessive compulsive symptoms (*adjusted R*<sup>2</sup> = .05, *F*(1, 377) = 22.66, *p* < .001). Autotelic personality general quotient ( $\beta = -.24$ , *p* < .001) was negatively associated with obsessive compulsive symptoms. The addition of general flow proneness in the second step led to an increment in the explained variance by 2 % (*adjusted R*<sup>2</sup> = .07, *F*(1, 376) = 7.10, *p* < .01). General flow proneness ( $\beta = -.16$ , *p* < .01) was negatively associated with obsessive compulsive symptoms.

Table 4.29

*Hierarchical Regression Analysis for Predicting Obsessive Compulsive Symptoms*

	$\Delta F$	<i>df</i>	<i>t</i>	$\beta$	$\Delta R^2$
First Step	95.21*	1,377			
Autotelic personality		377	-9.76	-.45	.20
Second Step	43.78*	1,376			
Flow proneness		376	-6.62	-.35	.08

*Note.* \**p* < .001

In the last hierarchical regression, a general quotient of psychopathology was computed through summation of depression, anxiety, worry, and obsessive compulsive scores. The internal consistency among psychopathology variables were found  $\alpha = .76$ . The analysis was performed by utilizing general quotient of psychopathology as the criterion; and autotelic personality general quotient as the first step predictor, accompanied by general flow proneness during the second step of the analysis. In the first step, autotelic personality general quotient explained 16 % of the variance in general quotient of psychopathology, (*adjusted R*<sup>2</sup> = .16, *F*(1, 377) = 71.07, *p* < .001). Autotelic personality general quotient ( $\beta = -.40$ , *p* < .001) was negatively associated with general quotient of psychopathology. The addition of general flow proneness in the second step led to an increment in explained variance by 6 %, (*adjusted R*<sup>2</sup> = .22, *F*(1, 376) = 29.90, *p* < .001). General flow proneness ( $\beta = -.30$ , *p* < .001) was negatively associated with general quotient of psychopathology.

Table 4.30

*Hierarchical Regression Analysis for Predicting Psychopathology*

	$\Delta F$	$df$	$t$	$\beta$	$\Delta R^2$
First Step	71.07*	1,377			
Autotelic personality		377	-8.43	-.40	.16
Second Step	29.90*	1,376			
Flow proneness		376	-5.47	-.30	.06

Note. \* $p < .001$

**4.10.4.3. Hierarchical Regressions for Personal Growth Initiative**

A hierarchical regression analysis was performed using personal growth initiative as the criterion, and autotelic personality general quotient as the first step predictor accompanied by general flow proneness at the second step of the analysis. In the first step, autotelic personality general quotient explained 44 % of the variance in personal growth initiative (*adjusted*  $R^2 = .44$ ,  $F(1, 377) = 300.72$ ,  $p < .001$ ). Autotelic personality general quotient ( $\beta = .67$ ,  $p < .001$ ) was positively associated with personal growth initiative. The addition of general flow proneness in the second step led to an increment in the explained variance by 8 % (*adjusted*  $R^2 = .52$ ,  $F(1, 376) = 57.33$ ,  $p < .001$ ). General flow proneness ( $\beta = .33$ ,  $p < .001$ ) was positively associated with personal growth initiative.

Table 4.31

*Hierarchical Regression Analysis for Predicting Personal Growth Initiative*

	$\Delta F$	$df$	$t$	$\beta$	$\Delta R^2$
First Step	300.71*	1,377			
Autotelic personality		377	17.34	.67	.44
Second Step	57.33*	1,376			
Flow proneness		376	7.57	.33	.07

Note. \* $p < .001$

#### 4.10.4.4. Testing Mediational Links

Hierarchical regression analyses for predicting personal strength general quotient, psychopathology, and personal growth initiative had indicated that the predictive associations of autotelic personality with personal strength, psychopathology, and personal growth initiative had weakened with the inclusion of flow proneness variable in the second step. Therefore, potential mediatory role of flow proneness between autotelic personality and personal strengths, between autotelic personality and psychopathology, and between autotelic personality and personal growth initiative were investigated in this section of the study. The analyses were guided by the four essential conditions of relations to launch mediatory hypotheses (Baron & Kenny, 1986): (1) The independent and mediating variables are significantly related, (2) The independent and dependent variables are significantly related, (3) The mediating and dependent variables are significantly related, and (4) The relation between the independent and dependent variables becomes non-significant or weaker when the mediator is added.

Table 4.32

*Correlations among the Variables Included in the Mediation Analyses*

	1	2	3	4	5
1. Flow Proneness	1				
2. Autotelic Personality	.57*	1			
3. Psychopathology	-.43*	-.40*	1		
4. Personal Strengths	.56*	.64*	-.55*	1	
5. Personal Growth Initiative	.60*	.66*	-.44*	.68*	1

*Note.* \*Correlation is significant at the .01 level (2-tailed).

Correlations among the variables included in the mediation analyses were provided in the table presented above. The correlations of independent variables (i.e., autotelic personality and flow proneness) with the dependent variables, personal strengths, psychopathology, and personal growth initiative were significant. To test the mediatory role of flow proneness between (1) autotelic personality and personal strength, (2) autotelic personality and psychopathology, and (3) autotelic personality and personal growth initiative relations, two blocks of variables were entered into the regression equation. In the first step, autotelic personality as the independent variable

was solely included in the regression equation to predict the dependent variable; in the second step, flow proneness as the possible mediator variable was added to the equation to observe if the relation between autotelic personality and the dependent variable weakened or became non-significant after this addition. It was observed that the variables included in the analysis met the essential conditions of relations outlined by Baron and Kenny (1986).

#### 4.10.4.4.1. The Mediator Role of Flow Proneness in the Relation between Autotelic Personality and Personal Strengths

Regression analyses to test the mediational effect of flow proneness between autotelic personality and personal strengths was summarized in Table 4.32. It was observed that the inclusion of flow proneness in the second step results in a decrement in the effect of autotelic personality on personal strengths. Sobel test was conducted to test whether flow proneness carries the influence of autotelic personality to personal strengths, and the mediatory role of flow proneness was confirmed ( $z = 6.01, p < .001$ ). Eighty per cent of the variance explained by the path between the autotelic personality and the personal strengths was accounted for by flow proneness as the full mediator.

Table 4.33

*Regression Analyses for Testing the Mediator Role of Flow Proneness in the Relation between Autotelic Personality and Personal Strengths*

	$\Delta F$	$df$	$t$	$\beta$	$\Delta R^2$
<b>Regression 1. DV: Personal Strengths</b>					
First Step	266.45*	1,377			.44
Autotelic personality		377	16.32	.64	
Second Step	37.44*	1,376			.07
Autotelic personality		376	10.50	.48	
Flow proneness		376	6.12	.28	
<b>Regression 2. DV: Flow Proneness</b>					
First Step	184.29*	1,377	13.58	.57	.33
Autotelic Personality		377			

Note. \*  $p < .001$



#### 4.10.4.4.2. The Mediator Role of Flow Proneness in the Relation between Autotelic Personality and Psychopathology

Regression analyses to test the mediational effect of flow proneness between autotelic personality and psychopathology was summarized in Table 4.33. It was observed that the inclusion of flow proneness in the second step had results in a decrement in the effect of autotelic personality on psychopathology. Sobel test was conducted to test whether flow proneness carries the influence of autotelic personality to psychopathology, and the mediatory role of flow proneness was not confirmed ( $z = -5.07, p > .05$ ). It was concluded that flow proneness does not mediate the relation between autotelic personality and psychopathology.

Table 4.34

*Regression Analyses for Testing the Mediator Role of Flow Proneness in the Relation between Autotelic Personality and Psychopathology*

	$\Delta F$	$df$	$t$	$\beta$	$\Delta R^2$
<b>Regression 1. DV: Psychopathology</b>					
First Step	71.07*	1,377			.16
Autotelic personality		377	-8.43	-.40	
Second Step	29.90*	1,376			.06
Autotelic personality		376	-4.04	-.22	
Flow proneness		376	-5.47	-.30	
<b>Regression 2. DV: Flow Proneness</b>					
First Step	184.29*	1,377	13.58	.57	.33
Autotelic Personality		377			

Note. \*  $p < .001$

#### 4.10.4.4.3. The Mediator Role of Flow Proneness in the Relation between Autotelic Personality and Personal Growth Initiative

Regression analyses to test the mediational effect of flow proneness between autotelic personality and personal growth initiative was summarized in Table 4.34. It was observed that the inclusion of flow proneness in the second step results in a decrement in the effect of autotelic personality on personal growth initiative. Sobel test was conducted to test whether flow proneness carries the influence of autotelic personality to personal growth initiative, and mediatory role of flow proneness was

confirmed ( $z = 6.59, p < .001$ ). Eighty six percent of the variance explained by the path between the autotelic personality and the personal growth initiative was accounted for by flow proneness as the full mediator.

Table 4.35

*Regression Analyses for Testing Mediator Role of Flow Proneness between Autotelic Personality and Personal Growth Initiative*

	$\Delta F$	$df$	$t$	$\beta$	$\Delta R^2$
<b>Regression 1. DV: Personal Growth Initiative</b>					
First Step	300.71*	1,377			.44
Autotelic personality		377	17.34	.67	
Second Step	57.33*	1,377			.07
Autotelic personality		376	10.90	.48	
Flow proneness		376	7.57	.33	
<b>Regression 2. DV: Flow Proneness</b>					
First Step	184.29*	1,377	13.58	.57	.33
Autotelic Personality		377			

Note. \*  $p < .001$

## **4.11. Discussion**

### **4.11.1. Overview**

The general aim of the presented research was to permeate an approach that investigates human strengths, positive emotions, optimal experiences, and psychological well-being to contemporary clinical psychology research. Autotelic personality constellation -as a set of positive personality traits that lead to increased intensity and frequency of daily flow experiences- was the central of the current research, and three areas of human psychological phenomenon were investigated in relation to autotelic personality; personal strengths, psychopathology, and personal growth initiation. By doing so, a contribution to the questioning of current knowledge about psychological disorders, their treatments, and perspectives of clinical scientists and practitioners is aimed. The associations of personal strength variables, and personal growth initiative variables with autotelic personality were investigated in both group differences and predictive analyses; however, the associations between psychopathology variables and autotelic personality was only investigated in terms of group differences, because of the fundamental assumption of positive psychology paradigm for not enslaving presence of positive characteristics as a function of psychopathology.

Within the scope of this discussion, research outcomes will be summarized and discussed from specific to general; by corresponding to plausible effects of the outcomes on the theory and applications of mental health. Strengths and limitations of the present study, and suggestions for future research will be presented in the last part of the discussion section.

Although, autotelic personality was introduced long ago (Csikszentmihalyi, 1990); up-to-date literature of positive psychology did not make an effort to capture such personality construct; but rather flow propensity, as an indicator of autotelic personality latent construct, was used to operationalize autotelic personality (Jackson & Kimiecik, 2008; Abuhamdeh, 2000; Asakawa, 2010; Adlai-Gail, 1994; Asakawa & Nakamura, 2008). One of the major contributions of the present research was the utilization of a newly developed inventory that is specifically constructed to measure autotelic personality. The major difference between autotelic personality and several other theories of personality lies in the conceptualization of personality in a positive

manner. Therefore, it distinctively addresses positive assets and qualities; which are relatively stable over time and susceptible to early experiences, nevertheless improvable through lifespan (Csikszentmihalyi, 1990). Therefore, by the utilization of autotelic personality in the present research; suggestions and evaluations presented here aim to highlight the significance of primary prevention, promotion and optimization rather than remediation; and conceivable psychological interventions that promote the best in people.

Autotelic personality domains as concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill-challenge balance, cooperation, being in the present, and seeking challenges refer to positive personality traits that function as a stable source for active and high engagement with life, i.e., flow. In other words, positive outcomes originating from autotelic personality constellation are most probably due to a high engagement with life. The findings of the present study revealed that autotelic personality, as a general quotient and as distinct sub-domains, was significantly associated in varying degrees and directions with (1) personal strengths, i.e., subjective happiness, presence of meaning, curiosity, and flow proneness; (2) psychopathology, indicated by depressive symptomatology, trait anxiety, worry, and obsessive compulsive symptoms; and (3) personal growth initiative comprising of readiness for change, planfulness, using resources, and intentional behavior. The associations among variables were investigated by examining descriptive properties, inter-variable correlations, multivariate variance analyses, regression equations, and structural equation modelling. The sequential advancement of the nature of statistical techniques allowed the investigation of both descriptive and inferential associations. Each of these associations will be summarized and discussed below.

#### **4.11.2. Autotelic Personality and Personal Strengths**

The findings of the present study showed that having an autotelic personality constellation is of predictive importance for a pleasant life comprising positive feelings; a good life that is characterized by high levels of engagement with life and an ability to find intrinsically motivating tasks; and a meaningful life by experiencing a fulfillment by being a part of something larger and permanent. Besides, autotelic personality constellation predicted flow proneness at work, during maintenance, and in leisure activity contexts.

#### **4.11.2.1. Subjective Happiness**

As an indicator of psychological well-being, the present study measured subjective happiness to trace the significance of autotelic personality on psychological well-being. Among three groups of non-autotelic, moderately autotelic, and high autotelic participants subjective happiness ratings were significantly different, with high autotelic individuals reporting higher subjective happiness. Besides, among autotelic personality domains, integration & differentiation had the highest predictive significance, followed by persistence & joy domain, and lastly by being in the present domain. The findings of the present study can be supported by earlier research. The explained variance of subjective happiness by autotelic personality was 28 % in the present study. This finding is of important theoretical value. Earlier meta-analytical studies in happiness literature revealed that 50 % of happiness is due to hereditary factors, 30 % is due to personality and self-control, whereas 10 percent is due to environmental factors (Lyubomirsky, 2008). Thus, the variance explained by autotelic personality inventory corresponds almost to the all variance explained by personality traits described in earlier happiness studies.

The integration & differentiation domain of autotelic personality had the highest predictive power on subjective happiness. Integration & differentiation domain is an indicator of relational self-complexity that can be linked to many aspects of psychological experience such as affective, or cognitive complexity. For example, the more an individual is differentiated and integrated, the more s/he possesses assets that enables him/her to express his/her distinct individuality; and the more effectively s/he uses social systems and mechanisms for the means of self-actualization (Csikszentmihalyi, 1993). Besides, higher integration & differentiation is associated with experience of positive affect, and serenity, as indicated by earlier research (Nakamura & Csikszentmihalyi, 2002). Labouvie-Vief, Gisela, Gonzalez, Marquez, Yun, and Sternberg (2004) underlined the significance of higher integration & differentiation for enabling individuation and personal growth, leading to conceptual and emotional complexity, facilitating affect regulation in the face of negativities, and eventually and possibly leading to psychological well-being. In addition to integration & differentiation domain, persistence & joy domain of autotelic personality also predicted subjective happiness. Earlier studies revealed that the perseverance to complete a task regardless of frustration is an indicator of quality of the experience (Cloninger, Svrakic, & Przybeck., 1993); and positively associated

with psychological well-being, positive affect, and pleasant experiences (Garcia, Kerekes, & Archer., 2012). Lastly, being in the present domain of autotelic personality, an inclination towards the enjoyment of present moment, positively predicted subjective happiness. Since being in the present fosters sensitivity and awareness of the context, it is also associated with positive affect and quality of the experience (Snyder, Shane, & Lopez, 2011).

In general, the assumptions of flow theory about subjective happiness and active engagement (Csikszentmihalyi, 1975) was tested and confirmed in the present research. Autotelic individuals tend to report higher subjective happiness due to higher self-complexity, persistence, and inclination to enjoy the present moment.

#### **4.11.2.2. Presence of Meaning**

Meaningful life and engaged life are often used interchangeably in the literature (Duckworth, Steen, & Seligman, 2005; Seligman & Csikszentmihalyi, 2002). As a precedent of high engagement, general autotelic personality and several domains of it revealed positive associations with presence of life meaning. In terms of presence of life meaning, non-autotelic, moderately autotelic, and high autotelic participants were significantly different, with high autotelic individuals reporting higher presence of meaning. In terms of the predictive function of autotelic personality domains, it was found that persistence & joy domain had the highest predictive significance, followed by concentration, and lastly by integration & differentiation domains.

Autotelic personality domains that predicted life meaning might be due to their functions serving for the fulfillment of the four main needs described by Baumeister and Vohs (2002). Persisting on the present activity and ability to see connections between the present activities with overarching outcomes due to concentration might fulfill the need for purpose (Csikszentmihalyi, 1997). High concentration abilities and integration & differentiation (indicating self-complexity) might be linked to sense of control over the situation (Adlai Gail, 1994) and the need for efficacy might possibly be fulfilled. High complexity, independence, and low self-centeredness can be linked to a well-balanced and stable self-worth (Nakamura & Csikszentmihalyi, 2002); thus might eventually lead to the fulfillment of the need for self-worth. High complexity and low self-centeredness reflected by integration &

differentiation domain of autotelic personality (Csikszentmihalyi, 1997) might fulfill the need for values.

The findings of the present study, referring to presence of life meaning and autotelic personality are in line with previous research and theoretical explanations. Flow theory (Csikszentmihalyi & Nakamura, 2003) postulates that being absorbed in a task that elicits joy eventually deepens the meanings attached to that task, because of the perceived subjective significance of involvement with the particular task. Furthermore, a task that is perceived as meaningless would not arouse an engagement. Besides, Osin, Malyutina, and Kosheleva (2015) indicated that meaning of an activity functions as a facilitator for flow.

Transcendence, a domain of autotelic personality that refers to being motivated by meaning (Frankl, 1965), was expected to yield a positive association with presence of life meaning. However, transcendence did not significantly predict presence of life meaning in the present study; yet a weak positive correlation ( $r = .27$ ,  $p < .01$ ) was observed between presence of life meaning and transcendence. Thus, transcendence domain of autotelic personality might be more associated with the search for meaning rather than presence of life meaning.

In summary, autotelic personality was positively associated with presence of life meaning; autotelic individuals owed the meaning in their lives to their persistence, ability to elicit joy, concentration abilities, and high self-complexity.

#### **4.11.2.3. Curiosity**

Curiosity as a distinctive human quality had just begun to be studied (Kashdan & Silvia, 2009) as an inclination to explore novelties, challenges, and uncertainties. However, more than two decades ago flow theory (Csikszentmihalyi, 1993) had stressed the significance of curiosity trait for entering and sustaining flow state. In this research, associations of autotelic personality –including the domain of curiosity– was investigated in terms of its associations with general curiosity that is measured by Curiosity and Exploration Inventory–II. Non-autotelic, moderately autotelic, and highly autotelic participants were significantly different in terms of their general curiosity scores; with high autotelic individuals reporting higher curiosity. In terms of the predictive function of autotelic personality domains, it was found that curiosity, challenge seeking, persistence & joy, and transcendence domains had predictive significance of given order.

Autotelic personality explained 60 per cent of variance in curiosity. That corresponds to a great overlap between the two constructs. This finding is not surprising, considering the fact that curiosity is a considered and incorporated into several theories of motivation as a central motivational virtue, an innate inclination towards novelty and challenges (Deci & Ryan, 2002). Flow state, absorption within an activity, resembles curiosity by the deployment of attentional resources. Furthermore, earlier research showed that a high level of curiosity is associated with higher levels of process orientation and higher enjoyment of exploration (Jacokbsen, 1998). Besides, curiosity is considered as a central facet of intrinsic motivation (Deci & Ryan, 2002). Therefore, the positive association between challenge seeking domain of autotelic personality and trait-like curiosity is an expected association. Likewise, persistence & joy domain of autotelic personality also represents the perseverance of task motivation. Thus, the predictive role of persistence & joy on curiosity is anticipated.

Hereafter, the shared variance between curiosity and autotelic personality indicated the significance of curiosity as a human strength for a good life. Yet, curiosity alone does not necessarily predict flow propensity and mediate positive outcomes due to increased experiencing of flow states.

#### **4.11.2.4. Flow Proneness**

The significance of autotelic personality inventory lays in its ability to predict flow frequency and intensity. Therefore, it was indispensably crucial to prove the unique predictive effect of autotelic personality on flow in the present research. Yet, flow is a mental state; therefore researches involved with the properties of flow state using the experience sampling technique that make the collection of real time experience data possible (Nakamura & Csikszentmihalyi, 2002). In the present study, instead of utilizing experience sampling method to capture real time flow experience, flow proneness (Ullen et al., 2012) was measured as a general tendency to experience flow at work, during maintenance, and during leisure time activities. This preference was based on the need to collect data from large samples, since psychometric properties of the autotelic personality inventory could only be studied with large samples. Experience sampling method is disadvantageous for reaching large samples



due to its dependence to equipment, such as palm computers and software to track participants' real time experiences.

As expected, non-autotelic, moderately autotelic, and highly autotelic participants differed in terms of their flow proneness at work, during maintenance, and during leisure activities. Non-autotelic participants reported low flow proneness at work, during maintenance, and during leisure activities; moderate autotelic participants reported moderate flow proneness at work, during maintenance, and during leisure activities; and lastly high autotelic participants had the highest scores for flow proneness in three different contexts. The observed group differences were in line with the researcher's expectations.

In terms of the associations between autotelic personality domains and flow proneness, it was observed that concentration, persistence & joy, integration & differentiation, skill & challenge balance, and seeking challenges domains yielded significantly different scores among low, moderate, and high flow proneness groups. Although low flow proneness group yielded significantly lower scores on curiosity, transcendence, and cooperation domains of autotelic personality from moderate and high flow proneness groups, no significant differences were yielded between moderate and high flow proneness groups. Lastly, in terms of being in the present domain, the only significant group difference was between the low flow proneness group and high flow proneness group.

The predictive role of autotelic personality domains for flow proneness was also investigated in the present study. It was found that general flow proneness is predicted by persistence & joy, skill–challenge balance, concentration, and integration & differentiation domains of autotelic personality. In terms of flow proneness at work, persistence & joy, concentration, and skill–challenge balance domains of autotelic personality had predictive power. Flow proneness during maintenance activities was predicted by integration & differentiation, and skill – challenge balance domains of autotelic personality. Lastly, flow proneness during leisure activities was predicted by persistence & joy, skill–challenge balance, concentration, and integration & differentiation domains of autotelic personality.

The results of the study regarding to the association between flow proneness and autotelic personality is of anticipated nature. The nature of flow experience and the inclination towards flow might differentiate in various contexts (Ullen et al., 2012; Nakamura & Csikszentmihalyi, 2002). In the present study, flow proneness

was measured for work, maintenance and leisure time activities. However, flow experience is not limited to these conditions. Furthermore, these conditions might be lacking to represent general flow proneness. Among the three contextual backgrounds, autotelic personality inventory was most satisfactorily capturing flow proneness at work, followed by flow proneness in leisure activities, and lastly flow proneness during maintenance activities. Although the present research indicated significant mean differences of all autotelic personality traits among the levels of low, moderate, and high flow proneness, not every autotelic personality trait was predicting flow proneness. Seeking challenges, transcendence, cooperation, and being in the present traits of autotelic personality did not predict flow proneness at work, during maintenance, and during leisure activities. This finding was evaluated with regard to above mentioned limitations of Swedish Flow Proneness Inventory for reflecting flow proneness in various other contexts (i.e., team sports, performance arts, fine-arts, and group-work).

#### **4.11.2.5. Overall Evaluation of Autotelic Personality and Personal Strength Variables**

Predictive associations of autotelic personality traits with personal strength variables that are yielded by earlier regression analyses were used as a baseline to form a comprehensive model conceptualization to test via structural equation modelling. It was revealed that the parsimonious comprehensive model of the relation between autotelic personality traits and personal strength variables yielded a good fit with the data as indicated by fit indices. Therefore, structural equation modelling confirmed the nature of the associations, which are obtained from previous analyses. Persistence & joy, and integration & differentiation traits of autotelic personality revealed positive predictive associations with subjective happiness; concentration, persistence & joy, integration & differentiation, and being in the present traits of autotelic personality reveal positive predictive associations with presence of meaning; persistence & joy, curiosity, transcendence, and seeking challenges traits of autotelic personality revealed positive predictive associations with curiosity. The results of the structural equation modeling confirmed the previously yielded univariate single regression equations.

Another comprehensive model of the predictive associations between autotelic personality traits and flow proneness at work, during maintenance, and

during leisure activities was examined via structural equation modelling. The model conceptualization was based on the significant relations depicted by earlier regression analyses and theoretical assumptions, and it was revealed that the parsimonious comprehensive model yielded a good fit with the data as indicated by fit indices. Therefore, structural equation modelling confirmed the nature of the associations which are obtained from previous analyses. Flow proneness at work was predicted by all nine autotelic personality traits, namely concentration, persistence & joy, curiosity, transcendence, integration & differentiation, skill–challenge balance, cooperation, being in the present, and seeking challenges; flow proneness during maintenance was predicted by concentration, persistence & joy, curiosity, integration & differentiation, skill–challenge balance, and being in the present; lastly flow proneness during leisure activities were predicted by concentration, persistence & joy, curiosity, integration differentiation, and skill–challenge balance traits of autotelic personality.

Lastly, a mediation analysis showed that the predictive effect of autotelic personality general quotient on the general personal strength variable (calculated by the summation of presence of meaning, curiosity, and subjective happiness) was fully mediated by general flow proneness. This finding supports the theoretical assumption that autotelic personality constellation is primarily a predictor of flow proneness, and its' effect on personal strength variables is delivered through flow proneness. Even though, flow proneness measurement by SFPQ is limited to measuring flow in limited contexts, a full mediatory effect was observed.

### **4.11.3. Autotelic Personality and Indicators of Psychopathology**

#### **4.11.3.1. Depression**

Earlier research has shown that depression has a negative effect on work engagement (Hakanen & Schaufeli, 2012), engagement with leisure time activities (Blanco & Barnett, 2014), and social engagement (Glass, Mendes de Leon, Bassuk, & Berkman, 2006). Therefore, autotelic personality domains as traits predicting flow—an active engagement with life- was expected to reveal negative associations with the presence of depressive symptoms, as consistent with the literature.

The findings of the present study revealed that non-autotelic participants significantly differed from moderately autotelic and highly autotelic participants in

terms of depressive symptom levels. However, moderately autotelic and high autotelic participants yielded similar depressive symptom levels. Non-autotelic participants reported significantly higher depressive symptoms compared to moderately and highly autotelic individuals.

When depression levels were compared among the levels of domains of autotelic personality, it was observed that each of the difference among three levels of concentration and integration & differentiation domains was significantly different in terms of depression scores. Low concentration group yielded highest level of depression; moderate concentration group yielded moderate levels of depression; and high concentration group yielded lowest levels of depression. Earlier research indicated that ability to concentrate is negatively affected by depressed mood (Rock, Roiser, Riedel, & Blackwell, 2014). Similarly, in terms of integration & differentiation domain of autotelic personality, low integration & differentiation group yielded significantly higher depression scores, moderate integration & differentiation group yielded moderate levels of depressive symptoms, and high integration & differentiation group yielded lowest levels of depressive symptoms. Earlier studies indicated that higher self-complexity, as reflected by the integration & differentiation domain of autotelic personality in the present research, is negatively associated with neuroticism (Ullen et al., 2012), depressive mood (Linville, 1987; Woolfolk, Novalany, Gara, Allen, & Polino, 1995; Cohen, Spiegler, Young, Hankin, & Abela, 2014), and even mood swings (Linville, 1985; Campbell, Chew, & Scratchley, 1991). Thus it can be suggested that higher self-complexity functions as a cognitive buffer against stress-related disorders and depression (Linville, 1987).

Among the levels of persistence & joy, skill–challenge balance, cooperation, and being in the present domains of autotelic personality there were significant differences in terms of depression scores; significant differences were observed between low and moderate, and low and high levels of above mentioned autotelic personality domains. Earlier research indicated that cooperation (Surbey, 2011), being in the present (Nolen-Hoeksema, 1991), and persistence & joy (APA, 2013) are negatively affected by the presence of depressive symptoms. In terms of transcendence, low transcendence and moderate transcendence differed in terms of depressive symptom levels. Previous research has also shown that depression is negatively related to transcendence (Ellerman & Reed, 2001). Lastly, in terms of low, moderate, and high levels of curiosity, and seeking challenges domains; the only

significant group difference was observed between low and high levels in terms of depression scores. Consistent with this finding, depression is characterized by a general disinterest towards the environment (APA, 2013). The findings of the present study indicated that the presence or absence of depressive symptoms is significantly associated with autotelic personality.

#### **4.11.3.2. Trait Anxiety**

Flow theory highlights the role of state anxiety as an affective component of non-flow states that arises when the challenges exceed the personal skills (Csikszentmihalyi, 1975). A negative appraisal of skills might be a property of individuals with high trait anxiety (Csikszentmihalyi, 1975). Similarly, anxiety was considered as one of the significant personal variables underlying non-flow states (Kimiecik & Stein, 1992). Earlier studies on the relation between flow and trait anxiety demonstrated a negative association (Jackson, Kimiecik, Ford, & Marsh, 1998; Koehn, 2013; Fullagar, Knight, & Sovern, 2013). Therefore, autotelic personality was expected to be negatively associated with trait anxiety.

The findings of the present study were consistent with the earlier literature. As expected, non-autotelic participants significantly differed from moderately autotelic and highly autotelic participants in terms of their significantly higher trait anxiety levels. Besides, moderately autotelic and high autotelic participants yielded similar trait anxiety levels. The findings of the present study demonstrated that high trait anxiety is an example of non-autotelic personality, whereas low trait anxiety is associated with moderate and high levels of autotelic personality.

When trait anxiety scores were compared in terms of domains of autotelic personality, it was observed that each of the comparisons among three levels of concentration, persistence & joy, and integration & differentiation was significantly different in terms of trait anxiety. Low concentration group yielded significantly higher trait anxiety; moderate concentration group yielded moderate levels of trait anxiety; and high concentration group yielded lowest levels of trait anxiety. A negative relation between concentration and trait anxiety had been known for a long time (Pacheco-Unguetti, Acosta, Callejas, & Lupianez, 2010). Similarly, in terms of persistence & joy, low persistence & joy group yielded significantly higher trait anxiety; moderate persistence & joy group yielded moderate levels of trait anxiety; and whereas high persistence & joy group yielded lowest levels of trait anxiety.

Heinstrom (2010) highlighted that a pessimistic mindset due to high negative affectivity including trait anxiety might lead to impairment for persistence, and eliciting joy from the present activities. Lastly, in terms of integration & differentiation, low integration & differentiation group yielded significantly higher trait anxiety; moderate integration & differentiation group yielded moderate levels of trait anxiety; and high integration & differentiation group yielded lowest levels of trait anxiety. In line with the present findings, higher self-complexity reflected by higher scores in integration & differentiation domain of autotelic personality had negative associations with neuroticism (Ullen et al., 2012) and trait anxiety (Linville, 1985).

In terms of skill–challenge balance, the present study revealed that low trait anxiety is associated with moderate and high levels of skill challenge balance, whereas high trait anxiety was associated with low skill–challenge balance. This is consistent with earlier discussions in the literature describing anxiety (both state and trait) as opposing affectivity to autotelic personality (Csikszentmihalyi, 1990). Similarly, trait anxiety yielded significantly higher scores in low level of being in the present than moderate and high being in the present levels of autotelic personality. This finding demonstrated the effect of high trait anxiety on being involved with anticipated dangers rather than focusing on the present (Getzfeld, 2006). Among the low, moderate, and high levels of curiosity and seeking challenges domains, the only significant group difference was observed between low and high levels in terms of trait anxiety scores. Earlier research indicated that high trait anxiety is negatively associated both with curiosity and seeking challenges, since high trait anxiety leads to low tolerance for ambiguity and makes it difficult to tolerate unsolvable problems (Schaninger & Sciglimpaglia, 1981). Lastly, no difference of trait anxiety was observed among low, moderate and high levels of transcendence.

#### **4.11.3.3. Worry**

Worry was evaluated as an affective component of non-flow states that arises when medium difficulty tasks are handled with low skills (Csikszentmihalyi, 1975). Besides, in the presence of such mismatch of skills with challenges, attentional resources might be focused on self, which in turn makes the absorption with the task less likely (Csikszentmihalyi, 1975). Increased awareness of self and possible threats

due to worrying might rupture the inclination to flow. Therefore, it can be suggested that autotelic personality is negatively associated with worry.

Consistent with the flow theory, the present research indicated that non-autotelic participants got significantly higher worry scores than moderately autotelic and highly autotelic participants. Therefore, presence of worry appears as a conflicting dimension for autotelic personality. This assumption was also supported by the finding that moderately autotelic and high autotelic participants yielded similar worry levels. Non-autotelic participants reported significantly higher worry compared to moderately and highly autotelic individuals.

When worry scores were compared in terms of domains of autotelic personality, it was observed that each of the difference among three levels of concentration and cooperation was statistically significant in terms of worry. Low concentration group yielded significantly higher worry, moderate concentration group yielded moderate levels of worry, and high concentration group yielded lowest levels of worry. Consistent with the present study's finding, Grossbard, Smith, Smoll, and Cumming (2009) demonstrated that worry had a particular effect on the decrement of concentration within performance contexts. Similarly, in terms of cooperation, low cooperation group yielded significantly higher worry, moderate cooperation group yielded moderate levels of worry and high cooperation group yielded lowest levels of worry. Since, worry refers to the mental attempts to avoid anticipated potential threats (Borkovec, 2002), excessive worrying might lead to a highly defensive state. Thus, cooperation might not be possible. Likewise, excessive over involvement with anticipated threats might deplete attentional resources. Therefore, the negative association between worry and concentration might be explained by means of depletion of attentional resources.

In accordance with the flow theory postulations (Csikszentmihalyi, 1975), worry had demonstrated effect on skill–challenge balance levels; low skill–challenge balance group indicated significantly higher worry than the moderate and high skill–challenge balance groups. Likewise, seeking challenges, integration & differentiation, and being in the present domains of autotelic personality yielded significantly high worry scores in low level than moderate and high levels. These findings also validate the earlier notion that worry is a non-flow affective state (Csikszentmihalyi, 1975). In terms of curiosity, a significant difference of worry was only observed between low curiosity and high curiosity levels; moderate level of

curiosity was not differentiated from low and high curiosity levels in terms of worry scores. Since curiosity is partially characterized by an openness towards novel situations, the decreased tolerance of uncertainty in high worry conditions (Dugas, Schwartz, & Francis, 2004) might be accounted for the significant mean differences of curiosity between low and high levels of worry.

Lastly, no significant difference of worry was observed among low, moderate and high levels of transcendence, and persistence & joy domains of autotelic personality. There is no earlier research to depict a relation between worry and persistence & joy. However, worry is known for being perseverative in the forms of rumination itself (Brosschot, Gerin, & Thayer, 2006). Therefore, domain specific information processing pathways (Cosmides & Toby, 2013) might be similar in terms of persistence & joy and perseverative worry.

#### **4.11.3.4. Obsessive Compulsive Symptoms**

Being characterized by the presence of unwelcomed, uncontrollable, and persistent thoughts, images, or emotions into consciousness; significant distress contingent to the presence of such material; and repetitive, excessive, and meaningless behaviors targeting the elimination of unpleasant feelings (Haycock, 2003), obsessive compulsive symptomatology might exploit psychological resources that are required for an optimal engagement with life. Therefore, the presence of autotelic personality traits were thought to be contradictory to the presence of obsessive compulsive symptoms. The present study revealed that non-autotelic participants, moderately autotelic participants, and highly autotelic participants significantly differed from each other in terms of obsessive compulsive symptom levels. Non-autotelic participants reported significantly higher obsessive compulsive symptoms compared to moderately and highly autotelic individuals. Furthermore, moderately autotelic participants reported significantly higher obsessive compulsive symptoms compared to highly autotelic participants. Therefore, obsessive compulsive symptom severity was found negatively associated with autotelic personality.

When obsessive compulsive symptoms scores were compared in terms of domains of autotelic personality, it was observed that each of the differences among three levels of integration & differentiation domain of autotelic personality was significantly different in terms of obsessive compulsive symptoms. Low integration



& differentiation group yielded significantly highest obsessive compulsive symptoms; moderate integration & differentiation group yielded moderate levels of obsessive compulsive symptoms; and high integration & differentiation group yielded lowest levels of obsessive compulsive symptoms. Among the domains of autotelic personality, integration & differentiation as an indicator of self – complexity was assumed to be having an important degree of association with general emotional stability, as earlier research indicates (Ullen et al., 2012). However, no previous research demonstrated the association between obsessive compulsive symptomatology and self-complexity. The present study signals a negative association of high self-complexity and obsessive compulsive symptom severity.

In terms of skill–challenge balance domain of autotelic personality, the only significant mean difference of obsessive compulsive symptoms was observed between low skill–challenge balance group and moderate skill–challenge balance groups. Unexpectedly, high skill–challenge balance group did not differ from low and moderate skill–challenge balance groups in terms of obsessive compulsive symptoms. Therefore, the present findings suggested a curvilinear relationship between skill–challenge balance and obsessive compulsive symptom severity. As earlier research in obsessive compulsive disorder (Rachman, 1997; Salkoviskis, 1996) indicated, dysfunctional beliefs and appraisals of excessive responsibility (believing that one has a unusual supremacy or duty to prevent negative outcomes), and need to control thoughts (believing that one can entirely control thoughts, and doing so is essential) might lead to a subjective anticipation of personal skills that can/should capacitate to control every situation. The likeness of skill–challenge balance scores of low and high obsessive compulsive symptom groups might be due to dysfunctional and distorted beliefs of control and responsibility.

In terms of cooperation domain of autotelic personality, obsessive compulsive symptoms were significantly different between low cooperation and moderate cooperation levels, and low cooperation and high cooperation levels. Low cooperation levels were associated with higher obsessive compulsive symptoms than moderate and high cooperation levels. However, no significant difference of obsessive compulsive symptoms was observed between moderate and high levels of cooperation domain of autotelic personality. No earlier research had examined the association between cooperation and obsessive compulsive symptom severity.

However, McWilliams (1994) described obsessive compulsive persons as highly defensive and particularly avoidant in their relationship with therapist, despite the compliance they show on surface. Therefore, clinical knowledge on obsessive compulsive clients might bring a plausible explanation to the negative association between cooperation and obsessive compulsive symptomatology.

In terms of challenge seeking domain of autotelic personality, high challenge seeking group reported significantly lower obsessive compulsive symptoms than moderate and low challenge seeking groups; however, no significant difference was observed between moderate and low challenge seeking groups with regard to obsessive compulsive symptoms. Interference of unwanted cognitive material (Taylor et al., 2009), instantaneous automatic behavioral activation to reduce distress (Salkovskis, 1996), predisposed appraisal of responsibility (Salkovskis, 1996), and dysfunctional beliefs regarding to responsibilities, thoughts, threats, high perfectionism, and low tolerance for uncertainty might pose a conflict with attentive, persistent, concentrated, independent, highly cooperative, and challenge seeking autotelic constellation of personality traits (Nakamura & Csikszentmihalyi, 2002).

Lastly, no significant difference of obsessive compulsive symptom severity was observed among the levels of transcendence, curiosity, and being in the present domains of autotelic personality. Low, moderate, and high levels of autotelic personality curiosity domain yielded significant differences on all other psychopathology variables (i.e., depression, worry, trait anxiety), but not with obsessive compulsive symptoms. This particular difference of obsessive compulsive symptomatology might be accounted for by hypersensitivity of obsessive compulsive persons to external stimuli (McWilliams, 1994). In terms of transcendence and being in the present domains of autotelic personality, the results of the present study are conflicting with the notion that intrusions are attributed a central function in obsessive compulsive symptomatology (Hanstede, Gidron, & Nyklicek, 2015). Thus, these findings might be due to low insight associated with obsessive compulsive symptomatology (McWilliams, 1994).

#### **4.11.4. Autotelic Personality and Personal Growth Initiative**

Both autotelic personality and personal growth initiative (PGI) concepts include the shared function of leading personal transformation & growth eventually. Personal growth initiative dimensions point out precedents of personal growth as

mechanisms (Robitschek, 1998); whereas autotelic personality (Csikszentmihalyi, 1990) refers to stable personality traits that lead to personal transformation and growth. The present research investigated the associations between personal growth initiative dimensions and autotelic personality traits. Readiness for change, planfulness, using resources, and intentional behavior were determined as the four fundamental aspects of personal growth initiative (Robitschek, 1998). The main difference between PGI and autotelic personality is the implication of strategic use of skills, rather than achieving personal growth as an output of intrinsic motivation or drives. The findings of the present study revealed that non-autotelic, moderately autotelic, and high autotelic participants significantly differ in terms of their general personal growth initiative. Non-autotelic participants scored significantly less than moderately autotelic and highly autotelic participants in terms of general personal growth initiative; and moderately autotelic participants scored significantly less than highly autotelic participants in terms of general personal growth initiative. The predictive effect of autotelic personality domains on personal growth initiative dimensions was also investigated in the present study. However, such associations were studied for the first time in the literature; therefore, no supporting evidence of the annotated relations are available in the literature.

#### **4.11.4.1. Readiness for Change**

Non-autotelic, moderately autotelic, and high autotelic participants significantly differed from each other in terms of their readiness for change. Non-autotelic participants were significantly less ready than moderately autotelic and highly autotelic participants; and moderately autotelic participants were significantly less ready for change than highly autotelic participants. Autotelic personality has been shown to be related to a preference towards seeking challenges, increased apprehension of skills, and higher curiosity in Japanese college students (Asakawa, 2004). Therefore, autotelic individuals are thought to be more ready for change, and more likely to seek challenge in an active fashion. In the same vein, the present study revealed that skill–challenge balance, persistence & joy, integration & differentiation, and curiosity domains of autotelic personality had predictive effect on readiness for change. Perceived balance between skills and challenges, enjoyment, curiosity, and higher complexity have been shown to be associated with higher optimism towards future and to predict growth (Asakawa, 2004). As discussed

earlier, autotelic personality leads to a fulfilling life, by means of high levels of engagement that eventually leads personal growth (Nakamura & Csikszentmihalyi, 2002).

#### **4.11.4.2. Planfulness**

Non-autotelic, moderately autotelic, and high autotelic participants significantly differed in terms of their planfulness. Non-autotelic participants were significantly less ready than moderately autotelic and highly autotelic participants; and moderately autotelic participants were significantly less ready for change than highly autotelic participants. Asakawa (2004) has shown that higher concentration, persistence and enjoyment, general happiness, and perceived control of the situation enable autotelic individuals to actively orient themselves towards future. Likewise, the planfulness dimension of personal growth initiative was predicted by persistence & joy, concentration, integration & differentiation, and skill–challenge balance domains of autotelic personality.

#### **4.11.4.3. Using Resources**

In terms of using resources domain of personal growth initiative, non-autotelic participants scored significantly lower than moderately autotelic and highly autotelic participants in terms of using resources for change; however, no significant difference was observed between moderately autotelic and highly autotelic participants in terms of using resources. Asakawa (2004) had demonstrated that high levels of perceived balance between challenges and skills appear as a central source for psychological well-being and quality of experience in Japanese college students. Furthermore, being more active was also found positively associated with autotelic personality. Likewise, the present study revealed that persistence & joy, cooperation, and integration & differentiation domains of autotelic personality had predictive effect on using resources domain of personal growth initiative.

#### **4.11.4.4. Intentional Behavior**

Non-autotelic, moderately autotelic, and high autotelic participants significantly differed in terms of their intentional behaviors. Non-autotelic participants scored significantly less than moderately autotelic, and highly autotelic participants in terms of their intentional behaviors; and moderately autotelic

participants scored significantly less than highly autotelic participants in terms of their intentional behaviors. Autotelic personality implies an active and purposeful way of striving in life (Csizksentmihalyi, 1990). Therefore, the intentional behavior domain of personal growth initiative was found to be positively associated with autotelic personality in the present research. Besides, persistence & joy, integration & differentiation, curiosity, and cooperation domains of autotelic personality had predictive effect on intentional behaviors domain of personal growth initiative. Although there is no concurrent evidence for the relation between intentional behavior and autotelic personality, the present study provided preliminary outcomes on the relation between intentional behavior and autotelic personality.

#### **4.11.4.5. Overall Evaluation of Autotelic Personality and Personal Strength Variables**

A comprehensive model of the predictive associations between autotelic personality traits and personal growth initiative dimensions was examined via structural equation modeling. The model conceptualization was based on the significant relations depicted by earlier regression analyses. The analysis revealed that the parsimonious comprehensive model has a good fit with the data as indicated by fit indices. Therefore, structural equation modeling confirmed the nature of the associations that are obtained from previous analyses. Persistence & joy and integration & differentiation traits of autotelic personality revealed a positive predictive association with all dimensions of personal growth initiative; curiosity trait revealed a positive predictive association with readiness for change and intentional behaviors; skill–challenge balance trait revealed a positive predictive association with readiness, planfulness, and intentional behaviors; concentration trait revealed a positive predictive association with planfulness; and lastly, cooperation trait revealed a positive predictive association with using resources and intentional behaviors. The results of the structural equation modeling confirmed the previously yielded univariate single regression equations.

Lastly, a mediation analysis showed that the predictive effect of autotelic personality general quotient on personal growth initiative was fully mediated by general flow proneness. This finding supports the theoretical assumption that autotelic personality constellation is primarily a predictor of flow proneness, and that the effect of autotelic personality on personal growth initiative variables is delivered

through flow proneness. Even though, flow proneness measurement by SFPQ is limited to measuring flow in limited contexts, a full mediatory effect was observed for flow.

#### **4.11.5. Implications for Clinical Practice**

In this section of the discussion, the study findings will be evaluated in terms of their possible implications for contexts and situations where human development takes place, and for clinical practice as a medium of remediation. The suggestions presented in this section were based on two central notions. The first notion was that autotelic personality traits are relatively enduring, stable and persistent; they might hold inherent properties, and development of autotelic personality constellation might be disrupted by negative early life experiences; yet improvable to a certain degree throughout lifespan (Nakamura & Csikszentmihalyi, 2002). The second notion was derived from the results of the present study; autotelic personality is positively associated with subjective happiness, presence of life meaning, curiosity, flow proneness, and personal growth initiative; whereas it is negatively associated with depression, trait anxiety, worry, and obsessive compulsive symptomatology. Thus, the findings of the current study were used to suggest implications for child rearing practices, schooling context, and adult psychotherapy.

Initially, child rearing practices are thought to have a great influence on the formation of autotelic personality. A parenting style that supports and responds the innate curiosity of the child; provides a complex learning environment where the children will be simultaneously supported and presented challenges fitting to their skill levels; gives instant feedback and positive reinforcement regarding to their accomplishments and progress; provides a predictable and emotionally stable environment for securing self-complexity; encourages cooperation will facilitate and support the natural development of autotelic personality. However, the use of rigid control on child's behaviors, conditional positive regard, and punishment; putting excessive emphasis on responsibility; low responsiveness, and low demandingness as parenting behaviors would pose a threat to the development of autotelic personality traits.

School environment holds a significant importance for the development of autotelic personality, since it provides systematic and gradual challenges that should be met. Therefore, teaching style and curriculum organization can be modified in a

way that becomes responsive and connected to autotelic personality concept; not only because doing so will foster the development of autotelic personality, but also efficient learning will take place. Montessori schools (Rathunde, 2001) is an example of educational institutions that utilize instruction styles and curriculum planning that prioritize the autotelic personality.

One major clinical implication of the present study on psychotherapy is made possible by the utilization of autotelic personality inventory. Autotelic personality inventory can be used as a normative clinical tool to identify personal strengths of the clients. Therefore, in addition to usual baseline measures regarding to specific pathologies, a baseline measure of personal strengths would enable therapists to build a treatment plan that also accommodates the improvement of personal strengths within the span of psychotherapy. In addition to Autotelic Personality Inventory, Meaning in Life Questionnaire, Subjective Happiness Scale, and Curiosity and Exploration Inventory–II can be used for clinical purposes to identify additional personal strengths of the clients. By doing so, therapeutic interventions would equally involve with the alleviation of psychological distress and fostering strengths. Besides, the revealed associations between autotelic personality traits and psychopathology within the scope of present research might contribute to a better identification of the clinical disorders beyond the presence of negative characteristics. In terms of therapeutic effectiveness, enhancement of particular personal strengths might buffer the impact of psychopathology, which should be tested in future studies. Therapists' perspectives for understanding their clients might be enriched, and new skills targeting the improvement of personal strengths might be developed.

Autotelic personality traits are mainly of predictive significance for propensity to flow experiences; experiences that are characterized by a complete engagement with the task at hand. The present study yielded negative associations of autotelic personality general quotient and sub-traits with depression, anxiety, worry, and obsessive compulsive symptom severity. Therefore, a principal finding of the present study is that, proneness to higher engagement is negatively associated with depression, anxiety, worry, and obsessive compulsive symptoms. Such an association was tested for the first time in the literature; and it might be speculated that enhancement of autotelic personality traits might buffer the psychological distress caused by depression, anxiety, worry, and obsessive compulsive symptomatology.

Autotelic personality traits had significant predictive effect on personal growth initiative domains. Therefore, the use of autotelic personality inventory as a clinical baseline measure would not only provide information on clients' strengths but also provide information on clients' tendency to change and benefit from therapy.

#### **4.11.6. Strengths and Limitations of the Present Study**

The current research is first in the literature investigating the associations of autotelic personality domains with sets of personal strength variables, psychopathology variables, and personal growth initiative variables. The broad scope of the study provided an opportunity to examine the associations of autotelic personality domains by estimating both direct and indirect relations. Besides, three comprehensive conceptual models were tested, and the predictive properties of autotelic personality inventory domains for flow proneness, personal strength variables, and personal growth initiative were confirmed. The findings of the present study serve as a broad preliminary inspection that provides space for further studies.

In addition to its' strengths, the study has several limitations. First, the study did not involve experience sampling data that represents a real time measurement of flow state. Instead, flow proneness was measured as a trait by self-report, autotelic personality domains are investigated in terms of their associations with flow proneness. Availability of real time data regarding to flow state would make it possible to investigate the associations with the nature of the flow state and autotelic personality traits. Therefore, an investigation of associations between autotelic personality traits and real time flow state is strongly recommended. Another limitation of the study was that the study sample was selected from a particular country. Therefore, replications of the present study in different cultures would provide additional information about the nature of associations among the study variables. It is widely known that culture has a unique and significant impact on personality development (Triandis & Suh, 2002). Likewise, most of the depicted associations among study variables are novel. Therefore, the findings of the present study are relatively incomparable due to lack of earlier evidence.



#### **4.11.7. Future Directions for Research**

A further study utilizing the experience sampling method for capturing real time flow state's properties would provide valuable information on the associations between autotelic personality traits and flow state. Additionally, replication of the present study in different cultures would provide supplementary knowledge on the nature of associations between study variables in various cultural contexts.

Evidence based interventions that target increasing flow is lacking in the literature. An intervention that aims to increase flow frequency and intensity via specifically designed exercises might enhance psychological well-being and alleviate psychological symptomatology. The acquired knowledge in the present research can be used to further design and test empirically validated flow interventions. Complimentary studies in clinical samples would be beneficial in terms of testing further causal associations and building empirically validated flow interventions for clinical population.

In addition to building new interventions based on flow theory, available clinical interventions may benefit from the introduction of autotelic personality traits to the research field. Clinical psychology might benefit from the inclusion of autotelic personality traits as human strengths to observe the significance of particular human strengths as a buffer for psychological distress or as a resilience factor. Similarly, further exploration of the associations between autotelic personality traits and psychological stress might lead to development of flow based prevention programs designed for non-clinical populations.

## CHAPTER V

### CONCLUSIONS

Clinical psychology is one of the earliest and most extensively studied fields of psychology that is involved with the scientific study and clinical knowledge for understanding psychological suffering and abnormal behavior through a focus on negative aspects of life and human experience (Plante, 2005). The widespread focus on psychological distress and negative aspects had been precipitated by a number of economic, social, and political reasons as described in the first chapter. Amongst all areas of psychology, clinical psychology had become distinctive and prominent due to assortment of applications that makes immediate use of scientific knowledge for the benefit of humans. Comprehensive phenomenological knowledge on psychological distress, systematic classification of psychological disorders, and empirical validation of interventions had contributed to the understanding of psychopathology, and endowed clinical psychologists with unique skills to apply theory into practice. Yet, clinical psychology's contemporary perspective on human experience is unbalanced in favor of negative experience of humans; overlooking the positive ones. On the other hand, positive psychology focuses on the positive states and traits, optimal functioning, well-being, and contexts that enhance positivity (Duckworth, Steen, & Seligman, 2005). Absence of psychological distress does not necessarily lead to a fulfilling and happy existence; the presence of positive assets such as perseverance, optimism, high levels of engagement, positive affect, and life meaning lead to a life worth living (Seligman & Csikszentmihalyi, 2000). However, the study of positive psychology field is hardly sufficient for the transformation of scientific knowledge to evidence-based positive interventions to foster human well-being (Wood & Tarrier, 2010). Therefore, a combined study field of "positive clinical psychology" might be reciprocally beneficial for clinical psychology and positive psychology, which are both involved in human well-being.

In this respect, the present doctoral dissertation aimed to contribute to the study of positive clinical psychology by putting equal emphasis on positive and negative aspects of human experience, psychological functioning, and human

development. The initial and foremost contribution of the dissertation to the field is the introduction of Autotelic Personality Inventory (API), as a measure of positive traits that predicts flow propensity and engagement with life. Being based on the earlier phenomenological explanations and research findings, API captures a general ability to concentrate, to persist and elicit joy, curiosity, transcendence, integration & differentiation, an ability to find a balance between available skills with challenges, tendency for cooperation, a general inclination to live in the present, and seeking challenges. In addition to the revealed significant collective role of autotelic personality traits for predicting flow propensity, the present study revealed that the combination of various autotelic personality traits are of significant importance for predicting presence of life meaning, subjective happiness as an indicator of psychological well-being, and trait-like curiosity. Besides, autotelic personality traits were identified as strong predictors for personal growth initiative. Readiness for change, planfulness, using resources for change, and intentional behaviors as dimensions of personal growth initiative were strongly predicted by autotelic personality traits. Another important finding about autotelic personality lies in its associations with depression, trait anxiety, worry, and obsessive compulsive symptom severity. The findings of the present dissertation indicated that autotelic personality traits were negatively associated with increased psychological distress indicated by the measures of depressive symptoms, trait anxiety, worry, and obsessive compulsive symptomatology.

Study findings regarding autotelic personality and its associations with personal strengths, personal growth initiative, and psychological symptoms might have several contributions to the field of positive clinical psychology. Initially, the emergence of autotelic personality inventory would provide a neat operationalization of positive traits; the inclusion of the assessment of such traits in clinical settings might have several potential benefits that were not directly tested within the scope of present doctoral dissertation. Future studies might investigate those potential benefits. Initially, autotelic personality traits might have a buffer role on the relation between life adversities and psychological distress. For instance, a higher inclination for cooperation and higher integration & differentiation might buffer depressive symptomatology in the aftermath of life adversities. Secondly, the inclusion of autotelic personality traits in psychopathology research might contribute to enriched explanations on the phenomenology of psychological disorders. Lastly, positive

clinical interventions based on the autotelic personality traits might be empirically validated to enhance flow and to alleviate psychological distress.

Another important contribution of the present dissertation is particularly in favor of psychology research in Turkey. Meaning in Life Questionnaire (MLQ) as a measure of life meaning, Subjective Happiness Scale (SHS) as a measure of subjective well-being, Curiosity and Exploration Inventory-II (CEI-II) as a measure of trait-like curiosity, and Swedish Flow Proneness Questionnaire (SFPQ) as a measure of flow proneness were adapted to Turkish culture. The adaptation of four critical instruments of positive psychology would hopefully facilitate new research by raising awareness and providing ease of access to positive psychology instruments. Reciprocally, international positive psychology literature would benefit from the utilization of positive psychology instruments in Turkey by reaching data obtained from a culture transitioning from collectivism to individualism (Kağıtçıbaşı, 1987). Future studies by Turkish researchers should take culture into account for studying the means of meaning derivation in life and subjective happiness.

Including measurements of subjective happiness, meaning in life, flow proneness, and trait-like curiosity in clinical psychology research might have potential benefits. Initially, there is an anticipated need for developing new evidence-based interventions that are based on the subjective experience of the client with regard to presence of life meaning, subjective happiness, and general curiosity. Development of new positive interventions valuing subjective experiences of life meaning and happiness might increase the plausible outcomes of the therapy. Besides, studies focusing on therapists' skills for actively integrating humanistic and positive aspects to therapy should be implemented. In my personal experience as a clinical psychologist, clients are fundamentally motivated by a desire for change and to feel better; not by the desire to be corrected or to be exposed to their weaknesses or deficits.

Subjective happiness, presence of life meaning, flow proneness, and trait-like curiosity might be associated with resiliency to psychological distress. Further studies might test the associations of these positive qualities with resilience. Besides, studying the associations of subjective happiness, presence of life meaning, flow proneness, and trait-like curiosity with psychological distress further might contribute to the better conceptualization of psychological disorders, to understand etiology, and to provide contributions to the disease models of psychology.

Long term outcomes of psychodynamic therapy and cognitive therapy were tested by various researchers (i.e., Leichsenring et al., 2014) and no significant differences in terms of remission and/or relapse frequencies were observed between the two approaches. Despite the fact that psychodynamic therapy and cognitive therapy have epic dissimilarities in their phenomenology of human mind and behavior, they are oriented in the same disease based approach. Thus, the increased emphasis on human strengths and positive traits in clinical interventions might result in better long term outcomes.

In an attempt to contribute to the field of positive clinical psychology, the findings offered by the present doctoral dissertation are of elementary nature. Further studies should be implemented to discover the nature of associations between autotelic personality, subjective happiness, meaning in life, trait-like curiosity, and psychopathology. Yet, neither study outcomes nor the suggestions based on the findings have no purpose of neglecting the negative human experience, but rather highlight the arbitrariness of studying positive and negative distinctively. The diversity of scientific knowledge resulting from the merging of two psychology fields would make clinical psychology more client centered, less disease focused, more sensitive, and receptive to positive aspects of human experience.

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## APPENDICE

### APPENDIX A: INFORMED CONSENT FORM

Değerli Katılımcı

Bu çalışma, ODTÜ Psikoloji Bölümü Doktora Programı Öğrencisi Orhan Ferhat Yazar tarafından Doç. Dr. Özlem Bozo danışmanlığında, mutlulukla ilgili psikolojik değişkenleri incelemek amacıyla yapılmaktadır. Kişilerin yaşadıkları olaylara ilişkin algı ve deneyimleri, tutumları değişiklik göstermektedir. Bu sebeple doldurduğunuz anketlerin doğru ya da yanlış cevapları yoktur. Bu çalışma kapsamında vereceğiniz tüm bilgiler tamamen gizli kalacaktır. Çalışmanın hiçbir bölümünde isminiz veya kimliğinizi ortaya çıkaran herhangi bir soru sorulmamaktadır. Çalışmanın objektif olması ve elde edilecek sonuçların güvenilirliği bakımından anket uygulamalarında içtenlikle duygu ve düşüncelerinizi yansıtmak üzere yanıtlar vermeniz önem kazanmaktadır. Çalışmamıza katılımınız tamamen gönüllülük temeline dayanmaktadır. Cevaplarınız tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir; elde edilecek bilgiler bilimsel yayımlarda kullanılacaktır.

Bu çalışmaya katılımınız anket soruları yanıtlamayı içermektedir. Anket sorularını yanıtlarken bir nedenden ötürü kendinizi rahatsız hissederseniz katılımınızı sonlandırmakta serbestsiniz. Böyle bir durumda, araştırma yürütücüsüne katılımınızı sonlandırmak istediğinizi söylemeniz yeterli olacaktır. Çalışma sonunda, bu çalışmayla ilgili sorularınız cevaplanacaktır. Değerli katılımınız için çok teşekkürler.

Çalışma hakkında daha fazla bilgi almak için ODTÜ Psikoloji Bölümü Doktora öğrencisi Orhan Ferhat Yazar (E-posta: [yarar@metu.edu.tr](mailto:yarar@metu.edu.tr)) ile iletişim kurabilirsiniz.

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

İsim Soyisim

Tarih

İmza

Alınan Ders

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## APPENDIX B: DEMOGRAPHIC INFORMATION FORM

Yaşınız : \_\_\_\_\_

Cinsiyetiniz

- Erkek
- Kadın

Medeni Haliniz

- Bekar
- Evli
- 6 aydan kısa süreli ilişki
- 6 aydan uzun süreli ilişki

Eğitim Durumunuz

- İlkokul Mezunu
- Ortaokul Mezunu
- Lise Mezunu
- Üniversite Mezunu
- Yüksek lisans öğrencisi veya mezunu
- Doktora öğrencisi veya mezunu

Annenizin Eğitim Durumu

- İlkokul Mezunu
- Ortaokul Mezunu
- Lise Mezunu
- Üniversite Mezunu
- Yüksek lisans öğrencisi veya mezunu
- Doktora öğrencisi veya mezunu

Babanızın Eğitim Durumu

- İlkokul Mezunu
- Ortaokul Mezunu
- Lise Mezunu
- Üniversite Mezunu
- Yüksek lisans öğrencisi veya mezunu
- Doktora öğrencisi veya mezunu

Mesleğiniz nedir?

Hiç psikolojik/psikiyatrik yardım aldınız mı ya da halen alıyor musunuz?

- Evet
- Hayır

Eğer aldıysanız, şikâyetiniz veya tanınız neydi? Eğer şikâyet ya da tanınız yok ise boş bırakabilirsiniz. \_\_\_\_\_

## APPENDIX C: AUTOTELIC PERSONALITY INVENTORY

Aşağıdaki ifadeleri genel olarak nasıl hissettiğinizi ve davrandığınızı en doğru biçimde yansıtacak şekilde değerlendiriniz. Ne yapmanız gerektiğini, yapmayı arzuladığınızı, ya da artık yapmadığınız şeyleri düşünerek değerlendirmeyiniz.

Çok az ya da hiç 1      Biraz 2      Orta Derecede 3      Sıklıkla 4      Çok Fazla 5

1. Dikkatim kolayca dağılır.
2. Bir iş üzerinde çalışırken kafamdan bir sürü ilgisiz düşünce geçer.
3. Bir işi yaparken, bir süre sonra kendimi başka bir şey yaparken bulurum.
4. Bir iş üzerinde çalışırken kendimi sık sık hayale dalmış bulurum.
5. Bir işe kolaylıkla odaklanırım.
6. Yaptığım iş bitinceye kadar sürekli bahanelerle ara veririm.
7. Gün içinde kendim için koyduğum hedefe ulaşana kadar dikkatim dağılmaz.
8. Çalışmak beni mutlu eder.
9. Mücadeleciyimdir
10. Kolay pes etmem.
11. Çalışırken kendimi enerjik hissedirim.
12. Kendimi yapabileceğim en iyisini yapmak için zorlarım.
13. Bir işi bitirene kadar peşini bırakmam.
14. Yaptığım işlerden keyif alırım.
15. Daha önce hiç yapmadığım şeyleri denemeyi severim.
16. Keşfetmeyi severim.
17. Yeni deneyimlere açık biriyimdir.
18. Maceracı birisiyimdir.
19. Bilinmezlikler bende heyecan uyandırır.
20. Kalıpların dışında fikirler üretmekten hoşlanırım.
21. Sürekli yeni şeyler öğrenmek isterim.
22. Zihinsel olarak yoğunlaştığımda zaman ve mekan algısının ortadan kalktığını hissettiğim olur.
23. Yaptığım işe o kadar yoğunlaşıyorum ki, nerede olduğumu unuttuğum olur.
24. Yaptığım işe o kadar yoğunlaşıyorum ki fiziksel ihtiyaçlarımı yemek yeme, tuvalete gitme, uyuma unuttuğum olur.
25. Bir işe yeterince yoğunlaştığımda etrafta olan biteni fark etmem.
26. Zaman zaman yaptığım işe bana coşku verecek kadar gömülürüm.
27. İnsanlarla geçinmekte zorlanıyorum.
28. Etrafımdaki insanlarla bağ kurmakta zorlanıyorum.
29. Kendimi dışlanmış hissediyorum.
30. Diğer insanlarla birlikte çalışırken onlara uyum sağlamakta zorlanırım.

31. Becerilerimin ve yeteneklerimin düzeyiyle ilgili genellikle fikir sahibiyimdir.
32. Bir işe başlarken, o iş için gerekli beceriye sahip olup olmadığımı öngörebilirim.
33. Bir işe başlarken, başarıp başaramayacağımı kestirebilirim.
34. Genellikle, üstesinden gelebileceğim işlere yeltenirim.
35. Yardım alıp vermeye açığım.
36. Gerekli durumlarda işbirliği kurmaktan kaçınmam.
37. Bir işi yaparken başkalarından yardım istemekte zorlanırım.
38. Bana benzemeyen insanlarla işbirliği kurabilirim.
39. Oyun oynarken kazanmaktan çok keyif almaya bakarım.
40. Vardığım nokta kadar, yürüdüğüm yol da önemlidir.
41. Bana kendimi mutlu ve huzurlu hissettiren farkındalık anları yaşadığım olmuştur.
42. Bir iş üzerinde çalışırken aldığım keyif, o işi başarıyla sonuçlandırmak kadar önemlidir.
43. Bir işi yaparken zorlanmaktan hoşlanmam.
44. Kafa yormayı gerektirecek işleri yapmaktan hoşlanırım.
45. Beni zorlayacak işleri üzerime almayı severim.

## APPENDIX D: SUBJECTIVE HAPPINESS SCALE

Aşağıdaki ifade ve / veya soruların her biri için, sizi en iyi şekilde anlattığını düşündüğünüz ifadeye karşılık gelen rakamı ölçekte daire içine alınız.

1. Genel olarak, kendimi:

1	2	3	4	5	6	7
çok mutlu bir insan olarak görmem						çok mutlu bir insan olarak görürüm

2. Çoğu arkadaşşıma göre ben:

1	2	3	4	5	6	7
daha az mutluyum						daha çok mutluyum

3. Bazı insanlar genellikle çok mutludur. Bu insanlar hayatlarında olup bitenden bağımsız olarak, genellikle her durumu en iyi şekilde değerlendirerek, hayattan zevk alırlar. Bu niteleme sizi ne ölçüde tanımlıyor?

1	2	3	4	5	6	7
hiç						oldukça fazla

4. Bazı insanlar genellikle çok mutlu değildir. Depresyonda olmasalar bile, hiçbir zaman yeterince mutlu görünmezler. Bu niteleme sizi ne ölçüde tanımlıyor?

1	2	3	4	5	6	7
hiç						oldukça fazla

Not: 4. madde ters kodlanır.

## APPENDIX E: MEANING IN LIFE QUESTIONNAIRE

Lütfen hayatınızı ve varoluşunuzu neyin önemli ve kayda değer hale getirdiğini düşünmek için bir dakikanızı ayırıp, olabildiğince dürüst ve kesin bir şekilde aşağıdaki ifadelere yanıt verin. Bu ifadeleri yanıtlarken, doğru veya yanlış cevapların olmadığını ve cevaplarının kişiden kişiye değişebileceğini unutmayınız. İfadeleri aşağıdaki ölçeğe göre yanıtlayınız.

Kesinlikle Yanlış	Çoğunlukla Yanlış	Kısmen Yanlış	Doğru veya Yanlış Diyemem	Kısmen Doğru	Çoğunlukla Doğru	Kesinlikle Doğru
1	2	3	4	5	6	7

- \_\_\_\_\_ 1. Hayatımın anlamını biliyorum.
- \_\_\_\_\_ 2. Hayatımı anlamlı hissettirecek bir şey arıyorum.
- \_\_\_\_\_ 3. Her zaman hayatımın amacını bulma arayışımdayım.
- \_\_\_\_\_ 4. Hayatımın net bir amacı vardır.
- \_\_\_\_\_ 5. Hayatımı neyin anlamı kıldığını bilirim.
- \_\_\_\_\_ 6. Hayatım için tatmin edici bir amaç keşfettim.
- \_\_\_\_\_ 7. Sürekli, hayatımı kayda değer hale getirecek bir şeyler arıyorum.
- \_\_\_\_\_ 8. Hayatım için bir amaç ya da misyon arıyorum.
- \_\_\_\_\_ 9. Hayatımın net bir amacı yok.
- \_\_\_\_\_ 10. Hayatımda bir anlam arıyorum.

## APPENDIX F: CURIOSITY AND EXPLORATION INVENTORY – II

Yönerge: Aşağıdaki ifadeleri genel olarak nasıl hissettiğinizi ve davrandığınızı en doğru biçimde yansıtacak şekilde değerlendiriniz. Ne yapmanız gerektiğini, yapmayı arzuladığınızı, ya da artık yapmadığınız şeyleri düşünerek değerlendirmeyiniz. Lütfen mümkün olduğunca dürüst olunuz.

Çok az ya da hiç 1      Biraz 2      Orta Derecede 3      Sıklıkla 4      Çok Fazla 5

1. Yeni bir durumla karşılaştığımda elimden geldiğince fazla bilgi edinmeye çalışırım.
2. Günlük hayatın belirsizliklerinden gerçekten keyif alan birisiyim.
3. Karmaşık veya zorlayıcı bir şey yaparken elimden gelenin en iyisini yaparım.
4. Zorlu durumları kendimi geliştirmek ve yeni şeyler öğrenmek için bir fırsat olarak görürüm.
5. Biraz korkutucu olan şeyleri yapmayı severim.
6. Heyecan verecek kadar belirsizliklerle dolu işleri tercih ederim.
7. Sık sık, beni zorlayacak ve bir birey olarak gelişmemi sağlayacak fırsatları kollarım.

## APPENDIX F: SWEDISH FLOW PRONENESS QUESTIONNAIRE

Bu anket günlük hayatta yaptığınız aktivitelere ilişkin deneyimlerinize ilgilidir. Size en uygun olduğunu düşündüğünüz seçeneği işaretleyiniz.

**2'den 8'e kadar olan maddeler sadece halen çalışan kişiler tarafından yanıtlanır.**

1 Şu anda herhangi bir işte çalışıyor musunuz? (Evet/Hayır)

(Eğer yanıtınız hayırsa, 9. maddeye geçebilirsiniz.)

**İşyerinizde çalışırken, aşağıdaki durumlarla hangi sıklıkta karşılaşsınız?**

2 ...sıkılırsınız.

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

3 ...yaptığınız işle ilgili beceri seviyenizin o işin zorluk seviyesiyle tamamen örtüştüğünü düşünürsünüz?

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

4 ...neyi başarmak istediğiniz ve bunu gerçekleştirmek için ne yapmanız gerektiği konusunda kafanız nettir.

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

5 ...işinizi ne kadar iyi ya da kötü yaptığının farkındasınızdır?

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

6 ...tamamıyla odaklanmış hissedersiniz?

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

7 ...tam bir kontrole sahip olduğunuzu hissedersiniz?

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

8 ...yaptığınız şeyin son derece keyifli olduğunu hissedersiniz.

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

**Ev işleri veya diğer günlük işleri (örn: yemek yapma, temizlik, alışveriş) yaparken, aşağıdaki durumlarla hangi sıklıkla karşılaşılırsınız?**

9 ...sıkılırsınız.

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

10 ...yaptığımız işle ilgili beceri seviyenizin o işin zorluk seviyesiyle tamamen örtüştüğünü düşünürsünüz?

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

11 ...neyi başarmak istediğiniz ve bunu gerçekleştirmek için ne yapmanız gerektiği konusunda kafanız nettir.

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

12 ...işinizi ne kadar iyi ya da kötü yaptığınızın farkındasınızdır?

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

13 ...tamamıyla odaklanmış hissedersiniz?

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

14 ...tam bir kontrole sahip olduğunuzu hissedersiniz?

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

15...yaptığımız şeyin son derece keyifli olduğunu hissedersiniz.

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

**Boş zamanlarınızı değerlendirmek için bir şey yaptığınızda, aşağıdaki durumlarla ne sıklıkta karşılaşılırsınız?**

16...sıkılırsınız.

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

17 ...yaptığımız işle ilgili beceri seviyenizin o işin zorluk seviyesiyle tamamen örtüştüğünü düşünürsünüz?

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün



18 ...neyi başarmak istediğiniz ve bunu gerçekleştirmek için ne yapmanız gerektiği konusunda kafanız nettir.

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

19 ...işinizi ne kadar iyi ya da kötü yaptığının farkındasınızdır?

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

20 ...tamamıyla odaklanmış hissedersiniz?

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

21 ...tam bir kontrole sahip olduğunuzu hissedersiniz?

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

22 ...yaptığınız şeyin son derece keyifli olduğunu hissedersiniz.

(1) Asla (2) Nadiren (3) Bazen (4) Genellikle (5) Her gün / neredeyse her gün

## APPENDIX G: BASIC PERSONALITY TRAITS INVENTORY

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

	Hiç uygun değil	Uygun değil	Kararsızım	Uygun	Çok uygun		Hiç uygun değil	Uygun değil	Kararsızım	Uygun	Çok uygun
1 Aceleci	1	2	3	4	5	24 Pasif	1	2	3	4	5
2 Yapmacık	1	2	3	4	5	25 Disiplinli	1	2	3	4	5
3 Duyarlı	1	2	3	4	5	26 Açgözlü	1	2	3	4	5
4 Konuşkan	1	2	3	4	5	27 Sinirli	1	2	3	4	5
5 Kendine güvenen	1	2	3	4	5	28 Canayakın	1	2	3	4	5
6 Soğuk	1	2	3	4	5	29 Kızgın	1	2	3	4	5
7 Utangaç	1	2	3	4	5	30 Sabit fikirli	1	2	3	4	5
8 Paylaşımçı	1	2	3	4	5	31 Görgüsüz	1	2	3	4	5
9 Geniş / rahat	1	2	3	4	5	32 Durgun	1	2	3	4	5
10 Cesur	1	2	3	4	5	33 Kaygılı	1	2	3	4	5
11 Agresif(Saldırgan)	1	2	3	4	5	34 Terbiyesiz	1	2	3	4	5
12 Çalışkan	1	2	3	4	5	35 Sabırsız	1	2	3	4	5
13 İçten pazarlıklı	1	2	3	4	5	36 Yaratıcı (Üretken)	1	2	3	4	5
14 Girişken	1	2	3	4	5	37 Kاپrisli	1	2	3	4	5
15 İyi niyetli	1	2	3	4	5	38 İçine kapanık	1	2	3	4	5
16 İçten	1	2	3	4	5	39 Çekingen	1	2	3	4	5
17 Kendinden emin	1	2	3	4	5	40 Alıngan	1	2	3	4	5
18 Huysuz	1	2	3	4	5	41 Hoşgörülü	1	2	3	4	5
19 Yardımsever	1	2	3	4	5	42 Düzenli	1	2	3	4	5
20 Kabiliyetli	1	2	3	4	5	43 Titiz	1	2	3	4	5
21 Üşengeç	1	2	3	4	5	44 Tedbiri	1	2	3	4	5
22 Sorumsuz	1	2	3	4	5	45 Azimli	1	2	3	4	5
23 Sevecen	1	2	3	4	5						

## APPENDIX H: POSITIVE / NEGATIVE AFFECT SCHEDULE

Bu ölçek farklı duyguları tanımlayan bir takım sözcükler içermektedir. Geçtiğimiz hafta nasıl hissettiğinizi düşünüp her maddeyi okuyun. Uygun cevabı her maddenin yanına ayrılan yere puanları daire içine alarak işaretleyin. Cevaplarınızı verirken aşağıdaki puanları kullanın.

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

1) ilgili	1.....	2.....	3.....	4.....	5.....
2) sıkıntılı	1.....	2.....	3.....	4.....	5.....
3) heyecanlı	1.....	2.....	3.....	4.....	5.....
4) mutsuz	1.....	2.....	3.....	4.....	5.....
5) güçlü	1.....	2.....	3.....	4.....	5.....
6) suçlu	1.....	2.....	3.....	4.....	5.....
7) ürkmüş	1.....	2.....	3.....	4.....	5.....
8) düşmanca	1.....	2.....	3.....	4.....	5.....
9) hevesli	1.....	2.....	3.....	4.....	5.....
10) gururlu	1.....	2.....	3.....	4.....	5.....
11) asabi	1.....	2.....	3.....	4.....	5.....
12) uyanık	1.....	2.....	3.....	4.....	5.....
13) utanmış	1.....	2.....	3.....	4.....	5.....
14) ilhamli (yaratıcı düşüncelerle dolu)	1.....	2.....	3.....	4.....	5.....
15) sinirli	1.....	2.....	3.....	4.....	5.....
16) kararlı	1.....	2.....	3.....	4.....	5.....
17) dikkatli	1.....	2.....	3.....	4.....	5.....
18) tedirgin	1.....	2.....	3.....	4.....	5.....
19) aktif	1.....	2.....	3.....	4.....	5.....
20) korkmuş	1.....	2.....	3.....	4.....	5.....

## APPENDIX I: STATE-TRAIT ANXIETY INVENTORY TRAIT FORM

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

	Hiç	Biraz	Çok	Tamamıyla
1. Genellikle keyfim yerindedir.	1	2	3	4
2. Genellikle çabuk yorulurum.	1	2	3	4
3. Genellikle kolay ağlarım.	1	2	3	4
4. Başkaları kadar mutlu olmak isterim.	1	2	3	4
5. Çabuk karar veremediğim için fırsatları kaçıırım.	1	2	3	4
6. Kendimi dinlenmiş hissederim.	1	2	3	4
7. Genellikle sakin, kendime hakim ve soğukkanlıyım.	1	2	3	4
8. Güçlüklerin yenemeyeceğim kadar biriktiğini hissederim.	1	2	3	4
9.Önemsiz şeyler hakkında endişelenirim.	1	2	3	4
10. Genellikle mutluyum.	1	2	3	4
11. Her şeyi ciddiye alır ve etkilenirim.	1	2	3	4
12. Genellikle kendime güvenim yoktur.	1	2	3	4
13. Genellikle kendimi emniyette hissederim.	1	2	3	4
14. Sıkıntılı ve güç durumlarla karşılaşmaktan kaçınırım.	1	2	3	4
15. Genellikle kendimi hüzünlü hissederim.	1	2	3	4
16. Genellikle hayatımdan memnunumum.	1	2	3	4
17. Olur olmaz düşünceler beni rahatsız eder.	1	2	3	4
18. Hayal kırıklıklarını öylesine ciddiye alırım ki hiç unutmam.	1	2	3	4
19. Akli başında ve kararlı bir insanım.	1	2	3	4
20. Son zamanlarda kafama takılan konular beni tedirgin eder.	1	2	3	4

## APPENDIX J: BECK DEPRESSION INVENTORY

Aşağıda, kişilerin ruh durumlarını ifade ederken kullandıkları bazı cümleler verilmiştir. Her madde, bir çeşit ruh durumunu anlatmaktadır. Her maddede o duygu durumunun derecesini belirleyen 4 seçenek vardır. Lütfen bu seçenekleri dikkatlice okuyunuz. Son bir hafta içindeki (şu an dâhil) kendi duygu durumunuzu göz önünde bulundurarak, size uygun olan ifadeyi bulunuz. Daha sonra, o madde numarasının karşısında, size uygun ifadeye karşılık gelen seçeneği bulup işaretleyiniz.

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

8. a) Kendimi diğer insanlardan daha kötü görmüyorum.  
b) Kendimi zayıflıklarım ve hatalarım için eleştiriyorum.  
c) Kendimi hatalarım için her zaman suçluyorum.  
d) Her kötü olayda kendimi suçluyorum.
9. a) Kendimi öldürmek gibi düşüncelerim yok.  
b) Bazen kendimi öldürmeyi düşünüyorum fakat bunu yapamam.  
c) Kendimi öldürebilmeyi isterdim.  
d) Bir fırsatını bulursam kendimi öldürürdüm.
10. a) Her zamankinden daha fazla ağladığımı sanmıyorum.  
b) Eskisine göre şu sıralarda daha fazla ağlıyorum.  
c) Şu sıralar her an ağlıyorum.  
d) Eskiden ağlayabilirdim, ama şu sıralarda istesem de ağlayamıyorum.
11. a) Her zamankinden daha sinirli değilim.  
b) Her zamankinden daha kolayca sinirleniyor ve kızıyorum.  
c) Çoğu zaman sinirliyim.  
d) Eskiden sinirlendiğim şeylere bile artık sinirlenemiyorum.
12. a) Diğer insanlara karşı ilgimi kaybetmedim.  
b) Eskisine göre insanlarla daha az ilgiliyim.  
c) Diğer insanlara karşı ilgimin çoğunu kaybettim.  
d) Diğer insanlara karşı hiç ilgim kalmadı.
13. a) Kararlarımı eskisi kadar kolay ve rahat verebiliyorum.  
b) Şu sıralarda kararlarımı vermeyi erteliyorum.  
c) Kararlarımı vermekte oldukça güçlük çekiyorum.  
d) Artık hiç karar veremiyorum.
14. a) Dış görünüşümün eskisinden daha kötü olduğunu sanmıyorum.  
b) Yaşlandığımı ve çekiciliğimi kaybettiğimi düşünüyorum ve üzülüyorum.  
c) Dış görünüşümde artık değiştirilmesi mümkün olmayan olumsuz değişiklikler olduğunu hissediyorum.  
d) Çok çirkin olduğumu düşünüyorum.
15. a) Eskisi kadar iyi çalışabiliyorum.  
b) Bir işe başlayabilmek için eskisine göre kendimi daha fazla zorlamam gerekiyor.  
c) Hangi iş olursa olsun, yapabilmek için kendimi çok zorluyorum.  
d) Hiçbir iş yapamıyorum.

16. a) Eskisi kadar rahat uyuyabiliyorum.  
b) Şu sıralar eskisi kadar rahat uyuyamıyorum.  
c) Eskisine göre 1 veya 2 saat erken uyanıyor ve tekrar uyumakta zorluk çekiyorum.  
d) Eskisine göre çok erken uyanıyor ve tekrar uyuyamıyorum.

17. a) Eskisine kıyasla daha çabuk yorulduğumu sanmıyorum.  
b) Eskisinden daha çabuk yoruluyorum.  
c) Şu sıralarda neredeyse her şey beni yoruyor.  
d) Öyle yorgunum ki hiçbir şey yapamıyorum.

18. a) İştahım eskisinden pek farklı değil.  
b) İştahım eskisi kadar iyi değil.  
c) Şu sıralarda iştahım epey kötü.  
d) Artık hiç iştahım yok.

19. a) Son zamanlarda pek fazla kilo kaybettiğimi sanmıyorum.  
b) Son zamanlarda istemediğim halde üç kilodan fazla kaybettim.  
c) Son zamanlarda beş kilodan fazla kaybettim.  
d) Son zamanlarda yedi kilodan fazla kaybettim.

-Daha az yiyerek kilo kaybetmeye çalışıyorum. EVET ( ) HAYIR ( ) –

20. a) Sağlığım beni pek endişelendirmiyor.  
b) Son zamanlarda ağrı, sızı, mide bozukluğu, kabızlık gibi sorunlarım var.  
c) Ağrı, sızı gibi bu sıkıntılarım beni epey endişelendirdiği için başka şeyleri düşünmek zor geliyor.  
d) Bu tür sıkıntılar beni öylesine endişelendiriyor ki, artık başka bir şey düşünmüyorum.

21. a) Son zamanlarda cinsel yaşantımda dikkatimi çeken bir şey yok.  
b) Eskisine göre cinsel konularla daha az ilgileniyorum.  
c) Şu sıralarda cinsellikle pek ilgili değilim.  
d) Artık, cinsellikle hiçbir ilgim kalmadı.

## APPENDIX K: EMOTION REGULATION QUESTIONNAIRE

Lütfen her maddeyi okuduktan sonra, o maddede belirtilen fikre katılma derecenizi 7 (*Tamamen Katılıyorum*) ve 1 (*Hiç Katılmıyorum*) arasında değişen rakamlardan size uygun olanını işaretleyerek belirtiniz. (1 - **Hiç Katılmıyorum**, 2 - **Katılmıyorum**, 3 - **Biraz katılmıyorum**, 4 - **Kararsızım**, 5 - **Biraz katılıyorum**, 6 - **Katılıyorum**, 7 - **Tamamen Katılıyorum**).

- 1) İçinde bulunduğum duruma göre düşünme seklini değiştirerek duygularımı kontrol ederim.
- 2) Olumsuz duygularımın az olmasını istersem, durumla ilgili düşünme seklimi değiştiririm.
- 3) Olumlu duygularımın fazla olmasını istediğim zaman duruma ilgili düşünme seklimi değiştiririm.
- 4) Olumlu duygularımın fazla olmasını istersem (mutluluk veya eğlence) düşündüğüm şeyi değiştiririm.
- 5) Olumsuz duygularımın az olmasını istersem (kötü hissetme veya kızgınlık gibi ) düşündüğüm şeyi değiştiririm.
- 6) Stresli bir durumla karşılaştığımda, bu durumu sakin kalmamı sağlayacak şekilde düşünmeye çalışırım.
- 7) Duygularımı ifade etmeyerek kontrol ederim.
- 8) Olumsuz duygular hissettiğimde onları ifade etmediğimden emin olmak isterim
- 9) Duygularımı kendime saklarım.
- 10) Olumlu duygular hissettiğimde onları ifade etmemeye dikkat ederim.



## APPENDIX K: SATISFACTION WITH LIFE SCALE

Aşağıdaki ifadelere katılıp katılmadığınızı görüşünüzü yansıtan rakamı maddenin başındaki boşluğa yazarak belirtiniz. Doğru ya da yanlış cevap yoktur. Sizin durumunuzu yansıttığını düşündüğünüz rakam bizim için en doğru yanıttır. Lütfen, açık ve dürüst şekilde yanıtlayınız.

- (0) Kesinlikle Katılmıyorum
- (1) Katılmıyorum
- (2) Biraz Katılmıyorum
- (3) Ne Katılıyorum
- (4) Ne Katılmıyorum
- (5) Biraz Katılıyorum
- (6) Katılıyorum
- (7) Kesinlikle Katılıyorum.

1. \_\_\_ Pek çok açıdan ideallerime yakın bir yaşamım var.
2. \_\_\_ Yaşam koşullarım mükemmeldir.
3. \_\_\_ Yaşamım beni tatmin ediyor.
4. \_\_\_ Şimdiye kadar, yaşamda istediğim önemli şeyleri elde ettim.
5. \_\_\_ Hayatımı bir daha yaşama şansım olsaydı, hemen hemen hiçbir şeyi değiştirmezdim.

## APPENDIX L: BERKELEY EXPRESSIVITY QUESTIONNAIRE

Lütfen aşağıdaki ifadeleri okuduktan sonra kendinizi değerlendirip sizin için en uygun seçeneğin karşısına çarpı (X) işareti koyunuz.		Kesinlikle Katılmıyorum	Katılmıyorum	Bazen Katılmıyorum	Kararsızım	Bazen Katılıyorum	Katılıyorum	Kesinlikle Katılıyorum
1	Olumlu bir duygu yaşadığımda insanlar tam olarak ne hissettiğimi rahatlıkla anlayabilir.	1	2	3	4	5	6	7
2	Bazı zamanlar acıklı filmleri izlerken ağlarım.	1	2	3	4	5	6	7
3	İnsanlar sıklıkla hissettiklerimi anlayamaz .	1	2	3	4	5	6	7
4	Birisi bana komik gelen bir fıkra anlattığında kahkahayla gülerim.	1	2	3	4	5	6	7
5	Benim için korkumu gizlemek zordur.	1	2	3	4	5	6	7
6	Mutlu olduğum da duygularım bunu gösterir.	1	2	3	4	5	6	7
7	Bedenim duygusal durumlara güçlü tepkiler verir.	1	2	3	4	5	6	7
8	Öfkemi açığa vurmaktansa gizlemenin daha iyi olduğunu öğrendim.	1	2	3	4	5	6	7
9	Ne kadar gergin veya üzgün olsam da dışarıya rahat görünmeye çalışırım.	1	2	3	4	5	6	7
10	Duygularımı ifade eden birisiyim.	1	2	3	4	5	6	7
11	Güçlü duygularım vardır.	1	2	3	4	5	6	7
12	İstesem de bazı zamanlar duygularımı gizleyemem.	1	2	3	4	5	6	7
13	Olumsuz bir duygu yaşadığımda insanlar tam olarak ne hissettiğimi rahatlıkla anlayabilir.	1	2	3	4	5	6	7
14	Ne kadar densesem de ağlamamı durduramadığım zamanlar olmuştur.	1	2	3	4	5	6	7
15	Duygularımı çok yoğun yaşarım.	1	2	3	4	5	6	7
16	Yüzüm duygularımı yansıtır.	1	2	3	4	5	6	7

## APPENDIX M: ROSENBERG SELF ESTEEM SCALE

Lütfen aşağıdaki maddeleri dikkatle okuyun ve her maddenin altındaki 4 cevap şikkından, size en uygun olanını daire içine alarak işaretleyin.

1. Kendimi en az diğer insanlar kadar değerli buluyorum.  
a. Çok doğru b. Doğru c. Yanlış d. Çok yanlış
2. Bazı olumlu özelliklerim olduğunu düşünüyorum.  
a. Çok doğru b. Doğru c. Yanlış d. Çok yanlış
3. Genelde, kendimi başarısız biri olarak görme eğilimindeyim.  
a. Çok doğru b. Doğru c. Yanlış d. Çok yanlış
4. Ben de diğer insanların bir çoğunun yapabildiği kadar, birşeyler yapabilirim.  
a. Çok doğru b. Doğru c. Yanlış d. Çok yanlış
5. Kendimde gurur duyacak fazla birşey bulamıyorum.  
a. Çok doğru b. Doğru c. Yanlış d. Çok yanlış
6. Kendime karşı olumlu bir tutum içindeyim .  
a. Çok doğru b. Doğru c. Yanlış d. Çok yanlış
7. Genel olarak kendimden memnunum.  
a. Çok doğru b. Doğru c. Yanlış d. Çok yanlış
8. Kendime karşı daha fazla saygı duyabilmeyi isterdim.  
a. Çok doğru b. Doğru c. Yanlış d. Çok yanlış
9. Bazen kesinlikle bir işe yaramadığımı düşünüyorum.  
a. Çok doğru b. Doğru c. Yanlış d. Çok yanlış
10. Bazen hiç de yeterli bir insan olmadığımı düşünüyorum.  
a. Çok doğru b. Doğru c. Yanlış d. Çok yanlış

## APPENDIX N: ACCEPTANCE AND ACTION QUESTIONNAIRE – II

Aşağıda birtakım ifadeler göreceksiniz. Lütfen her bir ifadenin sizin için ne kadar doğru olduğunu aynı satırda bulunan sayıları yuvarlak içine alarak değerlendiriniz. Seçiminizi aşağıdaki ölçeği kullanarak yapınız.

1	2	3	4	5	6	7
Hiçbir zaman doğru değil	Çok nadiren doğru	Nadiren doğru	Bazen doğru	Sıklıkla doğru	Neredeyse her zaman doğru	Her zaman doğru

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1. Acı verici yaşantılarım ve anılarım değerli bulduğum bir hayat yaşamamı zorlaştırıyor. 1 2 3 4 5 6 7

2. Duygularımdan korkarım. 1 2 3 4 5 6 7

3. Kaygılarımı ve duygularımı kontrol edememekten endişe duyarım. 1 2 3 4 5 6 7

4. Acı verici anılarım tatmin edici bir hayat yaşamamı engelliyor. 1 2 3 4 5 6 7

5. Duygular hayatımda problemlere yol açar. 1 2 3 4 5 6 7

6. Çoğu insan hayatını benden daha iyi idare ediyor gibi görünüyor. 1 2 3 4 5 6 7

7. Endişelerim başarılı olmamı engelliyor. 1 2 3 4 5 6 7

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## APPENDIX O: LIFE ORIENTATION TEST

### LOT

Aşağıda 12 cümle verilmiştir. Her cümleyi dikkatli okuyarak beşli ölçek üzerinde size uygun olan dereceyi işaretleyiniz. Verdiğiniz yanıtların 'Doğru' ya da 'Yanlış' olması gibi bir durum söz konusu değildir.

	Kesinlikle katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle katılıyorum
1. Ne olacağının önceden kestirilemediği durumlarda hep en iyi sonucu beklerim.					
2. Kolayca gevşeyip rahatlayabilirim.					
3. Bir işimin ters gitme olasılığı varsa mutlaka ters gider.					
4. Her şeyi hep iyi tarafından alırım.					
5. Geleceğim konusunda hep iyimserimdir.					
6. Arkadaşlarımla birlikte olmaktan hoşlanırım.					
7. Yapacak bir şeylerimin olması benim için önemlidir.					
8. İşlerin istediğim gibi yürüyeceğini nerdeyse hiç beklemem.					
9. Hiçbir şey benim istediğim yönde gelişmez.					
10. Moralim öyle kolay kolay bozulmaz.					
11. Her türlü olayda bir iyi yan bulmaya çalışırım.					
12. Başıma iyi şeylerin geleceğine pek bel bağlamam.					

## APPENDIX P: OXFORD HAPPINESS QUESTIONNAIRE SHORT FORM

	<b>1 Hiç katılmıyorum</b>	<b>2 Katılmıyorum</b>	<b>3 Biraz katılıyorum</b>	<b>4 Katılıyorum</b>	<b>5 Tamamen katılıyorum</b>
1. Kendimden hoşnut değilim.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Hayatın çok ödüllendirici olduğunu hissediyorum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Hayatımdaki her şeyden oldukça memnunum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Çevremdeki güzelliklerin farkına varırım.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Yapmak istediğim her şeye zaman bulabilirim.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Zihinsel olarak kendimi tamamen zinde (dinç) hissederim.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Geçmişle ilgili mutlu anılara sahip değilim.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## APPENDIX Q: PADUA INVENTORY – WSUR

Aşağıdaki ifadeler, günlük hayatta herkesin karşılaşılabileceği düşünce ve davranışlar ile ilgilidir. Her bir ifade için, bu tür düşünce ve davranışların sizde yaratacağı rahatsızlık düzeyini göz önüne alarak size en uygun olan cevabı seçiniz. Cevaplarınızı aşağıdaki gibi derecelendiriniz:

0 = Hiç 1 = Biraz 2 = Oldukça 3 = Çok 4 = Çok Fazla

	Hiç	Biraz	Oldukça	Çok	Çok Fazla
1. Paraya dokunduğum zaman ellerimin kirlendiğini hissedirim	0	1	2	3	4
2. Vücut sıvıları (ter, tükürük, idrar gibi) ile en ufak bir temasın bile giysilerimi kirleteceğini ve bir şekilde bana zarar vereceğini düşünürüm	0	1	2	3	4
3. Bir nesneye yabancıların yada bazı kimselerin dokunduğunu biliyorsam, ona dokunmakta zorlanırım	0	1	2	3	4
4. Çöplere veya kirli şeylere dokunmakta zorlanırım	0	1	2	3	4
5. Kirlenmekten ya da hastalanmaktan korktuğum için umumi tuvaletleri kullanmakta kaçınırım.	0	1	2	3	4
6. Hastalıklardan veya kirlenmekten korktuğum için umumi telefonları kullanmaktan kaçınırım	0	1	2	3	4
7. Ellerimi gerektiğinden daha sık ve daha uzun süre yıkarım	0	1	2	3	4
8. Bazen kendimi, sırf kirlenmiş olabileceğim ya da pis olduğum düşüncesiyle yıkanmak ya da temizlenmek zorunda hissediyorum	0	1	2	3	4
9. Mikrop bulaşmış veya kirli olduğunu düşündüğüm bir şeye dokunursam hemen yıkanmam veya temizlenmem gerekir	0	1	2	3	4
10. Bir hayvan bana değerse kendimi kirli hissedirim ve hemen yıkanmam yada elbiselerimi değiştirmem gerekir	0	1	2	3	4
11. Giyinirken, soyunurken ve yıkanırken kendimi belirli bir sıra izlemek zorunda hissedirim	0	1	2	3	4
12. Uyumadan önce bazı şeyleri belli bir sırayla yapmak zorundayım	0	1	2	3	4
13. Yatmadan önce, kıyafetlerimi özel bir şekilde asmalı ya da katlamalıyım	0	1	2	3	4
14. Doğru dürüst yapıldığını düşünemedim için yaptıklarımı bir kaç kez tekrarlamam gerekir	0	1	2	3	4
15. Bazı şeyleri gereğinden daha sık kontrol etme eğilimindeyim	0	1	2	3	4

16. Gaz ve su musluklarını, elektrik düğmelerini kapattıktan sonra tekrar tekrar kontrol ederim	0	1	2	3	4
17. Düzgün kapatılıp kapatılmadıklarından emin olmak için eve dönüp kapıları, pencereleri ve çekmeceleri kontrol ederim	0	1	2	3	4
18. Doğru doldurduğumdan emin olmak için formları, evrakları, ve çekleri ayrıntılı olarak tekrar tekrar kontrol ederim	0	1	2	3	4
19. Kibrit, sigara vb'nin iyice söndürüldüğünü görmek için sürekli geri dönerim	0	1	2	3	4
20. Elime para aldığım zaman birkaç kez tekrar sayarım	0	1	2	3	4
21. Mektupları postalamadan önce bir çok kez dikkatlice kontrol ederim	0	1	2	3	4
22. Aslında yaptığımı bildiğim halde, bazen yapmış olduğumdan emin olamam	0	1	2	3	4
23. Okurken, önemli bir şeyi kaçırdığımdan dolayı geri dönmem, ve aynı pasajı iki veya üç kez okumam gerektiği izlenimine kapılırım	0	1	2	3	4
24. Dalgınlığımin ve yaptığım küçük hataların felakete sonuçlanacağını hayal ederim	0	1	2	3	4
25. Bilmeden birini incittiğim konusunda çok fazla düşünürüm veya endişelenirim	0	1	2	3	4
26. Bir felaket olduğunu duyduğum zaman onun bir şekilde benim hatam olduğunu düşünürüm	0	1	2	3	4
27. Bazen sebepsiz yere kendime zarar verdiğime veya bir hastalığım olduğuna dair fazlaca endişelenirim	0	1	2	3	4
28. Bıçak, hançer ve diğer sivri uçlu nesnelere gördüğümde rahatsız olur ve endişelenirim	0	1	2	3	4
29. Bir intihar veya cinayet vakası duyduğumda, uzun süre üzülür ve bu konuda düşünmekten kendimi alamam	0	1	2	3	4
30. Mikroplar ve hastalıklar konusunda gereksiz endişeler yaratırım	0	1	2	3	4
31. Bir köprüden veya çok yüksek bir pencereden aşağı baktığımda kendimi boşluğa atmak için bir dürtü hissederim	0	1	2	3	4
32. Yaklaşmakta olan bir tren gördüğümde, bazen kendimi trenin altına atabileceğimi düşünürüm	0	1	2	3	4
33. Bazı belirli anlarda umuma açık yerlerde kıyafetlerimi yırtmak için aşırı bir istek duyarım	0	1	2	3	4
34. Araba kullanırken, bazen arabayı birinin veya bir şeyin üzerine sürme dürtüsü duyarım	0	1	2	3	4
35. Silah görmek beni heyecanlandırır ve şiddet içeren düşünceleri aklıma getirir	0	1	2	3	4
36. Bazen hiçbir neden yokken bir şeyleri kırma ve zarar verme ihtiyacı hissederim	0	1	2	3	4
37. Bazen işime yaramasa da, başkalarına ait olan şeyleri çalma dürtüsü hissederim	0	1	2	3	4
38. Bazen süpermarketten bir şey çalmak için karşı konulmaz bir istek duyarım	0	1	2	3	4
39. Bazen savunmasız çocuklara ve hayvanlara zarar vermek için bir dürtü hissederim	0	1	2	3	4



## APPENDIX R: PENN STATE WORRY QUESTIONNAIRE

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

1	2	3	4	5
Beni hiç tanımlamıyor		Beni biraz tanımlıyor		Beni çok iyi tanımlıyor

- \_\_\_ 1. Her şeyi yapmaya yeterli zamanım yoksa bunun için endişelenmem.
- \_\_\_ 2. Endişelerim beni bunaltır.
- \_\_\_ 3. Yaşamakta olduğum şeyler hakkında endişelenme eğiliminde değilimdir.
- \_\_\_ 4. Birçok durum beni endişelendirir.
- \_\_\_ 5. Yaşamakta olduğum şeyler hakkında endişelenmemem gerektiğini biliyorum ama kendime engel olamıyorum.
- \_\_\_ 6. Baskı altında olduğumda çok endişelenirim.
- \_\_\_ 7. Her zaman bir şeyler hakkında endişeleniyorum.
- \_\_\_ 8. Endişe verici düşünceleri aklımdan kolaylıkla atarım.
- \_\_\_ 9. Bir işi bitirir bitirmez, yapmak zorunda olduğum tüm diğer şeyler hakkında endişelenmeye başlarım.
- \_\_\_ 10. Asla herhangi bir şey için endişelenmem.
- \_\_\_ 11. Bir konu ile ilgili olarak yapabileceğim daha fazla bir şey olmadığında, artık o konu hakkında endişelenmem.
- \_\_\_ 12. Tüm yaşamım boyunca endişeli biri olmuşumdur.
- \_\_\_ 13. Yaşamakta olduğum şeyler hakkında endişeleniyor olduğumu fark ederim.
- \_\_\_ 14. Bir kez endişelenmeye başladığımda, bunu durduramam.
- \_\_\_ 15. Sürekli olarak endişeliyimdir.
- \_\_\_ 16. Tamamen yapıp bitirene kadar tasarladığım işler hakkında endişelenirim.

## APPENDIX S: PERSONAL GROWTH INITIATIVE SCALE

Lütfen aşağıdaki maddeleri dikkatlice okuyunuz. Her bir ifadeye ne derece katıldığınızı aşağıdaki ölçeği kullanarak belirtiniz.

0: Hiç katılmıyorum 1: Çoğunlukla katılmıyorum 2: Kısmen katılmıyorum  
3: Kısmen katılıyorum 4: Çoğunlukla katılıyorum 5: Tamamen katılıyorum

1. Kendimle ilgili değiştirmek istediğim şeyler için gerçekçi hedefler belirlerim.
2. Kendimle ilgili belirli değişiklikler yapmaya hazır olduğum zamanı söyleyebilirim.
3. Kendimle ilgili değişiklik yapmak için gerçekçi bir planın nasıl yapılacağını biliyorum.
4. Kendimi geliştirmek için ortaya çıkan her fırsatı değerlendiririm.
5. Kendimle ilgili değişiklik yapmaya çalıştığımda, gelişimim için gerçekçi bir plan yaparım.
6. Kendimle ilgili değişiklik yapmaya çalıştığım zaman başkalarından yardım isterim.
7. Kendimi geliştirmek için aktif bir şekilde çalışırım.
8. Kendimle ilgili neleri değiştirmem gerektiğini belirleyebilirim.
9. Bir birey olarak sürekli kendimi geliştirmeye çalışıyorum.
10. Kendimle ilgili değişiklikler yapmak için gerçekçi hedefleri nasıl belirleyeceğimi biliyorum.
11. Kendimle ilgili belirli bir değişikliği ne zaman yapmam gerektiğini bilirim.
12. Kendimi geliştirmeye çalıştığım zaman mevcut olanakları kullanırım.
13. Kendimle ilgili değişiklik yapmak için atacağım adımları biliyorum.
14. Kendimi değiştirmeye çalıştığımda aktif olarak yardım almaya çabalarım.
15. Bir birey olarak gelişmek için fırsatları araştırırım.
16. Kendimle ilgili belirli şeyleri değiştireceğim zamanı bilirim.

## APPENDIX T: AUTOTELIC PERSONALITY FOCUS GROUP

### Creating an Instrument for Measuring Autotelic Personality

A focus group will be held with PhD candidates in psychology in order to investigate properties of Autotelic Personality. Data coming from the focus group will be used to form items for an Autotelic Personality Inventory. For this purpose, the researcher will moderate a small focus group comprising of 4 PhD candidates in Psychology.

Focus group will be held in a classroom, and members will be invited for a three hours meeting. The session will be captured via a sound recorder to prepare the minutes of the meeting afterwards. The minutes will be signed by each member of the group and the moderator, later on.

The outline of the focus group will be as follows:

1. Flow Theory will be explained by the moderator. In this phase, flow theory will be explained with little or no emphasis to autotelic personality properties for preventing bias.
2. Several excerpts about people experiencing or describing flow will be read by the moderator. After reading each excerpt, group members will be asked to describe the person mentioned, with adjectives.
3. Autotelic Personality will be described by the moderator with special emphasis on its dimensions, several adjectives from the literature will be shared with the focus group members
4. The members will be asked again to provide adjectives in accordance with the autotelic personality properties
5. The moderator will share the adjectives he uses to describe autotelic personality, to discuss with the group.
6. Sample items and inventory properties will be created and discussed by the group.

### Excerpts about People Experiencing Flow

These excerpts are taken from statements of several professionals and artists who made descriptions of their flow states.

1. Şimdi okuyacağım metin tango dansçısı Sharna Fabiano ile "Dance Place" dergisi tarafından 2010 yılında yapılmış bir röportajdan alıntılanmıştır. Fabiano, dans etmenin kendisinde yarattığı ruhsal durumdan bahsetmektedir. *Tamamıyla o anda olduğumu hissettim. Biz tango dansçıları her şeyden önce bunun için çabalarız, tangonun vücudunuzu canlandırdığı, çaba göstermeksizin gelecek ve geçmiş olmadan var olmanın yol açtığı zen benzeri bir durum... Yalnızca anı deneyimlediğinizde, olabildiğince saf bir biçimde kendiniz olabilirsiniz.*
2. Şimdi okuyacağım metin Michael Novak'ın, Sporun Keyfi adlı kitabından alınmıştır. Spor yapmanın insanda yarattığı ruh hali tarif edilmektedir. *Bu bahsettiğim, spordaki en büyük sırlardan biridir. Benlik içerisinde ve benlik ile dünya arasında bir birliktelik duygusunun yaşandığı bu durum, belli bir noktada, niyetin ve bilinçli bir zihnin başaramayacağı kesin bir işbirliği ve manyetizma yaratır. Belki de, bu birlikteliği ve bütünlüğü yaratan parçaların her birinde önceden ustalaşmıştır, ancak bu ustalık güdülerin kontrolü ele almasına imkân tanıyabilir. Güdüsel komut, bilinçli zihin tarafından komut etmeye göre daha incelikli, daha derin, daha doğru, daha fazla gerçeğe temas halindedir. Bunu keşfetmek kişinin nefesini keser.*

3. Şimdi okuyacağım metin Andrew Cooper'ın Playing in the Zone: Exploring the Spiritual Dimensions of Sports adlı kitabından alınmıştır. Bu metin maneviyat ve spor arasındaki ilişkiyi anlatmaktadır.

*Spor artık dinsel olmayan günümüz dünyasındaki belki de en dünyevi etkinlik olmasına rağmen, merakı kıskırtması, derin duyguları ortaya çıkarması, zamansız güzellik ve özgürlük ile hayatımızı şerefliendirmesiyle.. ve benzeri diğer yollarla, din olmasa da, ruhani bir şey.*

4. Şimdi okuyacağım metin Diane Ackerman'ın , Deep Play adlı kitabından alınmıştır. Bu metin oyunların ortak özelliklerine değinmektedir.

*Bütün bu aktivitelerin ortak noktası nedir? Hepsi, cesaret, risk alabilme, konsantrasyon, belirsizliğe tahammül edebilme becerisi, oyunun kurallarını takip etme isteği ve aşkınlık için bir istek gerektirir. Hepsi, bir çocuk ve şairin bir yabaniyle aynı evde oynadığı kutsal bir oyunun ruhunu paylaşır. Bazen olmayı arzu ettiğimiz şey, doğaya uyum içerisinde, ham duygular ve kurnazlıkla yaşayan, algıları açık, tehlikeyi sezebilen, meydan okumaktan heyecan duyan bir yabaniydir.*

5. Şimdi okuyacağım metin -Michael Murphy ve Rhea A. White'ın "In the Zone: Transcendent Experience in Sports" adlı kitabından alınmıştır. Bu metinde sporcuların en iyi performanslarını nasıl ortaya koydukları tartışılmaktadır.

*Uzun yıllar boyu alınan eğitimlere ve antrenmanlara rağmen, pek çok sporcu sıradışı performanslarını genellikle spontan davranırken ortaya koyarlar. Doğru ve yanlış farkındalıklı bilgisi ancak bir ateşi yakmak için gerekli olan çıra gibidir, aslen ateş ilk yandığında bu çiralar hızlıca yanarak yok olurken, büyük alevler ateşi ele geçirir. Bu alevlerin kaynağı, teknik bilgilerden, deneyimden, ve farkındalıktan çok daha ötede bir kaynaktan ortaya çıkar. Bu elbette, antrenman ve bilginin küçümsenmesi anlamına gelmemektedir, sonuçta çıra olmadan ateş alev almaz. İki aşamadan bahsetmemiz belki de daha doğrudur, bilinçli ve bilinçdışı. İkisi de diğer olmadan işlev göremez. Elbette, antrenman yapmak, okumak, eğitilmek, bilinçlenmek önemlidir. Ancak, daha az vurgulanan spontan hale de aynı önemi vermeliyiz. Sporunun ancak performansı bittikten sonra hatırladığı ve çoğunlukla "şuursuz", "aklımı kaybetmiş gibi", "uçmuş" gibi tanımladığı spontan hal... Kendisini oynatanın ne olduğunu bilmez ve "bir içgüdüydü" der.*

6. Şimdi okuyacağım metin Susan Jackson ve Mihaly Csikzentmihalyi tarafından yazılan "Flow in Sports" adlı kitaptan alıntılanmıştır. Bu metinde akış deneyiminin önemi tartışılmaktadır.

*Dünyanın her yerinde, sporcular böyle anların peşinde koşarlar. Böyle anlarda yaşanan duygular bir kişinin hayatı boyunca yaşayabileceği en yoğun, en hatırlamaya değer deneyimlerdir. Bahsettikleri hal, bizim akış veya optimum deneyim dediğimiz haldir. Akış bir kez yaşandıktan sonra, akış deneyimi zihinde bir iz bırakır ve kişiler tekrar bu deneyimi yaşamak isterler.*

7. Şimdi okuyacağım metin Susan Jackson ve Mihaly Csikzentmihalyi tarafından yazılan “Flow in Sports” adlı kitaptan alıntılanmıştır. Bu metinde akış deneyiminin önemi tartışılmaktadır.

*Akış, çabaya gerek kalmaksızın zihin ve bedenin uyumlu bir şekilde birlikte çalıştığı, kişide özel bir şey yaşandığı duygusunu bırakan bir deneyimdir. Akış hali, deneyimi sıradandan optimale çevirdiği için, o anlarda gerçekten yaşam dolu ve yaptığımız işle uyumlu hissederiz.*

8. Şimdi resim yaparken akış deneyimi yaşayan bir ressamın deneyime dair söylediklerini okuyacağım.

*Zihnimde düşünceler uçuşmuyor. Başka hiç bir şeyi düşünmüyorum. Tamamıyla resim yapmaya dalmış durumdayım. Kendimi fiziksel olarak iyi hissediyorum. Hiç bir şey duymuyor gibiyim. Dünyayla bağlantım kesilmiş gibi hissediyorum. Kendimin ve problemlerimin farkında değilim. Dikkatim adeta nefes alıp vermek gibi, hiç çaba göstermiyorum. Resim yapmaya başladığımda, dünyayla olan ilişkiyi tamamen kesiyorum. Resim yapmaya yoğunlaştıktan sonra, etrafımda olan bitenlere tamamen kayıtsız kalıyorum. Telefon veya kapı zili çalabilir, ev yanabilir, ya da öyle şeyler... Yoğunlaştıktan sonra, hakikaten dünyadan kopuyorum. Eğer durursam, tekrar aynı şekilde devam edebiliyorum. Resim yaparken adeta yaptığım işe gömülüyorum. Kendimi resim yapmaktan ayrı göremiyorum.*

### **Alıntılara İlişkin Sorular**

1. Sizce, az önce okuduğum metinde tarif edilen deneyimi diğer insanlara göre daha sık yaşayabilen bir kişi nasıl birisidir? Lütfen elinizdeki kağıda, bu kişiyi tariflemek için mümkün olduğunca çok sayıda sıfat yazınız.
2. Sizce, bu kişi nasıl birisi değildir? Lütfen, bu kişinin sahip olmadığını düşündüğünüz sıfatları yazınız.
3. Şimdi lütfen yazdığınız sıfatları okuyunuz ve grup olarak sıfatları tartışalım.

### **Ototelik Kişilik Boyutlarını Tanımlamak**

Ability achieve a skill & challenge balance, curiosity, challenge seeking, enjoyment and persistence, openness to novelty, concentration, integration and differentiation, independence and cooperation, transcendence.

For each of these domains,

- 1- Lütfen ototelik kişiliğin her boyutu için sıfatlar yazalım.
- 2- Bu sıfatları tartışalım.
- 3- Kullanılacak sıfatlara karar verelim.

## APPENDIX U: TURKISH SUMMARY

### OTOTELİK KİŞİK: AKIŞ EĞİLİMİ, KİŞİSEL GÜÇLER VE PSİKOPATOLOJİ İLE BAĞLANTILARI

#### 1. Giriş

Bu doktora tezi, ODTÜ Klinik Psikoloji Doktora Programı öğrenciliğim sürecinde yaşadığım deneyimlerin bende yarattığı merak sonucunda ortaya çıkmıştır. Klinik psikoloji doktora eğitimimde, gerek kendimin gerekse diğer eğitim sürecindeki sağaltımcı meslektaşlarımdan danışanlarımızın güçlü yönlerine odaklanmak konusuna, psikopatolojik süreçleri tanımlamak, ruhsal bozuklukların ve psikolojik zorlukların sebeplerini tanımlamak ve işe yarar bir sağaltım planı hazırlamak kadar odaklanmadığımı fark ettim. Bu elbette, sadece programımıza özgü bir durum değildi. Klinik psikolojinin Ülkemizdeki ve Amerika Birleşik Devletleri'ndeki (ABD) gelişimini incelediğimde, klinik psikoloji mesleğinin geçtiğimiz 20. Yüzyılın siyasal, ekonomik ve sosyal olaylarının etkisi ve erken dönem insan ruhsallığı teorileri sonucunda; temelde insanların güçsüzlüklerine ve psikolojik sorunlarına eğildiğini görmek zor değildi.

Psikolojinin bir sosyal bilim olarak, medikal yaklaşımdan belki de en büyük farkının insan davranışı, düşüncesi ve duygu süreçlerine ilişkin olabildiğince olumlu ve olumsuz tarafları birlikte incelemesi olduğunu düşünüyorum. Psikolojinin Pennsylvania Üniversite'sinde Lightner Witmer tarafından gerçekleştirilen ilk sağaltımcı uygulamalarında da bu durum görünürdü (Reisman, 1991). Dr. Sigmund Freud'un 1909 senesinde ABD'ne yaptığı ilk ziyaretin; ülkedeki ana akım psikolojinin gelişme yönünde etkisi olduğu bilinmektedir. Bu ziyaret neticesinde psikanalizin ABD'de yaygın kabul görmesiyle, psikopatolojiye ve zihinsel hastalıklara yapılan vurgu zaman içerisinde klinik psikoloji mesleğinde baskın hale gelmiştir (Maddux, Synder & Lopez, 2008).

Dr. Sigmund Freud, Oskar Pfister'e yazdığı bir mektupta insan doğasına ilişkin tutumunu, "İnsanların doğasıyla ilgili iyi pek az şey buldum. Bana kalırsa çoğu insan özelliği işe yaramaz ve çerçöp." diyerek açıklamıştır. Psikanalitik

sağaltım büyük ölçüde Dr. Sigmund Freud'un görüşlerinden yola çıkmaktadır. Gerek Psikanalitik yöntem; 1960'lardan sonra alanda yaygınlaşan Bilişsel ve Davranışçı sağaltım yaklaşımları; insana bakışlarında temel farklar barındırmalarına rağmen belli yönlerden eleştirildiler. Bu eleştirilerin doktora teziyle ilgili olanlarını özetlemek gerekirse: (1) Psikanalitik kuram bilinçdışı süreçlere güçlü bir önem atfederek; Bilişsel Davranışçı yaklaşımlar ise insan ruhsallığını bilişsel süreçler, duygusal süreçler ve davranışlar arasındaki neden-sonuç ilişkilerine bağlayarak belirlenimci (deterministik) bir tavır içerisinde oldular, (2) insan iradi süreçlerine vurgu yapmadılar, (3) insanların iyi özelliklerine vurgu yapmadılar.

İnsancıl sağaltım yaklaşımının temel varsayımları Psikanalitik ve Bilişsel Davranışçı sağaltım okullarından temel farklılıklar içermektedir. Bütün insanların temelde iyi olduğu, hayatta kalabilmek ve mücadele göstermek için iradi güçlere ve özgürlüğe sahip oldukları ve kendilerini gerçekleştirebilme, doyum yaşayabilme potansiyelleri olduğu varsayımları benimsenmiştir (Wong, 2006). Logoterapi (Frankl, 1988) ve Danışan-merkezli sağaltım (Rogers, 1957) yukarıda özetlenen temel varsayımlara dayanan iki sağaltım okuludur.

İnsancıl yaklaşımların varlığına rağmen, geçtiğimiz yüzyılda hastalık ve bozukluk temelli yaklaşımlar daha çok benimsenmiş ve klinik psikoloji alanında baskın hale gelmiştir. Psikiyatrik durumların tanımlaması ve sınıflandırılmasıyla ilgili olarak temel kaynak olan Zihinsel Bozuklukların Tanısal ve İstatistiksel Kitabı'nın 1952 yılındaki ilk baskısı 130 sayfa olup 106 zihinsel bozukluk tanımlarken, 2013 senesinde çıkan 5. basım 947 sayfa olup 312 zihinsel bozukluğu tanımlamaktadır. İnsanın olumsuz deneyimlerine dair böylesine büyük bir bilgi birikiminin oluşturulması ciddi bir avantaj sağlarken, insanların güçlü yönleri, erdemleri ve olumlu kişilik özelliklerine ilişkin aynı ölçüde yeterli ve güçlü bir anlayış ortaya konamamıştır (Seligman, 2000).

Klinik psikoloji mesleğinin dünya üzerinde ilk ortaya çıktığı yerlerden birisi olan ABD'de mesleğin gelişimi temel olarak II. Dünya Savaşı'ndan etkilenmiştir (Capshe, 1986). Savaş döneminde ve sonrasında, ruh sağlığı hizmetlerine duyulan ihtiyaçtaki artış, psikologların öncelikle psikiyatriklere yardım eden tanı ve değerlendirme uzmanı olarak görev almalarında, sonrasında ise sağaltım sürecini yürütmelerinde etkin olmuştur. ABD'ye benzer olarak, Türkiye'de de klinik psikoloji mesleğinin bilinirliği ve mesleğe duyulan ihtiyacın artması 1999 senesinde Gölcük'te yaşanan talihsiz depremin etkisiyle olmuştur. Bu dönemde, psikologlar yoğun bir

şekilde gönüllü saha çalışmaları yürütmüşlerdir. Bu çalışmalar neticesinde, hem toplum, hem diğer ruh sağlığı uzmanları, hem de klinik psikologlar klinik psikoloji mesleği ile ilgili farkındalıklarında artış yaşamışlardır. Klinik psikoloji çalışmalarına Türkiye’de öncülük etmiş bilim insanlarından Dr. Işık Savaşır’ın 2000 senesindeki vefatından sonra; kendisinin adıyla düzenlenen Işık Savaşır Klinik Psikoloji Sempozyumu’nun ilki de 2000 senesinden sonra gerçekleştirilmiştir (Gençöz, 2005). Aynı yıllarda, Çenesiz (2007) tarafından klinik psikoloji mesleğine ilişkin tutumları araştıran bir çalışma yapılmıştır. Bu çalışma temel olarak, psikiyatristlerin klinik psikologları tanıya yardımcı değerlendirme hizmeti sunan aktif ve bağımsız sağaltım becerisi olmaya meslek erbapları olarak algıladığı; klinik psikologların da kendilerini sağaltım ekibinin temel olarak tanısal ve değerlendirici süreçlerinden sorumlu olan bir parçası olarak gördükleri; toplumun ise klinik psikologları psikiyatri mesleğine göre daha insancıl ve arkadaşça bir yardım kurumu olarak gördükleri bulgusunu ortaya koymuştur.

Klinik psikolojinin Ülkemizdeki ve ABD’ndeki gelişimi incelendiğinde meslek erbaplarının neden temel olarak “zihinsel bozukluklarla” ilgilendiği belirginleşmektedir. Klinik psikoloji mesleği çoğunlukla psikolojik stresin ortadan kaldırılmasıyla ilgilenmiştir, ancak insanların olumlu özellikleri ve erdemleri ile ilgili olarak gerek teorik gerekse uygulama olarak neredeyse hiç gelişmemiştir. Bu doktora tezi klinik psikologların, psikolojinin görece yeni bir çalışma alanı olan pozitif psikolojiden ilham almasının her iki psikoloji alanı içinde faydalı olacağı temel savı üzerine inşa edilmiştir.

Pozitif psikoloji olumlu deneyimler, olumlu insan özellikleri, uygun değer işlevsellik, psikolojik iyi olma ve olumluluğu destekleyen kurumlar üzerine çalışan bir bilim dalıdır (Duckworth, Steen & Seligman, 2005). Pozitif psikolojinin temel varsayımlarından birisi olumlu deneyimlerin ve insan özelliklerinin tamamıyla olumsuz durum ya da kişisel özelliklerin etkisi altında olmadığıdır. Diğer bir deyişle, olumsuzu ortadan kaldırmak mutlak olumlu durumlara yol açmaz.

Pozitif psikolojinin çalışma alanları 3 temele indirgenebilir. Zevkli ve memnuniyet veren bir hayat, iyi bir hayat ve anlamlı bir hayata ilişkin çalışmalar pozitif psikolojinin temel ilgi alanıdır. Pozitif psikoloji perspektifinden bakıldığında, yeterli bir psikolojik iyilik hali sadece psikolojik bozuklukların yokluğuyla açıklanamaz; zengin, doyurucu ve tatmin edici bir yaşam deneyiminin de var olması gerekir. Sebatkârlık, geleceğe ilişkin iyimser bir bakış açısı, hayatta sorumluluk



almak, geçmişe ilişkin doyum kişisel gelişime ve iyilik haline yol açan temel psikolojik güçlerdir (Seligman & Csikszentmihalyi, 2000).

Klinik psikoloji arařtırmalarında, kişilerin güçlü yönlerine dair daha gelişmiş bir anlayış geliştirme ihtiyacı bu doktora çalışmasının temel çıkış noktasıdır. Bu doktora tezinin amacı, pozitif psikoloji ve klinik psikoloji çalışma alanlarını birleştirerek, insan psikolojisinin daha dengeli bir anlayış içerisinde ele alınmasına ve nihai olarak klinik arařtırmaların tamamen hastalık modellerinde temellenen yaklaşımına ek olarak güçlü yönleri de ele alabilen bir temele oturmasına katkıda bulunmaktır. Bu amaçla, hayat anlamı, öznel mutluluk, merak ve akış eğilimi araştırma dâhilinde geliştirilen pozitif ototelik kişilik özellikleri ile olan ilişkileri bağlamında incelenmiştir. Buna ek olarak kişisel büyüme ve dönüşüme yol açan taktikler bütünü olarak kişisel gelişim yönelimi; depresyon, sürekli kaygı, endişe, takıntı ve kompulsif davranışlarla temsil edilen bir grup psikopatoloji değişkeni ototelik kişilikle olan ilişkileri bağlamında çalışılmıştır. Birbirini takip eden üç çalışma gerçekleştirilmiştir: (1) İsveç Akış Eğilim Ölçeği, Öznel Mutluluk Ölçeği, Hayatın Anlamı Ölçeği, Merak ve Keşif Envanteri-II Türk kültürüne uyarlanmıştır; (2) Akışı ve hayatla olan bağı yordayan ve güçlü kişisel özellikler üzerine temellenmiş bir kişilik envanteri olarak Ototelik Kişilik Envanteri geliştirilmiştir ve (3) kişisel güçlü yönler, ototelik kişilik, psikopatoloji ve kişisel gelişim yönelimi arasındaki ilişkiler ve kavramsal modeller test edilmiştir.

## 2. Ölçek Adaptasyonları

Doktora tezi kapsamında, pozitif psikoloji literatüründe önemli kavramsal yapıları ölçen 4 adet araştırma ölçeği Türk kültürüne adapte edilmiştir: İsveç Akış Eğilim Ölçeği (Ullén et al., 2012), Merak ve Keşif Envanteri-II (Kashdan et al., 2009), Hayatın Anlamı Ölçeği (Steger, Frazier, Oishi & Kaler, 2006), Öznel Mutluluk Ölçeği (Lyubomirsky & Lepper, 1999). Ölçek adaptasyonlarında açılımlayıcı faktör analizi ve güvenilirlik geçerlilik çalışması için 652 kişiden oluşan bir öğrenci örnekleme, test-tekrar test çalışması için 652 kişilik örneklemden elde edilmiş 222 kişilik bir öğrenci örnekleme, ve doğrulayıcı faktör analizi için ise 379 kişiden oluşan bir genel toplum örnekleme kullanılmıştır. Orijinal ölçeklerin çeviri süreci, psikoloji arařtırmalarında genel kabul görmüş çeviri – geri çeviri- karşılaştırma süreciyle, psikoloji alanında doktora eğitimi alan ve İngilizce’de yüksek seviyede yeterliliği olan uzmanlar tarafından yürütülmüştür.

## 2.1.İsveç Akış Eğilim Ölçeği

1970’li yıllardan günümüze uzanan süreçte akış kuramı alanında yapılan çalışmalar akış deneyiminin, iyi ve doyurucu bir hayatı yordayan önemli faktörlerden birisi olduğunu vurgulamıştır. Akış deneyimi, kişinin yaptığı işe tamamen kendini kaptırmasıyla karakterize olan, öz-farkındalığın ortadan kalktığı, zaman algısının bozulduğu, yoğun keyif ve doyum hissinin yaşandığı anlksal deneyimler olarak tanımlanmaktadır (Csikszentmihalyi, 1975). Yapılan araştırmalar, herkesin belli yoğunluk ve sıklıklarda akış deneyimi yaşadığını ortaya koymuştur. Ancak akış deneyimi sıklığı ve yoğunluğu bireyler arasında farklılık göstermektedir. Bir takım kişilik özellikleri ve bilişsel eğilimlerdeki değişkenlikler akış deneyimi sıklığı ve yoğunluğunu yordamaktadır. Genel olarak değinmek gerekirse, kişinin beceri seviyesi dâhilinde yapılabilir ve kontrol edilebilir görünen işler bulmaya yönelik genel bir eğilim, hedef koymak, net geribildirimler alabilmek, dikkati görev üzerinde yoğunlaştırabilme becerisi, ve kontrol algısı akış deneyimini yordayan önemli faktörlerdendir.

İsveç Akış Eğilim Ölçeği, ev işleriyle ilgilenirken, işyeri ortamında, ve hobi faaliyetleriyle meşgul olurken akışın kişilerce hangi seviyede deneyimlendiğini öz-bildirime dayalı olarak ölçmeyi amaçlayan bir araştırma aracıdır. İsveç Akış Eğilim Envanteri yukarıda belirtilen 3 bağlamda akış sıklığını 7 madde ile sorgulayan ve 1 madde ile de kişinin halen iş sahibi olup olmadığını sorgulayan 22 maddeli bir araştırma aracıdır. Araştırma katılımcılarına yöneltilen 7 madde, daha önce Csikszentmihalyi (1990) tarafından işaretlenen akış boyutlarını sorgulamaktadır: Konsantrasyon becerisi, beceri-zorluk eşleşmesi, açık hedefler, net geribildirim, kontrol algısı, sıkılma hissinin mevcut olmaması ve keyif alma hali. Her madde 5’li Likert tipi ölçek olarak biçimlendirilmiştir.

İsveç Akış Eğilim Envanteri’nin Türkiye adaptasyonunun psikometrik özellikleri incelendiğinde, araştırma bulguları ölçeğin yeterli düzeyde geçerlilik ve güvenilirlik sağladığını ortaya koymuştur. Açımlayıcı faktör analizi, ve doğrulayıcı faktör analizi orijinal ölçeğin faktör yapısına özdeş bir yapı işaret etmiştir. Daha önceki araştırmalara paralel olarak, kişilik özellikleri ve akış eğilimi arasında ilişki bulunmuştur. Duygusal dengesizliğin akış eğilimiyle olumsuz bir ilişkisi olduğu bulunmuş, buna karşın deneyime açıklık, dışa dönüklük ve sorumluluk kişilik özelliklerinin akış ile olumlu bir ilişkisi olduğu ortaya konmuştur. Olumsuz

duygulanım, hayat anlamı arayışı, depresyon ve sürekli kaygının da genel akış eğilimiyle olumsuz ilişkisi olduğu saptanmıştır. İyimserlik, mutluluk, anlam varlığı ve yaşam doyumunu ise akış yatkınlığı ile olumlu ilişki işaret etmişlerdir. İsveç Akış Eğilim Envanteri Türkiye adaptasyonu, Türkiye’de genel akış eğilimini ölçmeyi hedefleyen ilk araştırma aracı olmuştur.

## **2.2.Merak ve Keşif Envanteri –II**

Merak’a ilişkin psikoloji araştırmalarının tarihçesi William James’in ilk çalışmalarına dayanmaktadır. Ancak psikoloji literatüründe merak, pek çok kuramsal perspektif kapsamında ele alınmasına rağmen işevuruk tanımı yapılmamış fenomenlerden birisidir. Kashdan ve Silvia (2009) merakı, yenilikler karşısında duyulan bir heyecan ve isteklendirme eğilimi ve dikkat kaynaklarını belirli bilgilere yöneltebilme becerisi olarak tanımlamaktadırlar. Merakın hayatta kalmaya hizmet ettiği, olumlu sorun çözme yaklaşımıyla ilişkili olduğu ve tutkulu bir ilişki inşa etme ihtimaliyle yüksek ilişkili olduğu çeşitli araştırmalarca gösterilmiştir. Güvenli bağlanan yetişkinlerin, diğerlerine göre daha meraklı oldukları da bağlanma yazınında gösterilmiştir. Kişisel gelişim yönünden bakıldığında ise, meraklı kişilerin diğerlerine oranla zorluklar arama ve alışıl gelmemiş aktiviteleri kişisel gelişim imkânı olarak değerlendirme yönünden daha üstün olduklarını göstermiştir.

Kashdan ve arkadaşları (2009), Merak ve Keşif Envanteri-II’yi iki boyutlu bir merak ölçüm aracı olarak tasarlamışlardır. Birinci boyut olan esneme boyutu, kişilerin yeni bilgiler aramaya yönelik aktif eğilimini, ikinci boyut olan kucaklama boyutu ise yenilikleri, belirsizlikleri ve gündelik hayatın değişkenliğini kucaklamaya yönelik eğilimi yansıtmayı amaçlamaktadır. MKE-II’nin iki alt boyutu 5’er madde ile yansıtılmaktadır ve toplam 10 maddeden oluşmaktadır. Bu doktora tezinde, MKE-II Türkiye kültürüne uyarlanmıştır. Yapılan uyarlama çalışması, 7 maddeli ve 2 boyutlu bir ölçeğin güvenilirlik ve geçerliliğini işaret etmiştir. Merak, deneyime açıklık, olumlu duygulanım, öz-güven, mutluluk, dışa dönüklük, psikolojik esneklikle olumlu ilişki göstermiştir. Elde edilen 7 maddelik ölçek iç geçerlilik, zamandaş geçerlilik ve güvenilirlik katsayıları değerlendirildiğinde psikometrik olarak yeterli değerlendirilmiştir.

Yapılan adaptasyon çalışmasının, Türkiye’de yapılan psikoloji arařtırmaları için merakla ilgili iyi bir ölçüm aracı sunması arzulanmıřtır. Bu ölçüm gerek arařtırmalarda, gerekse klinik uygulamalarda iře yarayabilir. Motivasyon arařtırmaları, benlik arařtırmaları, klinik psikoloji arařtırmaları, gelişimsel psikoloji yazını MKE-II’nin kullanımından faydalanacağı düşünölmektedir.

### **2.3.Hayatın Anlamı Ölçeđi**

Batı düşünce dünyasında hayatın anlamına ilişkin sorgulamalar çok eskiye dayansa da, hayat anlamına ilişkin psikoloji yazınındaki sorular ve arařtırmalar görece yenidir. Viktor Frankl’ın 1965 de yayınladıđı “İnsan’ın Anlam Arayışı: Logoterapiye Giriř” isimli eseri psikoloji yazınında hayat anlamının önemine ilişkin göze çarpan ilk metin olma özelliđini taşımaktadır. İnsancıl terapilerin kurucusu Carl Jung’un çalışmaları da hayat anlamının önemine ilişkin erken çabalardan birisidir. Ancak, 1960’lardaki bu çabalar uzun süre sonra 1990’ların başından itibaren tekrar psikoloji yazınında önem kazanmıřtır. Hayatın anlamının gerekliliđi ve işlevi, hayat anlamının evrenselliđi ya da tekilliđi, anlamlı bir hayatın nasıl başarılacağı, ve hayat anlamının varlıđı ya da yokluđunda psikolojik iyilik hali, mutluluk ve genel işlevselliđe ilişkin sorular psikoloji yazınının temel arařtırma alanları olarak ortaya çıkmıřtır.

Yakın geçmişteki çalışmaları, Steger ve arkadaşlarını (2006) 2 boyutlu bir hayat anlamı ölçeđi geliřtirmeye teşvik etmiřtir. Anlam arayışı ve anlam varlıđı isimli 2 alt-boyuttan oluşarı hayatın anlamı ölçeđi literatürde daha önce olgusal olarak tartıřılan kavramları içeren bir ölçek olarak tasarlanmıřtır. Bu doktora tezi kapsamında Hayat Anlamı Ölçeđi’nin (HAÖ) Türkiye kültürüne uyarlanması yapılmıřtır. Yapılan uyarlamada, HAÖ’nün Türkiye kültüründe orijinal faktör yapısının dođrulandıđı; geçerli ve güvenilir bir hayat anlamı ölçeđi olduđu belirlenmiřtir.

Psikolojik iyilik halinin, önemli bir yordayıcısı olarak belirlenen hayat anlamı varlıđına ilişkin psikolojik ölçümler gerek arařtırma gerekse uygulama alanlarında kullanılabilecek bilgiyi insan davranışı ile ilgilenen bilim dallarının kullanımına sunmaktadır. Hayat anlamının varlıđı, genel hayat dengesi, olumluluk, mevcut davranıřların gerekçelendirilmesi, öz-teyit, öz-etkinlik, ve öz-deđer ile olumlu ilişkiler göstermektedir. Bu nedenle, hayat anlamı ölçeđi, klinisyenler tarafından

yardımcı klinik araç olarak kullanılarak danışanların mevcut psikolojilerinin daha zengin bir değerlendirmesi yapılmasına hizmet edebilir. Buna ek olarak, hayat anlamının önemli rolüne karşın, klinik psikoloji araştırmalarında halen aydınlatıcı çalışmaların eksikliği göze çarpmaktadır. Hayat anlamına ilişkin yapılacak çeşitli araştırmalar, insan psikolojik olgusunun daha kapsamlı ve dengeli bir değerlendirmesini mümkün kılacaktır.

#### **2.4.Öznel Mutluluk Ölçeği**

Mutluluk pek çok insanın hayatının temel arayışlarından biridir. Mutluluğun kökenlerini anlamaya ilişkin psikoloji araştırmaları birlikte değerlendirildiğinde, genetik eğilimler, finansal durum, fiziksel aktivite seviyesi, adaptasyon, yaşam olayları, ve başka pek çok değişkenin mutluluğu beraber açıkladığı görülmüştür. Bazı araştırmalarda mutluluğun oldukça öznel olduğu, kültürlerarası ve kişilerarası farkların mutluluğun nedenlerini farklılaştırdığı öne sürülmektedir. Bu nedenle, mutluluk öznel olarak ölçüldüğünde daha anlamlı bir sonuç ortaya çıkacağı tartışılmıştır. Kişilerin arzuları, amaçları ve ihtiyaçları farklılık gösterdiğinden mutlu olma nedenleri de farklılaşmaktadır.

Öznel Mutluluk Ölçeği (Lyubomirsky & Lepper., 1999) öznel mutluluğu nicelemeyi hedefleyen 4 maddeli 7'li Likert tipi tek boyutlu bir ölçektir. 4 maddeli tek faktörlü Öznel Mutluluk Ölçeği'nin kişilerin öz-bildirimlerine dayanan etkili bir ölçüm olduğu gösterilmiştir. Ölçeğin iki maddesi, yanıtlayan kimselerin kendilerini başkalarına göre kıyaslamasını gerektirmekte; diğer iki madde ise kendileriyle ilgili değerlendirme yapmalarını gerekli kılmaktadır. Bu doktora tezinde, Öznel Mutluluk Ölçeği Türkiye kültürüne uyarlanmıştır. Yapılan araştırma sonucunda, Öznel Mutluluk Ölçeği Türkiye formunun geçerli ve güvenilir bir öznel mutluluk ölçümü sağladığı görülmüştür. Öznel mutluluğun, cinsiyet, eğitim seviyesi, medeni hal ile ilişkili olmadığı görülmüştür. Buna karşın, iyimserlik, yaşam doyumu, dışa dönüklük, olumlu duygulanım ve öz-saygı ile öznel mutluluk anlamlı olumlu ilişkiler göstermiştir. Önceki psikoloji yazını incelendiğinde, olumlu duyguların, zevkin, yaşam bağlılığının, olumlu ilişkilerin, hayat anlamı varlığının ve başarılarla sahip olmanın öznel mutlulukla ilişkili olduğu ortaya konmuştur. Bu nedenle, insan güçlü yönlerine ve psikolojik iyilik haline odaklanan psikologların öznel mutluluk

ölçümlerini gerek arařtırmada gerekse klinik uygulamalarda kullanmaları pek çok yaygın etkiyi beraberinde getirecektir.

### 3. Ototelik Kişilik Envanteri

Daha önce de bahsedildiđi üzere, akıř bilincin bařkalařtıđı, zaman algısının bozulduđu ve kendilik bilincinin ortadan kalktıđı bir psikolojik haldir. Genellikle yođun bir keyif ve doyum duygusu akıř haline eřlik etmektedir. Csikszentmihalyi (1975) iyi bir hayatın ancak gündelik hayat ierisinde yařanan akıř hallerinin sıklık oranının artmasıyla elde edileceđini tartıřmaktadır. Son 40 senede akıř kuramına iliřkin yapılan alıřmalar, yođun bir dikkatin, net hedeflerin ve geribildirimlerin, yapılan iř ile mevcut beceriler arasındaki dengenin, farkındalık ve eylemin birleřtirilmesinin ve genel bir kontrol algısının akıř halinin diđer özellikleri olduđunu ortaya koydular. Akıř literatürü akıřın bir psikolojik hal olarak özelliklerini geniř bir biçimde arařtırmıř, buna karřın akıř deneyimini yordayan ve süreklilik arz eden deđiřkenlerin dođası üzerine arařtırmalar kısıtlı kalmıřtır. Ototelik kiřilik (Csikszentmihalyi, 1990) terimi akıř deneyimini yařamayı ve sürdürmeyi kolaylařtıran karakter özellikleri birliđi olarak tanımlanmıřtır. Ototelik kiřiliđe iliřkin yapılan kısıtlı sayıdaki ampirik arařtırmalar ve olgusal tartıřmalar temelde bu karakter özelliklerine sahip kiřilerin yaptıkları iři dıřsal bir ödülde ziyade iřin kendisinden kaynaklanan doyum iin yaptıklarını göstermektedir. Buna ek olarak, yapılan iřin zorluđu ile sahip olunan beceri seviyesinin eřleyebilme eđilimi önemli bir ototelik kiřilik bileřenidir. Ancak literatürde henüz akıř sıklıđını, řiddetini, akıřa girme kolaylıđını ve řiddetini yordayan karakter özelliklerine iliřkin arařtırmalar detaylandırılmamıřtır. Buna ek olarak, akıř literatürü ototelik kiřiliđin ölçümüne iliřkin bir araçtan mahrumdur. Yakın gemiřte, akıřa girme ve sürdürme kolaylıđını, akıř řiddetini ve akıř sıklıđını yordayıcı rolleri bakımından 5 faktörlü kiřilik modelleri incelenmiřtir. Bu arařtırmalarda genel olarak, nevroklikliđin, dıřa dönüklüđün, uyumluluđun, ve sorumluluđun bazı alt boyutlarının akıřı yordadıđı gösterilmiřtir. Ancak yapılan arařtırmaların sonuçları birbiriyle kıyaslandıđında bazı tutarsızlıklar görölmektedir. Bu nedenle, bu doktora tezi kapsamında akıř sıklıđını, akıřa girmedeki ve sürdürmedeki kolaylıđı yordayan ve olumlu kiřilik özelliklerinin ve eđilimlerin bir araya getirilmesinden oluřan ototelik kiřilik envanterinin inřa edilmesi amalanmıřtır.

Ototelik kişiliğe ilişkin yapılan önceki olgusal tartışmalarda, bazı kişilik özellikleri ve eğilimlerin akışı yordamadaki önemi vurgulanmıştır. Bu özelliklerden en önemlisi olarak, kişilerin beceri seviyelerine uygun düzeyde zorluk sağlayan görevleri bulmaları gösterilmiştir. Yapılan çalışmalarda, algılanan zorluğun beceri seviyesini çok aşması halinde göreve ilişkin ilginin kaybolduğu, görevden alınan keyfin ortadan kalktığı gözlenmiştir. Buna ek olarak, düşük zorluk seviyesi olan işlerinde benzer şekilde kişilerde heyecan uyandırmadığı ve onları güdülemediği ortaya konmuştur. Yüksek beceri seviyesi ve yüksek görev zorluğu bir araya geldiğinde gerek işten alınan hazzın gerekse işe olan ilginin oldukça yüksek olduğu görülmüştür. Beceri – zorluk seviyesi uyumuna ek olarak, aktif bir zorluk arayışının da mevcut beceri ve yetenekleri arttırıcı potansiyelinden ötürü ototelik kişiliğin önemli bir bileşeni olduğu ifade edilmektedir. Aktif bir zorluk arayışının, başarıya temel bir rol biçen durumlarda akış modelinin daha alakalı olduğu düşüncesi literatürde tartışılmıştır. Merak da temel bir insan olumlu niteliği olarak, ototelik kişiliğin boyutlarından birisi olarak tartışılmıştır. Yüksek bir merak seviyesinin, görevinden kendisinden elde edilen içsel bir motivasyonla ilişkili olduğu düşünülmektedir. Öte yandan, anda olabilmenin de bağlamsal farkındalığı ve hassasiyeti arttırarak keyif almayı sağlayan bir ototelik kişilik özelliği olduğu vurgulanmaktadır. Sebatarlık ve haz alabilme yetisi de, kişilerin yorgunluk ve engellenmişlik hislerini yaşamadan görevlerini sonlandırabilmelerini sağlayan bir ototelik özellik olduğu literatürde tartışılmıştır. Dikkati dar bir alana odaklayabilme eğilimi ototelik kişiliğin temel boyutlarından birisidir. Akış deneyimini karakterize eden temel boyutlardan birisi olarak dikkat yöneltebilme eğilimi, ototelik kişilik için önemlidir. Yüksek ayrışma ve bütünleşme bir öz karmaşıklık işareti olarak, işbirliği eğilim bağımsız bir benliğin ve yardım almaya ve vermeye açıklığın belirtisi olarak, ve aşkınlık anlam arayışının hayattaki eylemlere yönelmesinin bir göstergesi olarak ototelik kişilerin temel özellikleri olarak literatürde tartışılmıştır.

Bu çalışmada, daha önce olgusal olarak yapılan ototelik kişilik özelliklerini bir arada ölçebilen ve akış eğilimini yordayabilen bir ototelik kişilik envanteri inşa edilmiştir. Açıklayıcı faktör analizi ve güvenilirlik geçerlilik çalışması için 652 kişiden oluşan bir öğrenci örnekleme, test-tekrar test çalışması için 652 kişilik örneklemden elde edilmiş 222 kişilik bir öğrenci örnekleme, ve doğrulayıcı faktör

analizi için ise 379 kişiden oluşan bir genel toplum örneklemini kullanılmıştır. Ototelik kişilik envanteri maddelerinin ve kuramsal altyapısının oluşturulmasında, klinik ve sosyal psikoloji alanlarında doktora tez çalışmalarına devam eden 5 adayın katıldığı yapılandırılmış bir odak grubu çalışmasıyla ototelik kişilik boyutları ve her boyuta işaret eden sıfatlar tanımlanmıştır. Bu çalışmadan sonra araştırmacı, elde edilen sıfatlarla 9 faktöre işaret eden 110 madde oluşturmuştur. Yapılan açımlayıcı ve doğrulayıcı faktör analizleri sonucunda 9 faktör ve 45 maddeden oluşan ototelik kişilik envanteri, akış eğilimini eşsiz ve yüksek bir biçimde yordayan bir envanter olarak ortaya çıkmıştır. Çalışma bulguları ototelik kişilik envanterinin yeterli geçerlilik ve güvenilirlik değerlerine sahip olduğunu göstermiştir. Bütün ototelik kişilik boyutlarının birlikte değerlendirilmesi sonucu elde edilen genel ototelik kişilik katsayısının duygusal dengesizlikle olumsuz bir ilişkisi olduğu, buna karşın dışa dönüklük, sorumluluk, uyumluluk ve deneyime açıklıkla olumlu ilişkiler gösterdiği bulunmuştur. Olumlu duygulanım, mutluluk, akış, umut, anlam varlığı, merak, yaşam doyumu değişkenlerinin ototelik kişilikle orta seviyede güçlü olumlu ilişkileri ortaya çıkmıştır. Buna ek olarak, depresyon, sürekli kaygı ve olumsuz duygulanım ototelik kişilikle olumsuz ilişki göstermiştir.

Ototelik Kişilik Envanteri'nin geliştirilmesinin, gerek akış araştırmalarına gerekse pozitif psikoloji araştırmalarına önemli katkı yapması umulmaktadır. Yapılan çalışma ototelik kişilik olgusunun işevuruk tanımının yapılmasına dair literatürdeki ilk çalışmadır. Ototelik kişilerin özellikleri, psikolojik halleri, gelecek yönelimleri, ve yaşam doyumlarına ilişkin temel bulgular araştırma kapsamında değerlendirilmiştir.

#### **4. Ana Çalışma**

Doktora tezinin bu kısmında, ototelik kişilik yapısının, kişilerin güçlü yönleri, yaşadıkları psikolojik stres ve kişisel gelişim yönelimiyle ilgisinin çeşitli araştırma soruları bağlamında ve kavramsal modeller vasıtasıyla incelenmesi amaçlanmıştır. Bu araştırmayı gerçekleştirmedeki temel çıkış noktası olumlu insan özellikleri ve iradi süreçlere ilişkin vurgunun yeterince yer edinmediği güncel klinik psikoloji paradigmasıyla pozitif psikoloji perspektifini bütünleştirme gereksinimidir. Bu sayede, olumlu kişisel özelliklerin varlığının psikolojik stresle ilişkisinin doğası, ototelik kişiliğin yaşam olayları karşısında geliştirilen stres tepkilerine karşın olası



etkisinin incelenmesi, ve psikolojik stresin üstesinden gelmede kullanabilecek olası kişisel güçlerin neler olabileceğine ilişkin ön araştırma niteliğinde bir bulgular tartışması yapılması hedeflenmiştir. Pozitif psikoloji araştırmaları 3 farklı temelde öbekleşmiştir: zevkli hayat, iyi hayat ve anlamlı hayat. Zevkli hayat olumlu duyguların ve hazzın mevcut olduğu bir hayatı, iyi hayat angajmanın yüksek olduğu bir hayatı, anlamlı hayat ise kendilik, aidiyet ve yaşam anlamına ilişkin olumlu bir hissiyatın kendinden daha büyük ve kalıcı bir varlığın parçası olmakla ortaya çıktığı bir hayatı tanımlamaktadır. Bu perspektiften bakıldığında, akış deneyimi yaşamının zevkli, iyi ve de anlamlı hayat içinde olumlu katkıları olacağı söylenmektedir. Ototelik kişilerin akış deneyimi esnasında yaşadıkları haz hedonistik zevklerden öte çeşitli, değişken ve karmaşıktır. Üstelik hedonistik zevklerin aksine, olumlu duygulanımı da arttırabilir. Buna ek olarak, ototelik kişilerin akış deneyimi esnasındaki yüksek iş angajmanı iyi bir hayat için gereksinilen genel hayat angajmanı ile ilişkili olabilir. Son olarak, ototelik kişilik özellikleri anlamlı bir hayatı yordamakta başarılı olabilir. Hayat ilişkin genel bir merak, içsel bir motivasyon, başarı ihtiyacı, yüksek öz-karmaşıklık, bağımsızlık ve işbirliği kurabilme anlamlı bir hayatı yordayabilir.

Mutluluk psikolojik iyilik halinin en önemli işaretçilerinden birisi olarak ele alınmaktadır. Mutluluğun bedensel ya da psikolojik zevkler yaşamakla, hayat angajmanıya, olumlu ilişkiler kurmakla ya da anlamlı bir hayat yaşamakla elde edilebileceği literatürde tartışılmaktadır. Benzer olarak, merak da yenilikleri, farklılıkları, ve zorlukları keşfetmeye ve onlara kucak açmaya dair önemli bir insan güçlü yönü olarak değerlendirilmektedir. Merakın da farklı deneyimleri mümkün kılmasıyla hazzı, hayata olan ilgiyi artırmasıyla iyi bir hayatı, ve planlanmamış fırsatları ve deneyimleri başarılarla ve becerilere dönüştürmesiyle anlamlı bir hayatı yordayabileceği tartışılmaktadır. Anlamlı bir hayat yaşamak insan varoluşsal çabasının önemli bir kanalı olarak istikrar ve denge unsurudur. Amaçlılık, değerlere sahip olmak, öz-yetkinlik algısı, ve dengeli-istikrarlı bir öz-değer anlamlı bir hayat için doyurulması gereken dört temel ihtiyaçtır.

Depresyon, sürekli anksiyete, endişe ve obsesif kompulsif belirtiler bu doktora tezi kapsamında ototelik kişilikle ilişkileri bağlamında incelenen psikolojik stres göstergeleri olarak ele alınmıştır. Depresyon, hoş olmayan deneyimlerin ertesinde yaşanan hayal kırıklığı, üzüntü, ve benzeri olumsuz duygularla karakterize

olan geçici ya da görece uzun süren duygu durumlarını tarif etmek için kullanılan bir terimdir. Depresyon, olumsuz duygu durum neticesinde işlevselliğin ve çevreye olan ilginin azaldığı, hayattan keyif almanın güçleştiği, uyku kalitesinin belirgin biçimde etkilendiği, yorgunluk ve enerji azlığından yakınılan bir psikolojik haldir. Düşünce boyutuna bakıldığında, depresif kişilerin düşük öz-değer hissettikleri, suçluluk hissettikleri, düşünmekte ve dikkati yoğunlaştırmakta zorlandıkları, ölüme ilişkin düşüncelerinin belirginleştiği görülmektedir. Depresyon gibi kaygı da bireylerin hayatını güçleştiren psikolojik stres kaynaklarından birisidir. Kaygıyı geçmiş ya da gelecekteki olayların korku ve endişe ekseninde değerlendirilmesi ya da kendilikle ilgili ruminasyonlara bağlı olarak ortaya çıkan ve genellikle bedensel belirtilerle eşlik edilen bir olumsuz duygu kombinasyonu olarak tanımlayabiliriz. Kaygı, kişiler gerçek ya da algılanan bir tehdit hissettiklerinde çeşitli seviyelerde ortaya çıkabilecek bir duygusal reaksiyondur. Normal seviyelerde kaygı kişinin işlevselliğine katkıda bulunurken, kaygının yüksek seviyeleri yaşam kalitesini ve işlevselliği belirgin olarak bozmaktadır. Öte yandan, endişe olası gelecek tehditler ve tehlikelere dair, kontrol edilemeyen, olumsuz ve yoğun duygunun eşlik ettiği düşünsel ve imgesel bileşenleri olan bilişsel bir kaygı boyutudur. Endişenin, duygusal ve bilişsel süreçlere çeşitli etkileri olduğu bilinmektedir. Olumlu duygulanımı azalttığı, daha yüksek seviyede kaygı ortaya çıkardığı, dikkati ve düşünmeyi olumsuz etkilediği tartışılmıştır. Obsesyonlar hoş karşılanmayan, kontrol edilemeyen, süregelen ve belirgin strese yol açan düşünce, imge ve duygulara verilen addır. Obsesyonlar stres ve endişeye yol açan zihinsel yığınlar iken, kompulsif davranışlar bu obsesyonların yol açtığı stresi ortadan kaldırmak için pratik edilen tekrarlayıcı, aşırı ve anlamsız aktiviteleri ve zihinsel pratikleri tanımlamaktadır. Obsesyonlar ve kompulsiyonlar da belirgin psikolojik stres kaynakları olarak değerlendirilmektedir.

Depresyon, anksiyete, endişe, obsesyon ve kompulsiyonlar çeşitli psikolojik stres kaynakları olarak akış deneyimini belirgin olarak sekteye uğratabilecek durumlar olarak düşünülmektedir. Bu nedenle, ototelik kişilik boyutlarıyla ilişkileri doktora tezi kapsamında incelenmiştir.

Kişisel gelişim yönelimi, kişisel gelişime yönelik işleyişler bütünü ya da süreçleri tanımlamak için kullanılan bir kuramsal yaklaşımdır. Bahsedilen işleyişler bütünü davranışsal ve bilişsel bileşenlerin bir araya geldiği bir beceriler kümesi olarak kuramsallaştırılmıştır. Kuram çerçevesinde değişime hazırlık, planlılık,

kaynakları kullanma, ve amaçlı davranış olarak 4 temel beceri kümesinden bahsedilmektedir. Kişisel gelişim yönelimi yaklaşımı becerilerin strateji kapsamında kullanılmasıyla ve kişisel gelişimi kapsamıyla alandaki benzer kuramsal yaklaşımlardan ayrılmaktadır. Görece yeni bir kuramsal yaklaşım olan kişisel gelişim yöneliminin ototelik kişilik boyutlarıyla ilişkisine dair bir yazın bulunmamaktadır. Bu tez kapsamında, kişisel gelişim yöneliminin ototelik kişilik özellikleriyle ilişkisi de incelenmiştir.

Araştırma bulguları ototelik kişiliğin, olumlu duygular ve karmaşık hazlarla karakterize zevkli hayatla, yüksek angajmanla karakterize iyi hayatla, ve kendinden daha süreğen ve dengeli bir yapının parçası olmakla karakterize olan anlamlı hayatla ilişkili olduğunu göstermiştir. Buna ek olarak, ototelik kişiliğin çeşitli durumsal bağlamlarda akış eğilimini yordadığı gösterilmiştir. Ototelik Kişilik Envanteri, pozitif psikoloji literatüründe mutluluk değişkenindeki varyansın kişilik boyutları tarafından açıklanan kısmın tamamını açıklamıştır. Bu bulgu, ototelik kişiliğin 5 faktörlü kişiliği çeşitli yönleriyle kapsadığını göstermektedir. Ototelik kişiliği ayrışma & bütünleşme boyutu mutluluğu en çok yordayan boyut olmuştur. Akış kuramında daha önce varsayılan aktif angajman ve mutluluk ilişkisi çalışma sonucunda gösterilmiştir. Hayat anlamının varlığı ve ototelik kişilik boyutları arasındaki ilişki incelendiğinde, ototelik kişilik özelliklerinin anlam varlığını yordadığı görülmüştür. Boyutlar içerisinde, sebatkarlık ve haz alabilme, dikkati yoğunlaştırabilme, ve bütünleşme ayrışma boyutları anlam varlığını en güçlü şekilde yordayanlar olmuşlardır. Merak ve ototelik kişilik arasındaki ilişki incelendiğinde, ototelik kişiliğin zorluk arama, sebatkarlık ve haz, ve aşkınlık boyutları merakı yordayan boyutlar olarak bulunmuştur. Akış eğilimi ve ototelik kişilik arasındaki ilişkiye dair bulgular ototelik kişilerin işyerinde, ev işlerinde, ve serbest zaman aktivitelerinde ototelik olmayan kişilere göre belirgin olarak daha fazla akış eğilimine sahip olduklarını göstermiştir. Akış eğilimini, sırasıyla ototelik kişiliğin dikkati yoğunlaştırabilme, sebatkarlık & haz, ayrışma & bütünleşme, zorluk arama, merak, ve anda olma boyutları açıklamıştır.

Ototelik kişilik ve psikopatoloji değişkenleri arasındaki ilişkiler incelendiğinde ototelik kişiliğin depresyon, endişe, sürekli kaygı, ve obsesif kompulsif semptomatoloji ile olumsuz ilişkileri olduğu gözlemlenmiştir. Depresyonun dikkat, ayrışma & bütünleşme, sebatkarlık & haz, beceri – zorluk

dengesi, işbirliği ve anda olabilme boyutlarıyla olumsuz ilişki işaret ettiği gözlenmiştir. Sürekli kaygının dikkat, sebatkarlık & haz, ayrışma & bütünleşme boyutlarıyla olumsuz ilişki gösterdiği saptanmıştır. Endişenin dikkat, beceri – zorluk dengesi, zorluk arama, bütünleşme & ayrışma, aşkınlık boyutlarıyla olumsuz ilişkisi saptanmıştır. Obsesif kompulsif belirtiler ise sırasıyla ototelik kişiliğin bütünleşme & ayrışma, beceri – zorluk dengesi, işbirliği, zorluk arama boyutlarıyla olumsuz ilişki göstermiştir.

Kişisel gelişim yönelimi ve ototelik kişilik boyutları arasındaki ilişki incelendiğinde, ototelik kişilerin kişisel gelişim yönelimi boyutlarında ototelik olmayanlara göre anlamlı olarak yüksek skorlar elde ettiği görülmüştür. Değişime hazırlık boyutu, planlılık boyutu, kaynakları kullanabilme boyutu, ve amaçlı davranış boyutu ototelik olmayan, orta seviyede ototelik, ve yüksek derecede ototelik kişiler arasında anlamlı olarak farklılaşmıştır.

Test edilen kavramsal modeller ve aracı değişkenli regresyon analizleriyle birinci düzeyde keşfedilen ilişkiler kapsamlı bir biçimde test edilmiştir. Kavramsal model testlerini ve aracı değişkenli regresyon analizlerini özetlemek gerekirse ototelik kişiliğin mutluluk, hayat anlamı varlığı, merak, akış eğilimiyle, ve kişisel gelişim yönelimiyle olumlu; psikopatolojilerle olumsuz ilişki gösterdiği gözlenmiştir.

Araştırma bulguları birlikte değerlendirildiğinde, araştırma bulgularının gelişimsel bağlama, klinik uygulamalara ve gelecek araştırmalara olası katkıları değerlendirilmektedir. Kişilik özelliklerinin görece süregelen, durgun, ve sabit olduğu düşünüldüğünde erken dönem olumsuz yaşam deneyimlerinin ototelik kişilik gelişimine ket vurabileceği düşünülmektedir. Bu nedenle gelişimin çoğunlukla gerçekleştiği aile ve okul ortamında ototelik kişiliği destekleyecek yaklaşımların benimsenmesi önem kazanmaktadır. Çocuğun içsel merakını destekleyen, karmaşık bir öğrenme ortamı sunan, becerilerine uygun zorluklarda görevler sağlayan, geri-bildirim sağlayan, ve duygusal açıdan dengeli bir aile ortamı sağlayan ebeveynlik tarzının ototelik kişilik gelişimine faydası olacağı düşünülmektedir. Benzer şekilde, okul ortamında çocuklara sağlanan sistematik ve aşamalı zorluklar, işbirliğinin özendirilmesi, ve dengeli olumlu geribildirim sağlanması okul ortamını ototelik kişilik gelişimini yeşertmek için önemli bir bağlam haline getirmektedir.

Yapılan araştırmanın klinik uygulamalar olası katkısı değerlendirildiğinde, Ototelik Kişilik Envanterinin alana takdimini vurgulamak gereklidir. Envanter danışanların olumlu özelliklerini saptamak için normatif bir araç olarak kullanılabilir. Bu sayede, danışanların güçlü ve geliştirilebilir tarafları daha sistematik bir şekilde tanımlanabilir ve gelişimleri takip edilebilir. Psikopatolojilerin daha iyi anlaşılabilmesi için de zengin bir veri bu kaynaktan elde edilebilir. Olumlu kişilik özelliklerinin güçlendirilmesini amaçlayan klinik müdahaleler geliştirilebilir. Akış deneyimini artırmak psikolojik stresin ortadan kalkmasına yardımcı olabilir, bu nedenle akış deneyimini arttırmayı hedefleyen klinik müdahalelerin de faydalı olabileceği düşünülmektedir.

## 5. Sonuçlar

Bu araştırmayla, ototelik kişilik boyutlarının işevuruk tanımının yapılması ve ölçümünün gerçekleştirilmesiyle klinik psikoloji alanında olumlu insan özelliklerinin de değerlendirilmesinin mümkün kılınması amaçlanmıştır. Araştırmanın bulguları ilksel seviyededir; dolayısıyla gelecek araştırmalarda ototelik kişiliğin psikolojik stres üstündeki tampon etkisi, psikolojik bozuklukların açıklanmasında kullanımı, ve klinik müdahalelerin gelişimine odaklanması tavsiye edilmektedir. Psikoterapilerin uzun dönem etkinliklerini inceleyen ampirik araştırmalar, terapistin bağlı kaldığı terapi okulundan bağımsız olarak remisyon ve relaps frekansları arasında anlamlı bir farka işaret etmemektedir. Bu benzerliğin, çağdaş terapi tekniklerinin insan iradi süreçlerine ve olumlu özelliklerine vurgusunun olmamasından kaynaklandığı düşünülmektedir. İnsan güçlü yönlerine ve olumlu deneyimlerine odaklanılmasının uzun dönem terapi etkinliğinde farklı sonuçlar doğuracağı düşünülmektedir. Buna ek olarak, araştırma kapsamında dünya pozitif psikoloji literatüründe kullanılan 4 ölçeğin Türkiye kültürüne adaptasyonu gerçekleştirilmiştir. Bu ölçeklerin pozitif klinik psikoloji araştırmalarının Ülkemizdeki gelişimini desteklemesi umulmaktadır.

Bu çalışma, olumsuz insan deneyimini azımsamamaktadır. Ancak, olumsuz ve olumlu deneyimlerin ayrı bir biçimde çalışılmasının anlamsızlığına vurgu yapılmaktadır. Pozitif psikoloji ve klinik psikoloji alanlarının birleştirilmesinin, klinik psikolojiyi daha çok danışan odaklı, daha az hastalık temelli, daha duyarlı, ve insan olumlu deneyimini kavramaya daha açık hale getirmesi umulmaktadır.

## Appendix V: Tez Fotokopisi İzin Formu

### TEZ FOTOKOPİSİ İZİN FORMU

#### ENSTİTÜ

Fen Bilimleri Enstitüsü

Sosyal Bilimler Enstitüsü

Uygulamalı Matematik Enstitüsü

Enformatik Enstitüsü

Deniz Bilimleri Enstitüsü

#### YAZARIN

Soyadı : Yarar

Adı : Orhan Ferhat

Bölümü : Psikoloji

**TEZİN ADI** (İngilizce) : Autotelic Personality: Links with Flow Propensity, Personal Strengths, and Psychopathology.

**TEZİN TÜRÜ** : Yüksek Lisans

Doktora

1. Tezimin tamamından kaynak gösterilmek şartıyla fotokopi alınabilir.

2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir.

3. Tezimden bir bir (1) yıl süreyle fotokopi alınmaz.

**TEZİN KÜTÜPHANEYE TESLİM TARİHİ**: 16.10.2015

## **Appendix W: CURRICULUM VITAE**

### **PERSONAL INFORMATION**

Surname, Name: Yazar, Orhan Ferhat  
Nationality: Turkish (TC)  
Date and Place of Birth: 1 February 1984 , Karamürsel  
Marital Status: Single  
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### **EDUCATION**

<b>Degree</b>	<b>Institution</b>	<b>Year of Graduation</b>
PhD	METU Clinical Psychology	2015
MS	METU Clinical Psychology	2011
BS	METU Psychology	2007

### **FOREIGN LANGUAGES**

Advanced English