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Clinical Psychology**

**INTEGRATING CLINICAL PSYCHOLOGY TO MOTIVATION IN  
WORK LIFE: DEVELOPMENT AND VALIDATION OF RATIONAL  
EMOTIVE SELF DETERMINATION SCALE FOR WORKERS**

**A Dissertation**

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Thesis directed by:  
**PROF. DR. PINAR TINAZ**

**MASTER'S THESIS**

**Murat ARTIRAN  
175180250**

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## **ACCEPTANCE AND APPROVAL**

**To the Institute of Social Sciences of Istanbul Arel University**

**The undersigned, appointed by the dean of the Graduate School,  
have examined the dissertation entitled**

**INTEGRATING CLINICAL PSYCHOLOGY TO MOTIVATION IN  
WORK LIFE: DEVELOPMENT AND VALIDATION OF RATIONAL  
EMOTIVE SELF DETERMINATION SCALE FOR WORKERS**

presented by Murat Artıran,  
a candidate for the degree of master of science in clinical psychology,  
and hereby certify that, in their opinion, it is worthy of acceptance.

Examining Committee Members

[Title, Name and Surname]

(Supervisor)

Chair: [Title, Name and Surname]

Member : [Title, Name and Surname]

Member : [Title, Name and Surname]

I confirm that the above signatures belong to the faculty members mentioned.

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## ETİK BEYANI

Yüksek lisans tezi/doktora tezi/dönem projesi olarak sunduğum “Klinik Psikolojiyi Çalışma Hayatında Motivasyona Entegre Etmek: Çalışanlar için Rasyonel Duygucu Öz Kararlılık Ölçeğinin Geliştirilmesi ve Geçerlilik ve Güvenirlilik Çalışması” başlıklı İstanbul Arel Üniversitesi Tez Yazım Kurallarına uygun olarak hazırladığım bu tez çalışmasında

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## **DEDICATION**

Tezimi annem Şahsene Artıran’a hediye ediyorum.

This thesis is dedicated to my mom Şahsene Artıran.

## **ACKNOWLEDGEMENTS**

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To my wife Aynur– thank you for your patience and understanding during this study. Finally, I would like to thank all the participants who took part in this study, their honesty and contribution is greatly appreciated.

## **ABSTRACT**

# **INTEGRATING CLINICAL PSYCHOLOGY TO MOTIVATION IN WORK LIFE: DEVELOPMENT AND VALIDATION OF RATIONAL EMOTIVE SELF DETERMINATION SCALE FOR WORKERS**

**Murat Artıran**

**Thesis for Master of Science in Clinical Psychology**

**Supervisor: Pof. Dr. Pınar Tınaz**

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This study is a scale development study for the use of clinical psychology in business life. The scale established on assumptions of Rational Emotive Behavior Theory (REBT) and Self Determination Theory (SDT). The scale measures irrational beliefs on three basic psychological needs (autonomy, competence, relatedness) of individuals. The idea of the combination explains human cognition in a different perspective: irrational beliefs and basic psychological needs has been evaluated in same track in order to collect data about how people unhealthy thinking styles on the psychological needs interfere their work motivation. The scale can be used in work places to measure irrational beliefs of their autonomy, competence and relatedness needs. Basic psychological needs are important concepts on human motivation, especially in work environment. What are the cognitive factors prevent workers being motivated toward their tasks and jobs? The measure partly answers the question. Outcomes of development of Rational Emotive Self Determination Scale for Workers (RES-D-W) study provided promising results.

The psychometric properties of the 16-item RES-D-W were examined through 7 phases with assessing the factor structure of the RES-D-A with exploratory factor analysis and confirmatory factor analysis, the reliability of the scale, test retest analysis, and construct validity. 607 participants were recruited from city of Istanbul and Ankara for this research. Analyses confirmed that theoretical expectations and yielded positive outcomes. According to outcomes RES-D-W is



a reliable and valid scale. The results were discussed with regard to practice, arguing that an examination of work life motivational and well-being problems through the integrated lens theoretical principles of REBT and SDT may provide an integrative perspective.

*Keywords: Work, scale, motivation, beliefs, psychological needs, REBT, SDT*

## ÖZET

# KLİNİK PSİKOLOJİYİ ÇALIŞMA HAYATINDA MOTİVASYONA ENTEGRE ETMEK: ÇALIŞANLAR İÇİN RASYONEL DUYGUCU ÖZ KARARLILIK ÖLÇEĞİNİN GELİŞTİRİLMESİ VE GEÇERLİLİK VE GÜVENİRLİLİK ÇALIŞMASI (RDM-Ç)

**Murat Artıran**

**Klinik Psikoloji Yüksek Lisans Tezi**

**Danışman: Prof. Dr. Pınar Tınaz**

**Ağustos, 2018-xxx sayfa**

Bu çalışma klinik psikolojinin iş hayatında kullanılmasına yönelik olarak bir ölçek geliştirme çalışmasıdır. Sözkonusu ölçek Rasyonel Duygucu Davranışçı Terapi (RDDT) ve Öz Kararlılık (Belilenim) Kuramlarının (ÖKK) varsayımları temellerinde oluşturulmuştur. Ölçek üç temel psikolojik ihtiyaç (özerklik, yeterlilik, aidiyet ihtiyaçları) kapsamında irrasyonel (akılcı olmayan) inanışları ölçmektedir. Bu iki kuramın bileşkesindeki fikir insan bilişlerini farklı bir açıdan açıklamaktadır: insanların temel psikolojik ihtiyaçları konusunda çalışma hayatlarında kendilerinin motivasyonlarını engelleyen sağlıksız düşünce tarzları, irrasyonel inanışlar ve temel psikolojik psikolojik ihtiyaçlarla aynı boyutta değerlendirilmektedir. Ölçek iş yerlerinde özerklik, yeterlilik ve aidiyet ihtiyaçları konusunda irrasyonel inanışları ölçmek için kullanılabilir. Çalışanların görevlerini icra ederken ve mesleklerini uygularken onların motive olmalarına mani olan bilişsel faktörler nelerdir? Bu ölçme aracı bu soruya kısmi olarak cevap vermektedir. Çalışanlar için Rasyonel Duygucu Öz Kararlılık Ölçeği (RDÖK-Ç) geliştirme araştırması sonuçları olumlu çıkmıştır.

16 maddelik RDÖK-Ç ölçeğinin psikometrik değerleri 7 aşamada test edilmiştir; bu aşamalarda faktör yapısı analizleri açımlayıcı faktör

analizi ve doğrulayıcı faktör analizi, güvenilirlik analizleri, test tekrar test analizleri, yapı (kriter) geçerliliği gerçekleştirilmiştir. Araştırmaya 607 katılımcı gönüllü olarak İstanbul ve Ankara illerinden katılmıştır. Analizler kuramsal beklentileri doğrulamış ve olumlu sonuçlar vermiştir. RDÖK-Ç'nin geliştirilmesine yönelik bu araştırmanın sonuçlarına göre ölçeğin güvenilir ve geçerli bir ölçek olduğu söylenebilir. Sonuçlar uygulamalar ve çalışma hayatında motivasyon ve psikolojik iyi oluş haline etkiler açısından yorumlanmıştır. Böylece RDDT ve ÖKK prensiplerinin birlikte ele alınması mümkün görünmektedir. Ancak gelecek çalışmalarda bu yöndeki niceliksel ve niteliksel araştırmalara ihtiyaç vardır.

**Anahtar Kelimeler:** *Çalışma hayatı, ölçek, motivasyon, inanışlar, psikolojik ihtiyaçlar, RDDT (ADDT), ÖKK (ÖBK)*

## FOREWORD

Clinical psychology, which focuses on diagnosis and treatment, has a risky point that it can kept away from recent developments in psychology. In psychology science, it recent research problems are not ‘how we treat the psychopathology’ but ‘how we prevent psychopathology’. It is therefore worthwhile that the aim of this study is on the motivations, satisfaction and psychological well-being of the people in the working life. Rational Emotive Behavioral Theory and Self-Determination Theory have been integrated in this study. Scientists who are interested in both Rational Emotive Behavioral Therapy and Self-Determination Theory are working intensively on preventive practices. In treating psychopathology, it is important to improve mental health as much as it is important to help clients by identifying the elements and conditions that contribute to human well-being and motivation. The aim of this study is to contribute to the use of clinical psychology in working life.

## ÖNSÖZ

Tanı koyma ve tedavi üzerine yoğunlaşan klinik psikoloji günümüzdeki son psikoloji bilimi gelişmelerinden uzak kalabilmektedir. Artık sorunlar olduktan sonra değil olmadan önceki kısımda ne yapılabileceği dünya biliminde araştırılmaktadır. Dolayısıyla bu çalışmanın çalışma hayatındaki insanların motivasyonları, tatminkarlıkları ve psikolojik iyi oluş halleri üzerinde olması değerlidir. Rasyonel Duygucu Davranışçı Kuram ile Öz Belirlenim (Kararlılık) Kuramı’nın bir araya getirilmesi bu çalışmada hedeflenmiştir. Hem Rasyonel Duygucu Davranışçı Terapi hem de Öz Belirlenim Kuramı üzerinde kafa yoran bilim insanları önleyici uygulamalar konusunda yoğun bir şekilde çalışmaktadır. Psikopatolojinin tedavisinde ruh sağlığını iyileştirmek önemli olduğu kadar, insan mutluluğunu ve motivasyonunu sağlayan unsurları ve koşulları belirleyerek danışanlara yardımcı olmak da en az tedavi kadar önemli hale gelmeye başlamıştır. Bu çalışmanın amacı çalışma hayatında klinik psikolojinin kullanımına katkıda bulunmaktır.

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## **CHAPTER I**

### **INTRODUCTION**

#### **1.1. The Aim of the Current Study**

Psychological ‘well-being’ and ‘healthy minds’ are important in working populations. To optimize the prevention of mental health problems in a working environment integrating the knowledge used in clinical psychology to a work environment is important. Thus, developing scales for this purpose will be helpful. The main purpose of this study is to develop a scale to be used to measure functional and dysfunctional thoughts & beliefs and motivation in working life. Bringing Rational Emotional Behavioral Therapy (REBT) and Self-Determination Theory (SDT) approaches together may provide an economical and effective model for work related stresses. This new concept, which can be used to determine the irrational beliefs in the core of REBT theory on three basic psychological needs (autonomy, competence, relatedness) mentioned in the SDT, is the ‘irrational beliefs of autonomy’, ‘irrational beliefs of competence’ and ‘irrational beliefs of relatedness’ it defines. Research on irrational beliefs and three basic psychological needs are common in psychology literature discussed separately under their own theoretical structures. This research revealed a new concept that was created by the predictions of these two conceptualizations: irrational beliefs in basic psychological needs.

Mental health problems, both pathological (e.g., major depression, anxiety disorders) and life related stresses (e.g., emotional disturbances), are extremely normal in working populations (LaMontagne, Martin, Page, Reavley, Noblet, Milner, Keegel & Smith, 2014). Major mental health problems such as mood disorders, anxiety disorders, bipolar disorder and schizophrenia may occur due to work related stress (LaMontagne, Keegel & Vallance, 2007). Clinical psychology’s workplace interventions to address mental health problems in the workplace setting, particularly as a means to prevent, detect, and effectively prevent depression and

anxiety (Wang, Simon, Avorn, Azocar, Ludman, McCulloch, Petukhova & Kessler, 2007; Sanderson, Andrews, 2006). Work related stress may cause alcohol or drug addiction in some people. The use of alcohol or drugs may affect an employee's capacity to work safely and also their performance (Work-Related Alcohol and Drug Use, Internet source).

Creating a safe and healthy workplace plays an important preventative role for mental disorders and clinical psychology in general. Mental health problems and motivational disturbances are common in the working population. Clinical psychology is a wide-ranging area and cannot be limited to psychopathology alone. It consists of, or is interested in, many areas such as; mental disorders, relationship problems, developmental issues, traumas, neuropsychology, health psychology, emotions, cognitions, decision-making, self-actualization, motivation, personality, assessment, prevention, work life, social life etc.

### **1.2. The Research Problems:**

The main research questions include:

Is Rational Emotive Self-Determination Scale – Work Life (RES-D-W) Scale a reliable scale?

Is Rational Emotive Self-Determination Scale – Work Life (RES-D-W) Scale a valid scale?

Does the RES-D scale have a three-factor structure (irrational beliefs of autonomy, irrational beliefs of competence, irrational beliefs of relatedness)?

### **1.3 Importance of the Study**

The occurrence of mental and behavioral disorders related to working activity is common in all countries. Depression lies among one of the preliminary workplace problems for employees (E. A. P. A. Survey). Depression causes three percent of total short-term disability days in the workplace annually; most of these

employees are female (E. A. P. A. Survey).

Work life is considered to be not only an economical issue but also a social issue for most individuals. Work is a source of social life for most people (Davidson, Borg, Marin, Topor, Mezzina & Sells, 2005). A job or career contains a preventive effect for psychological disorders and is recommended as an element of recovery from mental health problems (Mykletun & Knudsen, 2009). Additionally, many mental health problems occur during unemployment (Mykletun & Knudsen, 2009).

There are 8760 hours in a year. According to the Organization for Economic Co-operation and Development (OECD) (Retrieved from OECD) the highest average working mans' hours is in Mexico with two thousand two hundred and fifty-five hours. The other countries with high working hours are Costa Rica (2212 hours) and South Korea (2069 hours). In Turkey the average is one thousand eight-hundred and fifty-five hours. In Belgium, which has one of the lowest working hours, an average of one thousand five-hundred and fifty-one hours of work are performed and in Switzerland one thousand five-hundred and ninety. As can be seen, approximately a quarter of the year of an adult's life time is spent in work. A huge amount of research has been done in psychology concerning a variety of occupations.

Psychological disorders are common in the work places, and possible negative impacts on workers and workplaces is huge (OECD report, 2012). Work life is central to the mental well-being and well-being of people as well as communities (Blustein, 2008). Labor stress studies have found psychological disorders because of overwork; some research investigated workers' performance-related stresses, fear of safety in work place and management problems of work organization in psychological disorders (Aittomäki, Lahelma, & Roos, 2003; Gillen, Baltz, Gassel, Kirsch, & Vaccaro, 2002; Dembe, Erickson, Delbos, & Banks, 2005; MacDonald, Harenstam, Warren, & Punnett, 2008).

Evaluating cognitive processes and motivations and developing a *clinical & occupational model* for work-life may help to prevent psychological disturbances in individuals, decrease work related injuries, maintain satisfaction of employees and increase productivity of the workforce. Moreover, psychopathological disorders will decrease in healthy work environments.

Individual report inventories of irrational thoughts are valuable for problem formulations and for providing and maintaining psychological health in general (Owings et al., 2013). Measuring three basic psychological needs on the basis of irrational beliefs may bring a new perspective to the studies in the area.

#### **1.4. Limitations**

- 1) Variables taken into account are limited to the three scales used in the study.
- 2) The data is limited to participants living in Istanbul. It was determined by means of a random sampling.
- 3) Although RESD-W's purpose to measure workers' irrational belief on three psychological needs sample is collected randomly without grouping of unemployees and employees.
- 4) Similarly, although data was collected from the sample, it is likely that some number of participants might have responded carelessly to the items due to lack of motivation on a scale like self-reporting.
- 5) Since the research is conducted with a cross-sectional design and not having randomised experimental manipulation it is limited.

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **2.1. Motivation**

Definitions of motivation can be divided into individual motivation and organizational motivation. In this research, the definition of motivation will be made from an individual perspective.

Motivation studies are mainly interested in why do we do things we do or what makes us start something we want to do? What are the needs and drives, instincts and arousals behind our behavior?

Motivation can be defined as a desire or wish that energizes and directs behavior. It is a power that starts and keeps individuals at work or that arouses people to attain their goals. Broussard and Garrison (2004) defined motivation as “the attribute that moves us to do or not to do something” (p. 106). According to Straw (1983), motivation is generally defined ‘as a condition that energizes and maintains the behavior’. According to Straw, motivation is hardly ever calculated directly, but is inferred from changes in behavior, or even attitudes (p. 302). Motivation is the amount of promptness of a being to chase an assigned objective and implies the determination of the nature and locus forces inducing the level of willingness (Golembiewski, 1973, p.597). Jones (1955) states that motivation is ‘concerned with how behavior gets started, is energized, is maintained, is directed, is ceased and what kind of personal response is present in the human being while all this is going on’ (p. 14). Motivation is an emotion or desire operating on a person’s determination and causing that individual to take action (Mathis and Jackson, 1982).

According to Bartol and Martin (1998), in order to reach a goal, motivation is a force that stimulates or gives direction to behavior. As Bartol, Martin Kreitner

and Kinicki (2004) suggested motivation is related to being goal-oriented. They suggested that we may think of motivation as behavior that produces the arousal, direction and persistence. Pointing out that importance of learning procedures such as arranging, monitoring, paying attention and association skills Turner (1995) perceives motivation to be cognitive processes rather than behavioral.

Seward and Seward (1937) pointed out drive as “an action of the total creature resulting from a constant disequilibrium”. Essentially, drive theory suggests that certain things are necessary for all human beings for the maintenance of their lives or for their psychological well-being. Disequilibrium is typically shaped by a lack of certain things such as water, food, and rest. Therefore, a drive reflects a “need” from the lack of a particular thing, such that a “need” can be characterized by, and characterized as, a lack of something that is essential to a person’s survival or psychological well-being.

Arnold, Robertson and Cooper (1991) posited three aspects of motivation: direction, effort and persistence. Direction refers to 'what the individual is attempting to do; effort refers to how strongly an individual is trying, persistence refers to how long an individual keeps on trying (Armstrong, 2006). We can assume that motivation can be maintained by determining goals, improving skills, optimistic thoughts, being passionate at and about work, emotional regulation and expressing power of will.

Mullins (2005) identified four common characteristics of motivation:

- 1) Uniqueness: Because every person is unique, motivation is an individual phenomenon.
- 2) Intentionality: Every person has the opportunity to choose her/his action.
- 3) Multifaceted: Resolution of how people get activated and what is the force behind their motivation is a requisite.
- 4) The purpose of motivational theories is to predict behaviour. They do not



focus on behavior or performance alone.

There are numerous concepts, views and ideas that have been proposed about motivation. For example:

- 1- Hedonism-based views: taking pleasure but avoiding pain (Bruton, 2016).
- 2- Instincts-based studies
- 3- Biological (drive reduction) necessities-based views
- 4- Low or high emotive arousals of motivation
- 5- Incentives approaches
- 6- Cognitive (thought processes) approaches of motivation
- 7- 'Needs' centered perspectives to motivation

Theories about motivation are categorized into three main groups: content, process and consolidation theories.

Content theories of motivation are Maslow's hierarchy of needs, Alderfer's ERG theory, Herzberg's two-factor, or motivation – hygiene theory, McClelland's acquired needs theory.

Process theories of motivation are equity theory, expectancy theory, goal-setting theory, social-cognitive theory and self-determination theory. Consolidation theories such as the ones of Thorndike and Skinner focus on the link between human behavior and its results.

## **2.2. Motivation Theories**

Since the early works of William James (1893), as well as William Isaac Thomas (1917), clinicians have been closely concerned with the motivational aspects of individual cognition, feeling, and behavior.

In 1917, one of the first researchers on motivation, William Isaac Thomas,

came up with the concept of “four wishes” when he was trying to analyze ‘what motivates’ people. These wishes are new experience, security, response, and recognition. Thomas considered that the “four wishes” were linked human behaviors. According to Thomas (Volkart, 1951) adventures and enthusiastic activations are called 'new experience', not willing to attempt unknown/unfamiliar activities is called 'security', receiving affection and appreciation from others is called 'response', being competent and reaching high status in the community is called 'recognition'.

Contrary to Thomas’ ideas, in 1938, Murray Miller (Klineberg, 1980) suggested that we should not focus on ‘wants or wishes’ because he thinks that people already know what they want, on the other hand, they are not aware of their needs. Therefore we should focus on ‘needs’ in psychotherapy.

Murray defined forty needs (13 physical and 27 mental and emotional):

Viscerogenic needs: Air, Water, Food, Sex, Lactation, Urination, Defecation, Harm-avoidance, Nox-avoidance, Heat-avoidance, Cold-avoidance, Sentience, Passivity.

Psychogenic needs: Acquisition, Blame-avoidance, Conservance, Affiliation, Order, Rejection, Retention, Nurturance, Construction, Succorance, Superiority, Play, Achievement, Cognizance, Recognition, Exposition, Exhibition, Aggression, Inviolacy, Contrariance, Infavoidance, Autonomy, Defendance, Similance, Counteraction, Abasement, Dominance. (Note: Murray’s defining terms are his own. For Additional explanations please go to the link:

[https://archive.org/stream/springer\\_10.1007-0-306-47676-2/10.1007-0-306-47676-2\\_djvu.txt](https://archive.org/stream/springer_10.1007-0-306-47676-2/10.1007-0-306-47676-2_djvu.txt))

Murray opened a new door to motivation studies with these ideas and researchers started to conduct studies to identify human needs.

In the 20<sup>th</sup> century, while studies on motivation were carried out at the individual level, on the other side, scientific studies were carried out from an

organizational and industrial point of view. These ideas based on motivational issues were not psychologically based but organizational focused and they had also become popular earlier. Some early ideas on work motivation were F.W. Taylor's rational-economic (1911) concept of motivation (sometime named as Taylorism). Taylor wasn't a psychologist, in fact, he was a mechanical engineer. He was actually interested in industrial efficiency. Taylor's view of motivation was based on time, productivity and financial rewards by seeing the human as a mechanical being. Taylor (1856-1915) was influenced by the philosopher Adam Smith who wrote the famous book *Wealth of Nations* (1776). Following Taylor's studies, Human Relations Movements and The Hawthorne Experiments by Elton Mayo who taking concept of motivation as a social concept and team works were presented to scientific literature. However, both scientist's work contribute to behavioral aspects of motivation, industrial productivity, management issues and leadership methods.

Throughout history, there have been theories that look at motivational processes from different angles. For instance, the main idea of expectancy-value motivation theories was focusing functionality of expectancy and importance and value of the tasks (Wigfield, Eccles, 2000). Attribution of motivation theories focuses subconscious causal explanations (attributions) and emotions which drive motivation for doing tasks (Weiner, 1985).

Social-cognitive motivation theories emphasize human learning and performance. Therefore, self-efficacy is the primary driver of motivation (Bandura, 1994, Dweck CS, Leggett EL., 1988). Goal-orientation motivation theories suggest that people will be motivated according to mastering content (desired goal), being better than others (performance goal) or avoiding mistakes (performance-avoidance goal) (Elliot AJ, 2005).

Self-determination theory, one of the recent motivational theories, is interested in Intrinsic motivation. Intrinsic motivations are feelings of competence, autonomy and relatedness. (Deci EL, Koestner R, Ryan RM., 1999)

### **2.3. Content and Process Theories**

During recent development on the nature of work motivation in literature we see that Maslow, Alderfer, Herzberg and McClelland's content theories emphasize what motivates individuals. They question how people act in certain ways, based on their needs. Content theories in motivation aim to explain the reasons for the behaviors exhibited in the direction of needs, which factors lead the person to a specific purpose and behavior, and the explanations of these goal definitions were the purpose of these theories.

Besides content theories, that is to say, emphasis on the actual process of motivation, four theories have been developed further: expectancy theory, equity theory, goal theory and attribution theory. None of the motivation theories are conclusive, rather they are useful to allow us to conduct a study on motivation.

### **2.4. Content Theories of Motivation**

#### **2.4.1. Maslow's Need Hierarchy Theory**

Following Murray, in his articles and books (e.g. "A Theory of Human Motivation", "Motivation and Personality"), Maslow (1943, 1987) sets out what the basic human needs are. Maslow's theory is based on presumptions that every behavior shown by an individual is shown in order to get at and to the specific needs of the person and that those needs of the individual are in a hierarchical order. Hierarchical order includes psychological needs (e.g. food, water, sex, air, sleep), safety needs (e.g. security, stability, protection), social needs (e.g. love, belongingness, affection), esteem (admiration, self-esteem, prestige, self-respect) and self-actualization (creativity, meaning in life). According to Maslow, it is not possible for a person in a hierarchical structure to make a high-level transition without satisfying their physiological needs. These needs, which are separated into

separate categories, is in continuum rising from higher to lower needs as the individual's satisfaction increases (Maslow, 1970). Because Maslow's model is hierarchical, it is not possible for a person to shift to a higher level of security need or any other level without satisfying his or her physiological needs. These needs progress upwards in order to be satisfied (Maslow, 1970).

The most basic physiological needs are: food, water, sexuality, shelter and marriage. A top category for security needs defines the desire to have the assurance that one can maintain one's existence, if the physiological needs are eliminated. If they are met, individuals are then in search of love, belonging and other social needs. These can be defined as family, friends or involvement in a professional environment. The fourth level includes the quest for respect and appreciation. People want to feel that they can come to a certain place in life, to see how successful they are and to be respected by people. Maslow's posit for the need of self-fulfillment, defined as the highest level in the pyramid of needs, is defined as the most important stage, and a person's life purpose (Maslow, 2001, Özer & Topaloglu, 2008). At this level, human beings must demonstrate their creativity, contribute to the world, possess the qualities they desire to possess, and use these qualities in a productive manner (Maslow, 2001, Eren, 2004, Küçüközkan, 2015). These needs come into action, according to the individual's level of satisfaction, and the least satisfied need pushes people to be the most powerful within a given set or subset. If this need is satisfied, the next least-needed need will affect motivation and behavior and will continue on this basis (Maslow, 2001; Ulukush, 2016).

#### **2.4.2. Alderfer's ERG Theory**

Clayton Alderfer (1972) created his theory, similar to the needs of Maslow's theory (1970), using a different grouping system. The needs of Alderfer's theory are addressed in a hierarchical order like Maslow's theory. However, unlike Maslow's, they have certain characteristics. Alderfer's ERG hypothesis evokes three main requirements: Existence, Relatedness and Growth. Alderfer delineates Maslow's physiological and safety needs as needs of existence; Maslow's self-

esteem and social needs as relatedness (similar to self-determination theory) and the previously mentioned self-actualization need as growth. In addition, the dissatisfaction of one of the needs in the upper group in Alderfer's model may be reflected in the needs in the lower group and these needs may be perceived as unsatisfied in the individual (Özer & Topaloğlu, 2008). This is not the case in Maslow's theory and the needs are independent of each other (Kucuközkan, 2015).

The need for existence is defined as physical survival, reproduction, nutrition, shelter and the security needs of a creature (Alderfer, 1972). Relatedness needs correspond to establishing relationships with the individual and establishing professional relationships as well as in the sense of romantic partners or family groups (Alderfer, 1972). According to Maslow's perspective, while the needs are met one by one, Alderfer's needs can be met at the same point in time.

#### **2.4.3. Herzberg's Two Factor Theory**

Focusing on job satisfaction, Herzberg (1987) suggested a two-factor theory; hygiene and maintenance factors. He took salary, working conditions, quality of supervisors, company policies and interpersonal relations as possible contributors of dissatisfaction.

Frederick Herzberg, like Maslow, suggested that motivation was based on need (Wall & Stephenson, 1970). However, he did not set up a hierarchical design in his theory but assessed needs in two different groups. These two groups are categorized as dissatisfiers and motivators (Wall & Stephenson, 1970). Protective factors that do not motivate a person but still have dimensions of need include wages, work conditions, job security, company policy and management and relationships with other employees at work (Mirze, 2002). The second group of motivating factors consists of factors such as a sense of success, status, work content, and promotion at work.

One of the important points that distinguishes Herzberg's theory from other content theories is the difference in the effects of protective factors and motivating factors on the person. These two factors do not affect the satisfaction of variety. Satisfaction and dissatisfaction are two dimensions that are not on the same line according to Herzberg's theory (BIBLIOGRAPHY). It has been found that the satisfaction of the protective factors does not cause any motivation in the employees and does not increase the satisfaction to a great extent in a satisfactory situation, but dissatisfaction lowers the satisfaction of the person (Wall & Stephenson, 1970). Similarly, the dissatisfaction of motivating factors decreases satisfaction but does not add extra dissatisfaction. In addition, motivating factors provide satisfactory direct motivation. In other words, protective factors constitute the minimum requirements necessary to sustain the individual's presence in the workplace. The highest motivation occurs when both protective and motivating factors are satisfied.

#### **2.4.4. McGregor's Theory X and Y**

McGregor assumed that there are two groups of people in nature. He calls one group Theory X and the second group Theory Y. People who belong to Theory X group inherently dislike working, are dependent on others in making decisions, generally resist change, are creatively poorer, prefer physiological and safety needs alone, avoid responsibility, prefer autocratic leadership and lack self-motivation. On the other hand, people who belong to Theory Y group work naturally and love working, they are ambitious, are able to make their own decisions, are creative, prefer higher order needs such as self-actualization and esteem, prefer democratic leadership and they are self-motivated.

#### **2.4.5. McClelland's Achievement Theory**

In his book 'The Achieving Society', McClelland established his theory of achievement on a basis of characteristics of individuals. He emphasizes achievement, power and affiliation (McClelland, 1961). McClelland argues that

these needs are not necessarily innate, but should be considered as lifelong needs (McClelland, 1961). The person in need of success ('achievement motivated') requires an effort to complete task as much as possible. The second need is called 'authority motivated' or 'power motivation'. It defines the need for the individual to establish some sort of dominance or authority around him (Özer & Topaloğlu, 2008). The final need is to establish a relationship; 'affiliation motivated'. The need to establish a relationship stems from the human individual as a social being. According to McClelland (1961), the need to establish a relationship is achieved when the individual is able to establish a friendly relationship with other people and is accepted by various groups.

#### **2.4.6. Sirota's Three Factor Theory**

Similar to McClelland's theory, Sirota's Three-Factor Theory is also interested in motivation and excitedness. According to Sirota (2014) people are motivated by equity/fairness, achievement and camaraderie. Dissimilarly, Sirota suggests that culture and life experiences play a big role in motivation.

### **2.5. Process (Contemporary) Theories**

Process theories, unlike content theories, do not aim to explain what motivate us but rather how we get motivated. They investigate various cognitive, emotional and behavioral factors to explain the processes of the concept of motivation.

Equity Theory (Adams, 1963) is another theory which does not focus on psychological aspects of human behavior but is centered on performance and productivity. Based on inputs and outcomes logic, Stacy Adams (1963) suggests that a person exchanges his contribution to a task in order to get paid. Experience of work, skills, education and effort can be considered as inputs while payments, benefits and supervisory treatment can be considered as symbols of outcomes. For



instance, if the ratio between the rate of one's own labor and the rate of labor obtained by the people around is not the same, there is a sense of inequity in the person (Luthans, 2008). In a case of disruption of equality, the remedial behavior that may be brought to you by the person can be two-sided: If there is an inequality and a person becomes disadvantaged by it, then that person may try to increase her/his performance, or reduce her/his performance (Mirze, 2002). Hence the performance is parallel to the perception of equality of the person in work place.

### **2.5.1. Edwin Locke's Goal Settings Theory**

In A Theory of Goal Setting, Locke and Latham (1991) point out two concepts as 'Content and Intensity' in motivation. Content is the result of the assignment, and Intensity is the supply required to attain it – which can be both psychological and physical. The premise highlighted the importance of considering the entire expedition of completing an objective and not just the result. Together Locke and Latham described five important standards of goal-setting (Locke & Latham, 1991):

- 1- Clarity that refer to having a specific target.
- 2- Challenges that refer to choosing a not easy or not very difficult goals.
- 3- Commitment that refers to committing along the way of reaching the desired outcome.
- 4- Feedback that refers to maintaining the goal on track.
- 5- Task complexity refers to having a programmed schedule to do tasks.

### **2.5.2. Vroom's Expectancy Theory**

Vroom's Expectancy Theory sees motivated behavior as goal oriented and assumes people act in a hedonistic way (Vroom, 1964). The essentials of Victor Vroom's (1964) Expectancy Theory is the result of the expected reward in the formation of a behavior. The theory coordinating several of the components of the needs, equity and reinforcement hypotheses (Gordon et al., 1990). 'Expectancy

theory states that individuals are motivated to act in ways that produce craved combinations of expected outcomes' (Kreitner and Kinicki, 1998). According to Vroom's theory of expectation, the individual is sensitive of what he or she will prefer in a behavior that he or she will make, how and how much effort he or she ought to make to attain that preference. The individual is motivated by the reward he will receive as a result of the behavior or the value he / she has achieved (Luthans, 2008). In Vroom's model, the person has a desire for a prize and is in the expectation of reaching it. This desire and expectation ultimately brings about the behavior of the subject, and the attainment of the attainment is achieved with the purpose or the payment with the result of the behavior. If the individual puts himself or herself in a working environment like a promotional goal, and if the individual sees reaching this excellence as a reward, it will become a source of motivation.

### **2.5.3. Porter ve Lawler's Expectancy Theory**

Porter and Lawler point out that Vroom is one step ahead of the motivation relationship between reward and behavior, resulting in a person's performance as well as rewards or intentions (Mirze, 2002). Here, a cognitive awareness is a matter, and the person is not only striving for satisfaction but also for fulfilment. Moreover, it is emphasized that the effort shown by the person in theory is not the only factor in delivering reward, purpose or fulfilment (Tevruz, 1999). Another aspect developed in Vroom's theory is that fulfillment of the expectation of the person reaches satiety (Tevruz, 1999). The person's ability to reach the aim of the attainment of the target, the personality traits he has and the perception of the role are some of the mediating variables between performance and effort, alone is not enough. The evaluation of the fairness of the award is also required to be determined by the individual whether he or she has not touched the used expense (Küçüközkan, 2015). In other words, a person will be dissatisfied with an injustice if he finds other people who have spent the same effort but have reached more dearly, even if they have reached the desired end by labor and have the promised pay. The fact that the perceived prize differs from the payout obtained can create a similar situation

(Küçüközkan, 2015).

#### **2.5.4. B. F. Skinner's Reinforcement Theory**

Skinner's work, which gave birth to behavioral therapy, has begun a new era in psychology and psychotherapy. B.F Skinner's studies (1938, 1948) are built on the presumption that behaviour is impacted by its consequences. Reinforcement theory is the procedure of forming behavior by controlling consequences of the behavior. Reinforcement theory proposes that you can change someone's actions by utilizing reinforcement, punishment, and extinction. Rewards are used to strengthen the behaviour you want and punishments are used to stop the behaviour you do not desire. Extinction is an implies to stop someone from performing a learned behaviour. The scientific expression for these processes is called 'operant conditioning'.

#### **2.5.5. Self Determination Theory**

Self-determination theory (SDT) (Deci & Ryan, 1985) is a well-known meta theory of motivation that gives valuable clues into the human potential for accomplishment and well-being through a structured framework. Deci, Eghrari, Patrick and Leone obtained results supporting the expectations of the hypothesis of self-determination in the experimental study they carried out in 1994.

In the study, it is shown that individuals react in a more motivated manner in the way they internalize themselves from outside. They therefore argued that individuals are more motivated in the actions they themselves have undertaken as internalized.

The theory of self-determination (Ryan & Deci, 1999, 2000) is a theory of motivation claiming that all psychological needs behind individual behavior can be explained by three basic psychological needs called autonomy, relatedness and competence. The degree to which individuals meet these psychological needs directly

influences their psychological well-being. On the other hand, a healthy and functional change in the mindset of counsellors during the psychotherapy process that damages their emotions and / or their and / or others' lives is one of the primary goals of REBT (Ellis, 1994, 2003, DiGiuseppe et al., 2014, Dryden & Branch, 2008; Vernon, 2011).

Accordingly, one of the main problems satisfying the basic psychological needs of individuals is the unreasonable beliefs (built-in, irrational) that they have regarding these needs.

It is clear, however, that the perspective of interventions on autonomy, relatedness and competence needs, which are the main psychological needs of the SDT, which has formed a prominent perspective in recent years, especially in adolescents' mental health studies, is still in its developing phase as a theory.

SDT offers a useful structure within which to gain knowledge of whether and to what degree irrational beliefs prevent mental health and psychological welfare. Particularly, the basic psychological needs hypothesis within SDT comprises three interrelated needs: autonomy, competence and relatedness. However, it is sensible to anticipate that irrational beliefs concerning the three needs will undermine need fulfillment, and have deleterious consequences on psychological wellbeing. In sum, alteration from extrinsic (e.g. sales targets, rewards, economic gains) to intrinsic motivation (e.g. individual growth, healthy relations, being part of community objectives, better well-being) in labour settings may be challenging due to distorted cognitive schemas such as irrational beliefs.

Ryan and Deci suggest that intrinsically motivated people are more likely to be mentally healthy individuals than extrinsically motivated individuals (Ryan & Deci, 2008), and that the fulfilment of basic psychological needs is very important for the maintenance of intrinsic motivation (Deci & Ryan, 2000). The improvement and maintenance of basic psychological needs (autonomy, competence, relatedness) are in this manner essential for intrinsic motivation and well-being, but how individuals can

move from extrinsic motivation to intrinsic motivation is blurred (Ryan & Deci, 2008; Vallerand, Pelletier, & Koestner, 2008). This lack of clarity is due to limited data on how individuals change across the continuum. A recent research verified that rational emotive behavior therapy (REBT) can boost a sportsperson self-determined motivation by helping them to decrease their dysfunctional cognitions (Turner & Davis, 2018).

According to Ryan and Deci (2001), the three basic psychological needs are essential for intrinsic motivation, psychological growth, integrity, vitality, self-congruence and wellbeing.

## **2.6. Job Satisfaction and Motivation**

Job satisfaction can be described as a result of evaluating a positive and enjoyable emotion that the individual has developed for his / her job. This result is determined by the behavior of the individual as a subjective emotional attitude and as a reaction (Özkalp ve Kirel: 2016: 114). The work that people are trying to sustain their lives with is done in a physical and social environment and is influenced by the characteristics of this work. The emotional response, defined as job satisfaction and satisfaction, is the sum of the emotions that the individual has developed for his work.

Job satisfaction can be expressed as pleasure in the satisfaction of employees' work (Yüksel, 2000). The terms "job satisfaction" and "employee satisfaction" are used to explain many different concepts in literature.

Botha (2014) found a positive correlation between motivation and the job satisfaction of grocery retailers. This means that the more job-related satisfaction an employee perceives, the more they are motivated and have positive feelings toward the work. For individuals, job satisfaction and motivation are crucial within the means of experiencing mastery and contentment. Job satisfaction is an important

factor in maintaining enthusiasm (Machado-Taylor, Soares, Brites, Ferreira, Farhangmehr, Gouveia & Peterson, 2016). Machado-Taylor et al. found evidence that job satisfaction is related to employee motivation. Well-motivated academic staff build a reputation for themselves and for their institution (Capelleras, 2005). Isik, Ugurluoglu, Mollahaliloglu, Kosdak and Taskaya (2016) found that motivation and job satisfaction intersect with each other. According to Peter, Chakraborty, Mahapatra & Steinhardt (2010) job satisfaction is linked to motivation, and they also suggest that motivation and job satisfaction both involve cognitive, affective, and behavioral processes. However, job satisfaction or motivation cannot be directly observable, but both have been identified as important to the retention and performance of health workers.

In scientific literature, the terms job satisfaction and motivation are frequently used interchangeably, but there is a borderline between them. Job satisfaction is a person's emotional reaction to work conditions, while motivation is the driving force to pursue and fulfil desires. On the other hand, job satisfaction and motivation combined increase job performance and health-care organizations can do a lot of things to encourage job satisfaction, basically by centring on the motivating interests of existing and prospective staff (Griffith et al. 2000). Gaki, Kontodimopoulos and Niakas, in their research, found job satisfaction is significantly related to motivational factors. One of the other outcomes of the research shows that 'achievements' are the most important motivator.

According to Miner, job satisfaction is one of the important variables that can give an idea about the general feeling and thought patterns of an individual's work and workplace and expresses the attitude towards the workplace and work of the individual (1992).

Mitchell and Krumboltz (1987) argue that in order for individuals to be able to make a constructive vocational decision, their irrational thoughts must be changed. According to Saunders, Peterson, Sampson, and Reardon (2000), illogical

professional considerations have a negative effect on professional decisiveness. According to Çakır (2003), among the components of the concept of professional indecision, there is an important role in the use of irrational beliefs.

Peterson, Maier and Seligman (1993) draw attention to the similarities between depression and helplessness; those who did not have a connection between behavior and outcome felt helpless; they underline that this desperation may also cause depression.

Jampol (1980) suggests that problem-focused coping strategies have a low level of association with depression. There was a significant negative correlation between life satisfaction and "negative automatic thinking" and "avoidance" behavior. Aydin and İmamoğlu (2001) recorded changes in the negative cognitive processes of individuals in their cognitive processes, as well as effective coping skills in stress situations in their group work. As life satisfaction increased, it was seen that there was a decrease in negative thinking and avoidance behavior.

The findings were obtained from Akbag (2000); Aysan and Bozkurt (2000); Aysan and Harmanli (2003) and Bozkurt Bulut (2005) are consistent with the findings of the study. This finding supports the view that cognitive assessment is influential on coping behaviors.

## **2.7. Rational Emotive Behavior Theory**

REBT, which was created by Albert Ellis to be used in clinical settings, has a respectable place among cognitive behavioral therapies. This type of therapy was named Rational Emotive Behavioral Therapy after 1994 (Ellis, 1994, Collard & O'Kelly, 2011). The theory suggests that cognitive, emotional, and behavioral components play a key role in pathological disorders (Ellis, 1987, Dryden, 2011). It uses a variety of methods to treat pathological disorders within the model of event, belief and emotional / behavioral outcome, which is defined as the ABC model.

Ellis began to see clients in his New York office after years of psychoanalytical training. For 15 years he continued to work within this theoretical framework. After seeing the inadequacies of Freudian theory and even the harmful aspects of it, in some cases, he began new investigations. He was supported with philosophical information, turned it into scientific knowledge and put forward an effective evidence-based psychotherapeutic approach. This was a clear break with many ideas and previously held beliefs.

REBT and the Cognitive Behavior Therapy (CBT) are recognized by their statement that "psychological poor health is essentially a disorder of thoughts by which the client consistently distorts reality in a self-defeating way" (Pechur, 1985). Thus it is the client's own belief which cause emotional pain and numerous difficult behavioral patterns. According to Albert Ellis, human emotions and behavior are significantly influenced by cognitive structures. Individuals significantly change their beliefs, attitudes, and values (Pechur, 1985).

REBT and other CBTs are recognized by the statement that "psychological poor health is essentially a disorder of thoughts by which the client consistently distorts reality in a self-defeating way" (Pechur, 1985). Thus, it is the client's own beliefs which causes emotional pain and numerous difficult behavioral patterns. Ultimately this is a Socratic method of approaching the field of psychology and not a didactic one and this is why it may be gives an edge to any new work but in no way diminishes what may be achieved outside the West, using some tools which may appeal to less well-educated or less enlightened peoples. According to Albert Ellis, human emotions and behaviour are significantly influenced by cognitive structures such as irrational beliefs, core beliefs, automatic thoughts, perceptions and derivatives. Individuals change their beliefs, attitudes, and values (Pechur, 1985) when they face a stressful activating event.

However, since these irrational beliefs have different meanings in different



individuals and there are differences between individuals in terms of their strength to cope with them or their coping power REBT may partially losing the effectiveness of intervening in the irrational mind-set (DiGiuseppe, 1996).

REBT is the first approach of Cognitive Behavioral Therapies. Cognitive-Behavioral Therapies define the framework of psychotherapy treatment in the context of the ABC model set forth by Ellis. The ABC model means (A) the event, (B) the thoughts or beliefs about the event, and (C) the outcome (feelings and behavior) (DiGiuseppe et al., 2014). According to Ellis and Dryden (1999), events and situations do not cause anxiety and depression in humans, but what they believe about these events and situations is that if they are irrational, they will reveal anxiety and depression. This view is a summary of the ABC model.

REBT discloses cognitive processes as two different concepts: rational and irrational beliefs (Ellis, 1994). Rational beliefs in REBT are thought to be healthy and beneficial in long term for people and irrational beliefs are seen as the main cause of psychological disturbances. Irrational beliefs are divided into four classes in cognitive processes: excessive demand, disaster, low resistance to distress, devaluation (Ellis, 1973; Bernard & DiGiuseppe, 1989). The irrational beliefs that determine feelings and behaviors have been debated, reviewed, considered and scrutinized in many studies. Tagipoor (1999) found that irrational beliefs lead to feelings such as anxiety, hostility and guilt. According to Hollins (1996), irrational beliefs can be associated with failure in coping with the problems encountered in life and function as an obstacle to human happiness.

### **2.7.1. Irrational and Rational Beliefs**

Rational and irrational are used to define the type of evaluative or appraisal cognitions that named as hot cognitions (Lynn and Ellis, 2010). They are used in Ellis's Rational Emotive Behavior Therapy. On the other side term of 'dysfunctional and functional thoughts' used for inferences, perceptions and cognitive distortions

in Beck's cognitive therapy. They are usually named as automatic thoughts.

In REBT, irrational beliefs are separated into four categories: (1) demandingness, (2) catastrophizing/awfulizing, (3) frustration intolerance and (4) global evaluations of human worth (self/others/life downing) (Ellis & Harper, 1975; DiGiuseppe, Doyle, Dryden, Backx, 2014). REBT suggests alternative cognitive structures as substitution of IBs (named rational beliefs): (i) preferences, (ii) anti-catastrophy (iii) high frustration tolerance (iv) unconditional self/others/life acceptance (DiGiuseppe et al., 2014). According to theory, irrational beliefs are dysfunctional, illogical, unrealistic beliefs while rational beliefs are functional, logical and realistic beliefs. This research is only interested in irrational and rational beliefs.

## **2.8. REBT and SDT on Motivation**

There are numerous studies on how cognitive processes cause emotional disturbances, interrupting happiness and motivation. In contrast, a recent paper demonstrated that cognitive behavioral therapy (specifically rational emotive behavior therapy; REBT) can increase athletes self-determined motivation by helping them to reduce their dysfunctional cognitions (Turner & Davis, 2018). The authors (Turner & Davis, 2018), suggest conjecturally that one of the potential reasons why REBT was effective in promoting self-determined motivation due to the enhancement of athlete basic psychological needs satisfaction. Through combining REBT and SDT it might be possible to aid the development of basic psychological needs through the disputation and promotion of rational beliefs (i.e., cognitive restructuring). However, the application of both SDT and REBT in the prevention of unhealthy emotions and behaviors suffers from a lack of a theoretical model, a problem that recent research has begun to address.

Three basic psychological needs of the SDT can be combined in an economic model under the umbrella of autonomy irrational beliefs, competence

irrational beliefs, relatedness irrational beliefs. It is the essential idea of this research that basic psychological needs and irrational beliefs are brought together for occupational psychology. For example, Lange and Jakubowski (1976) argue that people who have problems with self-reliance have a belief in irrational beliefs that they must be absolutely successful in every aspect, especially on the subject of competence. This situation is referred to as a rational belief in total competence in the REBT, and there is a settled thought in which the individual must be absolutely successful in what he or she is doing at every attempt (DiGuiseppe et al., 2014).

REBT has also been the subject of research on relationships in numerous studies. According to Spörrle, Strobel and Tumasjan (2010), the REBT-based intervention program is an effective way to support people's well-being and their life satisfaction. Bringing together both approaches is even more important to put forward a more economical prevention and intervention model, given that the two theories actually have many elements parallel to each other with an in-depth reading.

## **2.9. Measurements on Irrational Beliefs**

The first measurement tools used in REBT are based on eleven beliefs by Albert Ellis. Later, those eleven beliefs were gathered into four beliefs.

There have been various criticisms on the measurement tools used in REBT. For instance, Jones' (1968) Irrational Beliefs Test (IBT) was formulated to operationalize and evaluate ten of the irrational beliefs but it may in fact be measuring self-reported emotional distress rather than irrational beliefs. Therefore, because of item contamination, it suffers from discriminant validity.

Many of these assessment tools have been criticized for being not only cognitive but also behavioral and emotional processes. Another criticism was that scales used in REBT in the past measure only irrational beliefs but not rational

beliefs.

In fact, different measuring tools are required for both. There are more than fifteen irrational beliefs in print. The most commonly used tests are the Attitude and Beliefs Scale, the Irrational Beliefs Test, and the Rational Behavior Inventory. The last two were based on Ellis' eleven beliefs (Hyland, 2014). There is a distinct lack of validity for both instruments.

Malouff and Schutte (1986) designed the Irrational Belief Scale, an improved version of the Irrational Belief Test and Rational Behavior Test, based on the first form of REBT theory. This scale placed importance on cognitive processes rather than emotions and behaviors (Lindner et al., 1999). Three important criteria for new scales were introduced on the problems of past scales. These include: 1) Containing cognitive items that are not mingled with emotional expression, 2) Having different scores for irrationality and rationality, 3) Separation of cognitive processes from their content (Ranelana, 2010), General Attitude and Belief Scale and Shortened General Attitude and Belief Scale (Lindner et al., 1999), which is now the most commonly used measure of adult rational and irrational beliefs.

## **2.10. Current Study**

The enhancement and maintenance of basic psychological needs is therefore important for intrinsic motivation and wellbeing, but how individuals can move from extrinsic motivation to intrinsic motivation is unclear (Ryan & Deci, 2008; Vallerand, Pelletier, & Koestner, 2008).

Indeed, recent research within sports and exercise settings indicates that a change in motivation is complex and not observable enough to determine what exactly causes progressive movement through the continuum (Blanchard, Mask, Vallerand, de la Sablonniere, & Provencher, 2007; Lavigne, Hauw, Vallerand, Brunel, Blanchard, Cadorette, & Angot, 2009). In contrast, a recent paper

demonstrated that cognitive behavioral therapy (specifically rational emotive behavior therapy; REBT) can increase an athlete's self-determined motivation by helping them to reduce their dysfunctional cognitions (Turner & Davis, 2018). The authors (Turner & Davis, 2018), suggest conjecturally that one of the potential reasons why REBT was effective in promoting self-determined motivation was due to the enhancement of an athlete's basic psychological needs satisfaction.

To clarify, to accelerate movement through the OIT continuum, cognitive behavior therapy (CBT; Beck & Dozois, 2011; Ellis, 2003) may provide a mediator role. In clinical psychology unhealthy cognitive distortions have been widely investigated as deleterious to psychological well-being. There are numerous studies on how cognitive processes cause emotional disturbances, interrupting happiness and motivation. One major framework for unhealthy thinking patterns is the theory of irrational beliefs (Dryden & Neenan, 2004; Ellis, 1994), as put forth within rational emotive behavior therapy (REBT; Ellis, 1957). REBT is a prominent cognitive-behavioral approach to psychotherapy, in which psychological dysfunction is determined by the endorsement of irrational, as opposed to rational, beliefs. There are four core irrational beliefs: demandingness, awfulizing, frustration intolerance, and depreciation beliefs (also called self, other, and life rating) (DiGiuseppe, Doyle, Dryden, & Backx, 2014). Irrational beliefs are considered to be extreme, rigid, and illogical. In contrast, there are four rational beliefs: preferences, anti-awfulizing, frustration tolerance and acceptance beliefs (of self, others and life acceptance). Rational beliefs are considered to be non-extreme, flexible, and logical. Irrational beliefs have been shown to be positively related to various psychological disorders (DiGiuseppe et al., 2014), and psychological distress (Visla et al., 2016). That is, irrational beliefs are considered to be a hindrance to mental health and psychological wellbeing (Turner, 2016).

SDT offers a useful framework within which to gain an understanding of whether and to what extent irrational beliefs hinder mental health and psychological wellbeing. Specifically, the basic psychological needs theory within SDT comprises

three interrelated needs: autonomy, competence, and relatedness. According to Ryan and Deci (2001), the three basic psychological needs are essential for intrinsic motivation, psychological growth, integrity, vitality, self-congruence and wellbeing. However, it is reasonable to expect that irrational beliefs concerning the three needs will undermine need satisfaction and have deleterious consequences on psychological wellbeing. For example, an individual with irrational awfulizing beliefs that it would be terrible if their autonomy was restricted, awful if they were incompetent at their job, or the end of the world if their colleagues acted distant from them, may as a consequence experience unhealthy and maladaptive emotions. In REBT, the situation (e.g., being restricted, being incompetent, being shunned) does not trigger unhealthy emotions alone, rather it is ones irrational beliefs (e.g., awfulizing) about the situation that causes unhealthy emotions (Ellis & Dryden, 1997).

In sum, the transformation from extrinsic (e.g. sales targets, rewards, financial gains) to intrinsic motivation (e.g. personal development, healthy relationships, being part of community goals, greater well-being) in work settings may be challenging due to distorted cognitive schemas such as irrational beliefs.

Through combining REBT and SDT it might be possible to aid the development of basic psychological needs through the disputation and promotion of rational beliefs (i.e. cognitive restructuring). However, the application of both SDT and REBT in the prevention of unhealthy emotions and behavior suffers from a lack of a theoretical model, a problem that recent research has begun to address. Specifically, Artiran (2015) integrated the four core irrational beliefs as proposed in REBT with the three basic psychological needs as proposed within SDT, forming a psychometric assessment of irrational beliefs about the three basic psychological needs. The rational emotive self-determination in adolescents (RES-D-A) scale is a context-specific irrational beliefs scale concerning the three basic psychological needs for use with adolescents. The integration of REBT and SDT constructs is important, in part, because basic psychological needs have been shown to be

important for mental health and psychological wellbeing (e.g., Ryan & Deci, 2000).

The RESD-A was validated for use with adolescents, and therefore should not be used with non-adolescent samples. Therefore, to aid the continued investigation of the theoretical integration of REBT and SDT, the RESD should be tested and validated across additional samples such as work, sport and exercise, and military samples, for example. For example, a recent irrational beliefs measure was developed for performance settings and has been validated in occupational (the irrational performance beliefs inventory; iPBI, Turner et al., 2016) and sport (iPBI-2, Turner & Allen, 2018) settings.

Indeed, recent recommendations (Ziegler & Horstmann, 2015) and research (Breevaart, Bakker, Demerouti, & Hetland, 2012) express the need to consider situational perception when developing psychometrics so that a more accurate understanding of the specific conditions or subpopulation with which a tool works best can be gained. Furthermore, according to Ellis (1994), situational or context-specific rational and irrational beliefs are stronger predictors of emotional disturbance than general or context-non-specific beliefs.

Padesky & Beck, 2003 have criticized the fact that irrational beliefs are a very general concept and therefore have been shown to be the cause of all psychopathological disturbances.

Recent recommendations (Ziegler & Horstmann, 2015) and research (Breevaart, Bakker, Demerouti, & Hetland, 2012) express the need to consider situational perception when developing psychometrics, so that a more accurate understanding of the specific conditions or subpopulation with which a tool works best in can be gained. Furthermore, according to Ellis (1994) situational or context-specific rational and irrational beliefs are stronger predictors of emotional disturbance than general or context-non-specific beliefs.

The purpose of the present study is to report the development, and examine the validity, of an occupational measurement of RESD-W (Rational Emotive Self Determination Scale for Work Life). The RESD-W has three components that combine irrational beliefs and three psychological needs: Autonomy Irrational Beliefs (AIB), Competence Irrational Beliefs (CIB), and Relatedness Irrational Beliefs (RIB). Before the scale items were useful for analysis, factor analysis was processed. Factor analysis was used to find the underlying dimensions within the scale.

In the present study the RESD-W is subjected to explanatory factor analysis (EFA) and confirmatory factor analysis (CFA) to test the proposed three factor structure, and also undergoes construct and test-retest validity testing. An individual with irrational awfulizing beliefs that it would be terrible if their autonomy was restricted, awful if they were incompetent at their job, or the end of the world if their colleagues acted distant from them, may as a consequence experience unhealthy and maladaptive emotions.

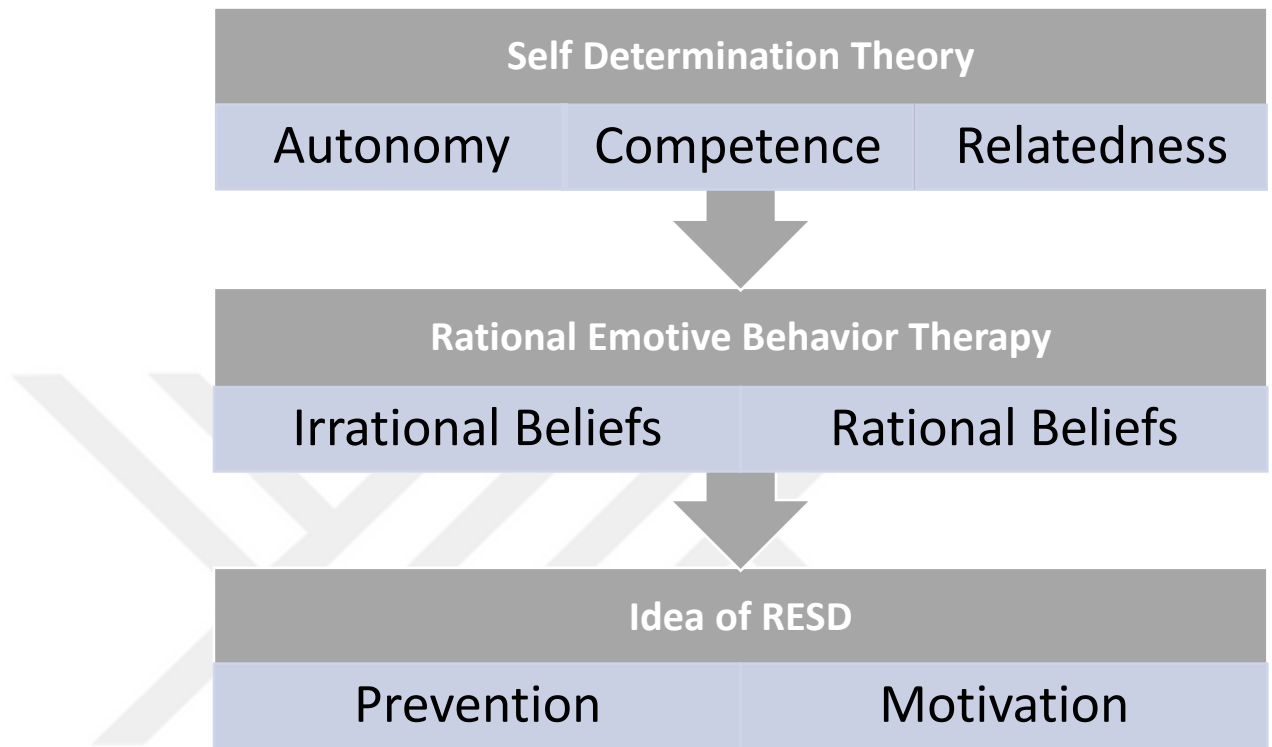
In REBT, the situation (e.g., being restricted, being incompetent, being shunned) does not trigger unhealthy emotions alone, rather it is ones irrational beliefs (e.g., awfulizing) about the situation that causes unhealthy emotions (Ellis & Dryden, 1997).

The results of the current study provided considerable implications for public health and mental health services.

Specifically, in Study 1 item development and EFA took place, in Study 2 CFA took place, in Study 3 we examined the construct validity of the RESD-W, and in Study 4 we investigated test-retest reliability.



**Figure 2.1.** Basic Representation of Idea of RESD-W



### **CHAPTER III**

#### **METHOD**

This study is conducted to develop a new scale for irrational beliefs, rational beliefs and three basic psychological needs. It is a quantitative research conducted with a model asking the thoughts and beliefs of the participants by giving questionnaires.

#### **3.1. Analysis Strategies**

All analyses (except item generation and content adequacy assessments) were conducted using IBM SPSS Statistics, Version 21 and Lisrel 8,51 (for confirmatory factor analysis). A p-value of  $< .05$  with an  $\alpha$ -level of 5% set for statistical significance. In order to test validity and reliability of the new scale following analysis has been done in following phases:

1. Scale Construction and Item generation
2. Testing conceptual consistency of the items and content adequacy assessments
3. Determining the scale for items
4. Explanatory factor analysis
5. Determine the reliability of the scale with internal consistency assesment
6. Confirmatory factor analysis
7. Testing criterion-related validity
8. Test retest analysis

### **3.2. Research Samples**

In total, 607 participants were recruited from city of Istanbul and Ankara for this research. All participants included in the study were volunteers who selected randomly. For testing conceptual consistency of the items, I get support from 9 psychologists and 20 workers (10 female and 10 male). Explanatory factor analysis (EFA) comprised 149 participants (female = 80; male = 67; other =2). Confirmatory factor analysis (CFA) comprised 194 participants (female = 102; male = 90; other =2). Construct validity analysis comprised 191 participants (female = 106; male = 75). Test Re-test validity analysis comprised 44 participants (female = 21; male= 23).

The same procedure was carried out with a group of participants. After an introductory meeting to obtain inform consent, each participant was handed an answer sheet. The instructions, emphasizing the significance of filling out the forms, were read aloud. The estimated handing out time for all groups was 15 minutes.

### **3.3. Phase 1: Scale Construction and Item Development**

Scale items are developed based on theoretical definitions. Therefore it is a deductive approach. A deductive scale development uses a hypothetical meaning of

a construct which is afterwards used as a guide for the formation of items (Schwab, 1980). This method requires thoughtful consideration of the related literature and of the facts to be explored for the new scale.

It is crucial that the development sample should be related to the population which the measure will be used on (DeVellis, 2012). The RESD-W scale measures the irrational and rational beliefs regarding the need for autonomy, relatedness and competence in work life. In the course of the preparation of the scale, REBT and SDT theories were used to achieve the goal.

The basic psychological needs (autonomy, competence and relatedness) revealed by Ryan and Deci (2001, 2008) and four irrational beliefs in REBT were taken and considered for the items development. Irrational beliefs include 1) demandingness beliefs, 2) catastrophic/awfulizing beliefs, 3) frustration intolerance 4) self / others / life global rating beliefs (Ellis, 1997, 2003) in the scale. Consistent with previous research, a five-point Likert-type scale was chosen as the response format.

While the scale was being developed, four measurement tools have been examined closely. These are Irrational Beliefs Test (Jones, 1968, Turkish adaptation: Yurtal, 1999), The Attitudes and Belief Scale-2 (Bernard, 1990 and 1998; DiGiuseppe, Leaf, Exner, & Robin, 1988), Basic Psychological Needs Scale (Deci & Ryan, 2000; Turkish adoption: Kesici, Bozgeyikli & Sünbül, 2003) and Work-Related Irrational Beliefs (Wijhe, Peeters & Schaufeli, 2013).

First, I started to write 32 items (8 items for each construct). With this method I categorized or sorted items based on their similarity to construct definitions.

### 3.4. Phase 2: Testing Conceptual Consistency Of The Items

The research sample used for testing conceptual consistency of the items comprised 6 clinical psychologists, 3 occupational psychologists and 20 workers (10 female and 10 male). Using experts and the workers, items were investigated based on their meanings, expressions and theoretical assumptions. After being reviewed by three clinical psychologists and two occupational psychologists with experience of working individuals, the number of items was reduced to 24. Mostly, repeating items and unclear items such as measuring emotions rather than cognitions were taken out of the scale. Another 3 clinical psychologists and an occupational psychologist with experience of working individuals and 20 workers rated the face validity of the scale and provided feedback on its design. They reviewed the clarity and appropriateness of each scale items. 4 out of 24 items were re-written during the process because of their unclear meaning. In the first form, each factor was represented by eight items.

After exploratory factor analysis, the item numbers were reduced to 16: 6 items for Autonomy Irrational Beliefs of Workers (AIB-W), 5 items for Competence Irrational Beliefs of Workers (CIB-W) and 5 items for Relatedness Irrational Beliefs of Workers (RIB-W). Keeping a scale short is useful for decreasing response biases through boredom and losing concentration (Schmitt & Stults, 1985).

All items are measured on a Likert-scale: 1 (*strongly disagree*), 2 (somewhat disagree), 3 (somewhat agree), 4 (agree) and 5 (*strongly agree*). Based on 16 items scale, the higher score can be 80 maximum and a lower score can be 16 minimums. Likert scales are the most commonly used in survey research using questionnaires (Schmitt and Klimoski, 1991)

It is suggested by the author that ideal scores to represent the well-being of participants between 25 and 55, who got scores under 25 or over 55 may need psychological support. After re-coding three reverse items (rational statements), a total score which was between 25 and 55 indicates that a worker has rational,

functional, healthy, logical, and realistic beliefs (evaluations) about her/his basic psychological needs. A score over 55 may indicate that a worker has irrational, dysfunctional, unhealthy, illogical and unrealistic beliefs (evaluations) about her/his *unsatisfied* basic psychological needs. A score under 25 may indicate that a worker has irrational, dysfunctional, unhealthy, illogical and unrealistic beliefs (evaluations) about her/his basic psychological needs. For instance, a worker who has a score under 25 may awfulize/catastrophise or (frustration intolerance) if she/he is asked to use her/his own autonomy. A person may have self-downing irrational beliefs when tries to develop a new skill score below 25. Another person get easily frustrated ('can't stand it') if she/he needs to get close relationships. Please see deeper discussions about this examples in the conclusion section.

### **3.5. Phase 3: Determining the scale for items**

There are three group of items were created for RESD-W:

- Irrational Beliefs of Autonomy items: 1-2- 5-7-8r-11
- Irrational Beliefs of Competence items : 9-10-12-13-16r
- Irrational Beliefs of Relatedness items: 3r-4-6-14-15

*Note that 'r' indicates rational belief and should be reverse coded when computing.*

#### **3.5.1. Items in English:**

1. In work, I must be in control and willing when doing tasks, and nobody should interfere with me.
2. If I can not work towards my own values and interests, it will be awful and I think it is like the end of the world.
3. Even if I can't get along with the others in my job I still believe they are valuable human beings.
4. If I can not establish sincere and close relationships in my job, I can

not stand it, it is unbearable.

5. If people interfere with each other in a workplace, I believe completing the tasks have no worth.

6. Without good and sincere human relationships in the workplace, it isn't worth completing the tasks.

7. I can't stand it if I am not allowed to make my own decisions when I am doing my job, I believe it is unbearable.

8. It is okay not working independently and willingly.

9. If one can not do a task well enough, he/she should definitely stop doing it.

10. It is awful if I am incompetent in my work life; I start thinking as if it is the end of the world.

11. People who interfere in my will and my own decisions while I am doing my job are worthless in my eyes.

12. I can not tolerate being insufficient and incompetent, I think such feelings are unbearable.

13. The value I give to myself as an individual disappears when I am inadequate in my job.

14. It is a 'must' that relationships with others in work place/life are sincere and warm.

15. Whenever I feel distance and coldness from others in work life, I believe it is awful and I start thinking as if it is the end of the world.

16. Being incompetent and inadequate in my job can be a bad thing, but it is not a awful thing.

### **3.5.2. Items in Turkish:**

1. İşimi yaparken istekli olmam ve kontrolün bende olması lazım ve işime kesinlikle başkası karışmamalıdır.

2. Kendi değerlerim ve ilgilerim doğrultusunda çalışmıyorsam felaket olur ve sanki dünyanın sonu gelmiş gibi düşünürüm.

3. İş yaşamında geçinemediğim kişileri de değerli insanlar olarak görmeye devam ederim.
4. İş yerinde samimi ve yakın ilişkiler kuramıyorsam bu benim için çekilmez bir durumdur, tahammül edemem.
5. İnsanların birbirinin işine karıştığı bir iş yerinde, yapılan işin gözümde değeri yoktur.
6. İş hayatında iyi ve samimi insan ilişkiler olmayınca yapılan işi bitirmeye değmez.
7. Çalışırken içimden geldiği gibi özgürce karar alamamaya katlanamam, bunun çekilmez bir durum olduğuna inanırım.
8. Bağımsızca ve arzu etmeden görev yapıyor olmak benim için problem değil.
9. Kişi, bir işi yeterince iyi yapamıyorsa kesinlikle yapmaya devam etmemelidir.
10. İşimde yetersiz kalırsam felaket olur ve dünyanın sonu olmuş gibi düşünmeye başlarım.
11. Özerk ve kendimce çalışmama müdahale eden insanların gözümde değeri kalmaz.
12. Yetersiz ve başarısız olmak çekilmez bir durum, buna tahammül edemem.
13. Yaptığım işte yetersiz olduğumda ve görevleri yapamadığımda birey olarak kendime verdiğim değer yok oluyor.
14. İş yaşamında, insanların birbirleri ile olan ilişkileri mutlaka çok iyi olmak zorundadır.
15. Çalışma arkadaşlarımla ilişkilerimde mesafe ve soğukluk olduğunda bunun bir felaket olduğuna inanırım ve sanki dünyanın sonu gelmiş gibi düşünmeye başlarım.
16. Yetersiz kalmak ve yaptığım işleri becerememek kötü bir şeydir ancak bir felaket değildir.

### **3.6. Phase 4: Main Study: Factor Structure**

#### **3.6.1. Participants**

One hundred and forty-nine (n=149) participants completed measures, 80 females (53.7%), 67 males (45%) and 2 (1.3%) others. Participants were aged 18-59 years, with a mean age of 32.95 (SD = 10.42). The sample includes non-employed 39% (n= 39), part-time workers 9.4% (n= 14), full-time workers 84% (n= 84), temporary workers 2.7% (n= 4), and project-based workers 3.4% (n= 5). Marital status of participants was single (never married) 44.3% (n=66), married 34.9% (n=52), divorced 8.7% (n=13), widows 2% (n=3) and in relationship 2% (n=13) in relationship. The education level of the participants was as follows: Graduate degree 37.6% (n= 56), bachelors' degree 47.7% (n=71), high school degree 10.7% (N= 16), middle school degree 2% (n=3) and primary school 0.7% (n=1).

#### **3.6.2. Procedures**

The sampling adequacy can be tested by the Kaiser-Meyer-Olkin (KMO) (Kaiser, 1970). According to Tabachnick and Fidell 2001, 0.50 (It ranges from 0 to 1) considered suitable for factor analysis. Bartlett's test of Sphericity (Bartlett 1950) indicates the item correlation matrix is not an identity matrix, its' chi-square output that must be significant ( $p < .05$ ) for factor analysis to be process (Hair, Black, Babin & Anderson, 2014).

The results of the KMO (Kaiser-Meyer-Olkin) coefficient (.814) and the Bartlett Sphericity Test (783.021) Ki-squared ( $p < .05$ ) were concluded for the determination of the suitability of the data obtained from EFA analysis. According to the findings, the data is significant ( $P < .05$ ) and is determined to be suitable for the EFA (Kalaycı, 2005). The principal axis factoring method was conducted using the rotation technique of direct oblmin.

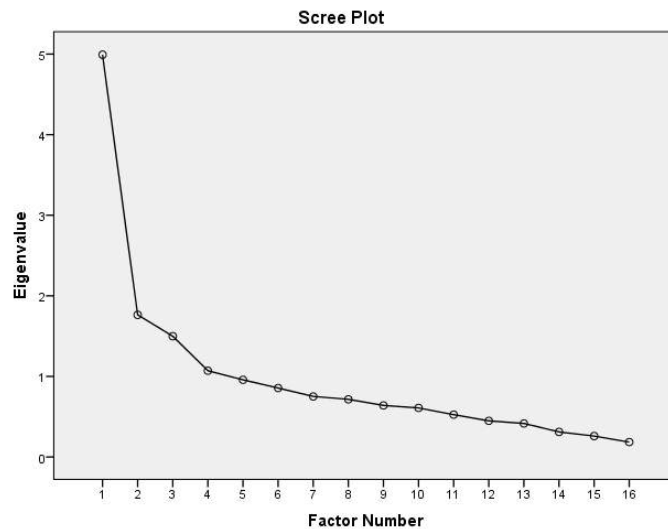


### 3.6.3. Results of Phase 4

When the 16 items of the scale are being analysed, 4 factors that are greater than the value of 1.0 emerged, and the total variant was observed to explain the 58.285% (Table 2.1.).

**Figure 3.1.** Scree Plot of RESD-W

When the scatter plot chart in Figure 2.1. is examined, although the ratios of



the eigen value are 4 factors above 1, the RESD-W scale items are gathered in a three-factor structure. Scree plot (Figure 2.1) indicates that a three-factor solution would be appropriate. According to the theoretical expectations, the factor structure was determined to be secured to 3. Since the variant of other components is seen to be very close to each other (Rietveld & Van Hout, 1993), only the first three variables are reflected in the factor structure of the scale. The three factors describe 51.593% of the total structure. The first factor describes the total existence of 31.202% and the second factor is 42.226%. The researcher examined the scree plot and decided where the line stops descending precipitously and levels out (Bryant & Yarnold, 1995).

**Table 3.1.** Total Variance of RESD-W Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup>
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4,992	31,202	31,202	4,519	28,247	28,247	3,294
2	1,764	11,025	42,226	1,252	7,824	36,071	2,584
3	1,499	9,366	51,593	,937	5,858	41,929	2,939
4	1,071	6,692	58,285				
5	,958	5,986	64,270				
6	,855	5,347	69,617				
7	,752	4,698	74,315				
8	,715	4,471	78,786				
9	,640	3,999	82,785				
10	,609	3,805	86,590				
11	,526	3,285	89,875				
12	,448	2,801	92,676				
13	,416	2,600	95,276				
14	,311	1,943	97,219				
15	,260	1,625	98,844				
16	,185	1,156	100,000				

Note: Extraction Method for this analysis was Principal Axis Factoring.

**Table 3.2.** Exploratory Factor Analysis Results: Items and Factor Loadings

Items	Factor 1	Factor 2	Factor 3
RSD10	,855		
RSD12	,732		
RSD16	,681		
RSD13	,587		-,277
RSD9	,346		
RSD7		,758	
RSD2		,622	
RSD1		,507	
RSD11		,463	
RSD5		,352	
RSD8		,349	
RSD4			-,803
RSD14			-,602
RSD15			-,534
RSD6		.293	-,469
RSD3			-,328

Note: Factor 1: Irrational beliefs on competence (CIB's), Factor 2: Irrational beliefs on autonomy (AIB's), Factor 3: Irrational beliefs on relatedness (RIB's).

EFA has been used to explore the underlying factor structure of a set of variables (Child, 1990). In this research three structures: AIB, CIB, and RIB have been targeted. Results support that the three-factor structure strongly fit the theoretical expectation of the irrational beliefs of three basic psychological needs as proposed. Factor loadings are presented in Table 2.2.

### **3.7. Phase 5: Reliability Of The Scale**

Internal consistency tests Cronbach's coefficient alpha for the whole scale and the factors identified by the analysis of EFA. Internal consistency shows the degree to which every item in a test are measuring the similar construct (Tavakol & Dennick, 2011).

Internal consistency value reliabilities for the RESD-W from the initial scaling were all high. Cronbach's Alpha value for the total scale was .81. The subscales were found to be internally consistent in the present study, with Cronbach's Alpha values of .71 for AIB, .73 for CIB, and .75 for RIB. Acceptable values of Cronbach alpha are the range value from 0.70 to 0.95 (Field, 2009; Tavakol & Dennick, 2011).

### **3.8. Phase 6: Confirmatory Factor Analysis**

#### **3.8.1. Participants**

One hundred and ninety-two (n=194) participants completed measures, 102 females (52.6%), 90 males (46.4%) and 2 (1%) others. Having 10 people for every variable in the model (Everitt, 1975; Schreiber et al., 2006) is suggested. A basis of 10 participants per variable for the 16 items on the RESD-W were required. 194 were recruited, which is considered an acceptable size for this analysis (Everitt, 1975; Kenny, 2012).

Participants were aged 18-38 years, with a mean age of 28.91 (SD = 4.73). The sample includes non-employed 26.8% (n= 52), part-time workers 10.3% (n= 20), full-time workers 54.6% (n= 106), temporary workers 2.6% (n= 5), and project-based workers 5.7% (n= 11). Marital status of participants was single (never married) 45.9% (n=89), married 40.2% (n=78), (n=52), divorced 5.2% (n=10), widows 1.5% (n=3) and in relationship 7.2% (n=14) in relationship. Education level of the participants as follows: Graduate degree 18.6% (n= 36), bachelors' degree 62.4% (n=121), high school degree 12.9% (N= 25), middle school degree 3.1% (n=6) and primary school 3.1% (n=6).

### **3.8.2. Procedure**

In order to confirm the factor structure of the RESD-W, confirmatory factor analyses (CFA) were completed using the maximum likelihood estimation method with Lisrel 8.51 (Jöreskog & Sörbom, 1993).

Several alternative indexes of fit as adjuncts to the Chi-square statistic were used (Byrne, 1998), including the Chi-square to degrees of freedom ratio ( $\chi^2/df$ ), the comparative fit index (CFI), goodness-of-fit index (GFI), standardized root-mean-square residual (SRMR) and root-mean-square error of approximation (RMSEA). In this study, the most used indices of goodness of fit statistics being considered: Incremental Fit Index (IFI), CFI, RMSEA, and SRMR. The values of 0.90 or greater for the indices indicate good model fit. For SRMR and RMSEA, values of 0.08 or less indicate good fit (Hu and Bentler 1999; Kline 2005; Şimşek, 2007).

### **3.8.3. Results of Phase 6**

Three and one factor models are being tested as to confirm the best model. The results obtained by CFA analysis are represented in Table 2.2. The best goodness of fit statistics were produced on the three-factor model. While RMSEA, SRMR, CFI, IFI, Model AIC values of three factor model is good, for the single factor model, the same values cannot be acceptable to fit the model.

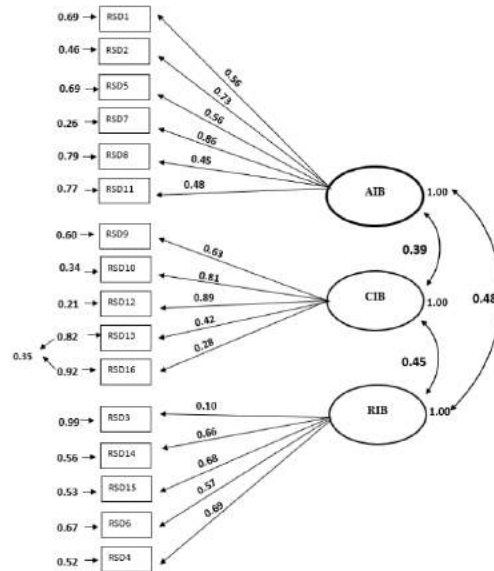
**Table 3.3.** Fit Indices for RESD-W

Indices	3-Factor Model	1-Factor Model
$\chi^2$	203.11	506.54
<i>Df</i>	100	104
CFI	.93	.73
IFI	.93	.74
SRMR	.082	.11
RMSEA	.074	.16
Model AIC	430.38	666.93
ECVI	1.43	1.41

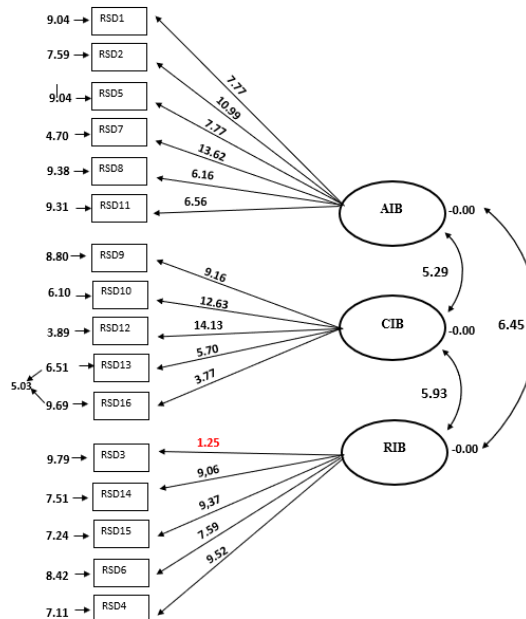
Note: N= 202.  $\chi^2$ = Chi-square; Df = degrees of freedom (\*p=0.000) ; CFI = comparative fit index; AGFI = adjusted goodness-of-fit index; SRMR = standardized root-mean-square residual; RMSEA= root-mean-square error of approximation; Model AIC = The Akaike information criterion (AIC) ; ECVI = expected cross validation index.

Correlations of the three factors are  $r = .48$  ( $p < .05$ ) between RIB and AIB,  $r = .45$  ( $p < .05$ ) between RIB and CIB,  $r = .39$  ( $p < .05$ ) between AIB and CIB (see Figure 3.1.). Examination of the standardized solution outcomes revealed no problems in the model coefficients (see Figure 3.1.).

**Figure 3.2.** Standardized solution outcomes.



**Figure 3.2a.** T-values of CFA



According to *t*-test results, all parameters were the *t* value of greater than

1.96 ( $p < .05$ ) except between RIB and the item of RSD3. In 3-factor model,  $t$ -test values in rest of the parameters range from 5.29 to 14.13; were statistically significant.

Figure 3.3. Standardized solution outcomes for alternative model.

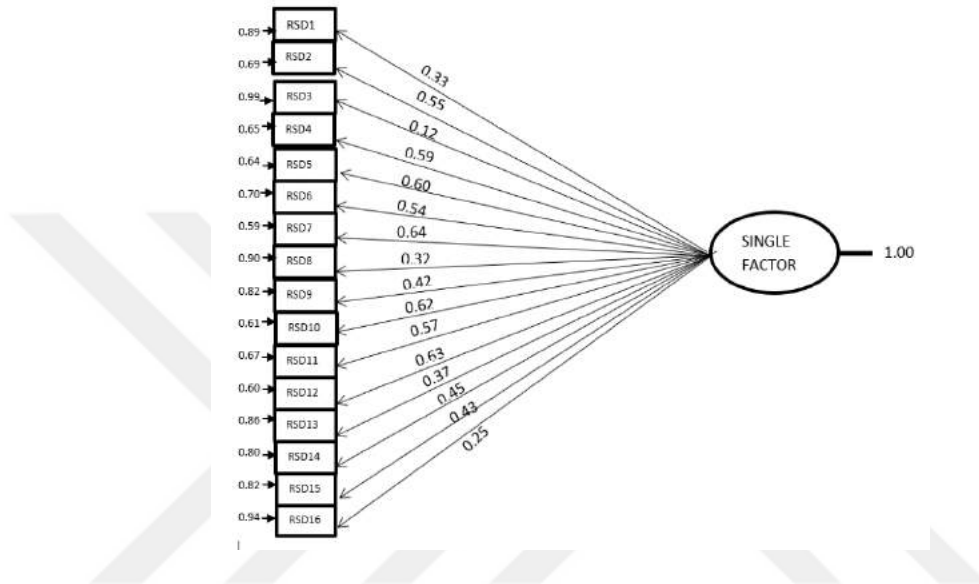
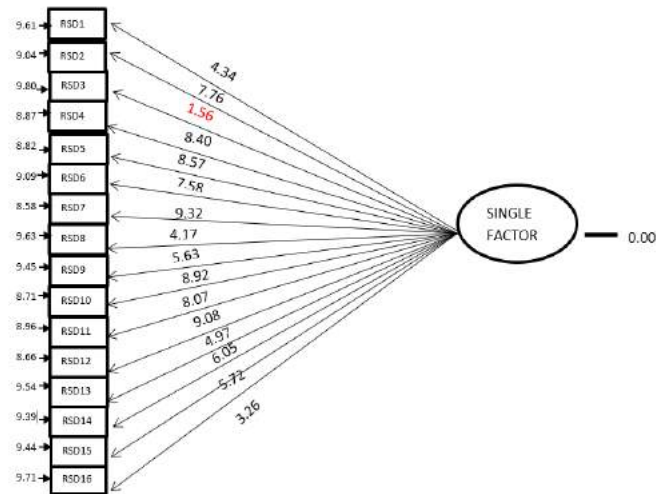


Figure 3.4. T-Values for alternative model





### **3.9. Phase 7: Criterion-Related Validity**

The aim of Phase 7 was to test the criterion-related validity of the RESD-W by investigating the associations between the RESD-W subscales and other measures of basic psychological needs, emotions and psychological ill-being.

#### **3.9.1. Participants**

One hundred and ninety-one (n=191) participants completed measures, 116 females (60.7%), 75 males (39.3%). Participants were aged 18-39 years, with a mean age of 29.96 (SD = 5.36). The sample includes non-employed 3.1% (n= 6), part-time workers 8.4% (n= 16), full-time workers 76.4% (n= 146), temporary workers 4.2% (n= 8), and project-based workers 7.9% (n= 15). The marital status of participants was single (never married) 39.3% (n=75), married 49.2% (n=94), divorced 7.3% (n=14), and in relationship 4.2% (n=8) in relationship. The education level of the participants were as follows: Graduate degree 6.3% (n= 12), bachelors' degree 61.3% (n=117), high school degree 23%, 44 middle school degree 3.1% (n=6) and primary school 6.3% (n=12).

#### **3.9.2. Procedure**

Criterion-related validity usually 'includes any validity strategies that focus on the correlation of the test being validated with some well-respected outside measure(s) of the same objectives or specifications' (Brown, 2000, p.8). Other variables and RESD-W relationships were analysed by using Pearson's Correlation Coefficient (r) measure. The measure provides the strength of the association between the considered variables (Cowan, 1998). Validity was subdivided into three categories: content, criterion-related, and construct validity (Brown 1996). Validity was generally defined as a degree of which a test measures what it claims, to be measuring" (Brown, 1996).

Its validity was investigated by calculating the Pearson Product Moment correlation coefficient (r). The value of r is between +1 and -1. To interpret its r

values following common rules taken as a criterion: .70 as a strong relationship, .50 as a moderate relationship, .30 as a weak relationship. SPSS 20.0 Program used for the analysis.

### **3.9.3. Instruments**

#### **3.9.3.1. Rational Emotive Self Determination Scale – Work Life (RES-D-W)**

Detailed conceptualising has been given at the beginning of the method section. To summarise, RES-D-W consist of 3 dimensions as autonomy irrational beliefs (AIB), competence irrational beliefs (CIB), relatedness irrational beliefs (RIB). The scale consists of 16 items which measure irrational beliefs levels on three basic psychological needs of workers. The scale uses Likert type measurement 1= not agree, 2= somewhat not agree, 3= somewhat agree, 4= agree, 5= definitely agree. The main idea is that very high and very low scores indicate that one may have irrational beliefs about her/his psychological needs and therefore cannot satisfy the needs. Consequently, one cannot be motivated or energised in work life unless one has rational beliefs in three psychological needs. In this study, Cronbach's Alpha value for the total scale was .81, the subscales were found to be internally consistent as with Cronbach's Alpha values of .71 for AIB, .73 for CIB, and .75 for RIB.

#### **3.9.3.2. The Basic Psychological Needs Support (BPNS)**

The BPNS has been used often in SDT research (Deci, Ryan, Gagné, Leone, Usunov, & Kornazheva, 2001). The BPNS is a family of scales: one that addresses need satisfaction, in general, in one's life and others that address need satisfaction in specific domains. The scale addresses need satisfaction in one's particular relationships (e.g., spouse, best friend, mother). It has 9-items assessing the three needs: competence, autonomy, and relatedness (La Guardia, Ryan, Couchman, & Deci, 2000). Some studies have worked with only 9-items (3-items per subscale). In the present paper, when measuring specific domains, 9-items concerning the three needs for competence, autonomy, and relatedness were used. For example, "When I am with XXX, I feel free to be who I am." In the current study, we fill the XXX

part with “work-life or in work place”. Necessary authorizations were obtained from the authors of The BPNS (please see EK -2). Kesici, Bozgeyikli, and Sünbül (2003) translated the scale into Turkish and reported satisfactory internal consistencies for autonomy ( $\alpha = .73$ ), for competency ( $\alpha = .61$ ) and for relatedness ( $\alpha = .73$ ). In the present study, the Cronbach’s Alpha reliabilities for clinical data were; autonomy  $\alpha = .57$ , competency  $\alpha = .67$ , and relatedness  $\alpha = .55$ . The Cronbach’s Alpha reliabilities for non-clinical data were; autonomy  $\alpha = .66$ , competency  $\alpha = .63$ , and relatedness  $\alpha = .63$ .

#### **3.9.3.3. Brief Symptom Inventory (BSI)**

The BSI was developed by Derogatis, 1977, 1993), as a shorter version of the the Symptom Checklist-90-Revised (SCL-90-R). Of the 90 items distributed to the 9 factors of SCL-90-R, 53 items with the highest factor loading were chosen. The instrument consisting of nine subscales (somatization, obsessive-compulsive disorder, interpersonal sensitivity, depression, anxiety disorders, hostility, phobic anxiety, paranoid ideations, psychoticism) was adapted into Turkish (Şahin&Durak, 1994). The participants were asked to reply a five-point scale ranging from 1 (*not at all*) to 5 (*extremely*). The reliability coefficients of the subscales were between .71 and .85.

#### **3.9.3.4. Needs for Absolute Truth (NAT)**

The scale developed to measure to find the degree of needs of finding absolute truth about oneself (Şimşek, 2013). NAT consist of 5 items with a single dimension. Items of the scale are "*(1)I always want to find the truth about myself. (2) I think I'm different from what I live with. (3)I hope that someday I will discover who I really am. (4) I am always thinking what is the truth about myself. (5) I think what my experiences mean more than I experience.*" A high score is positively related to negative psychological variables such as depression and anxiety and negatively correlated to positive psychological variables such as self-esteem (Şimşek (2013). The Cronbach Alpha internal consistency coefficient of the scale is  $\alpha=.74$ . In this study, the number of internal consistency was taken as  $\alpha=.80$ .

### **3.9.3.5. Job-related Affective Well-being Scale (JAWS)**

Developed by Katwyk, Fox, Spector and Kelloway (2000), Şimşek, Günlü and Erkuş (2012) translated JAWS into Turkish. While translation-back translation processes have been done there is no adaptation study on JAWS to Turkish yet. In their study Şimşek et al. (2012 found that internal consistency coefficients of the scale were .95 for positive emotions and .94 for negative emotions in the Turkish population).

In the present study these values were determined as .93 for two sub-dimensions. The scale consists of 30 expressions with a Likert scale of 5. Participants are questioned on a variety of positive and negative emotions that they may encounter in the work environment. The participants are asked to rate how often they feel the emotions in their work life from 1 (Never) to 5 (Always). Positive and negative emotional scores of the participants are evaluated separately. JAWS Scale has sub-scales: High pleasurable-High arousal (HPHA) (items of 14, 15, 16, 17, 25) measures feelings of being energetic, excited, ecstatic, enthusiastic, inspired; High pleasurable-Low arousal (HPLA) (items of 1, 7, 9, 29, 30) measures feelings of being at-ease, calm, content, satisfied, relaxed; Low pleasurable-High arousal (LPHA) (items of 2, 4, 11, 18, 20) measures feelings of being angry, anxious, disgusted, frightened, furious; Low pleasurable-Low arousal (LPLA) (items of 5, 10, 12, 21, 22) measures feelings of being bored, depressed, discouraged, gloomy and fatigued.

In this study, the scale sub-scores were taken for two groups for positive and negative emotions. The positive items were 1, 6, 7, 9, 13, 14, 15, 16, 17, 23, 25, 27, 28., 29, 30. Items for negative feelings were 2, 3, 4, 5, 8, 10, 11, 12, 18, 19, 20, 21, 22, 24, 26. The total scores of these groups and RESD-W relationship were analysed using Pearson's Correlation Coefficient (r) measure.

In this study, internal consistency coefficients of the scale were .92.5 for positive emotions and .93 for negative emotions in Turkish population.

### 3.9.4. Results of Phase 7

In order to determine Criterion-Related Validity of Turkish form of RESD-W, I explored the relationship between the RESD-W and BPNS, the anxiety and depression (BSI), NAT and emotions in work life (JAWS).

According to the results, from weak to moderate, correlations were found between the RESD-W and the other scales and their subscales. All the correlations occurred in the hypothesised directions.

Relationship (correlations) between the total score of RESD-W 's and total score of The Basic Psychological Needs Support (BPNS) is  $r = .25$  ( $p < .01$ ), the total score of NAT is  $r = .31$  ( $p < .01$ ), JAWS' s negative feelings dimension was  $r = .32$  ( $p < .01$ ), total score of BSI's anxiety subscale was  $r = .29$  and BSI's depression subscale was  $r = .29$  ( $p < .01$ ).

The construct (concurrent) validity of the subscales on the RESD-W was also tested using Pearson correlations coefficients. High positive correlations were found between the three subscales on the RESD-W; AIB ( $r = 0.80$ ,  $p < 0.001$ ), CIB ( $r = 0.79$ ,  $p < 0.001$ ), and RIB ( $r = 0.84$ ,  $p < 0.001$ ), indicating that each measured the general concept of irrational beliefs of three psychological needs.

The relationship between the autonomy dimension of RESD-W and BPNS autonomy dimension is  $r = .17$  ( $p < .05$ ). It is related to BPNS competence dimension ( $r = .23$ ) and relatedness dimension ( $r = .22$ ). AIB and JAWS' s negative feelings correlation coefficient was  $r = .25$  ( $p < .01$ ), AIB and NAT .

The relationship between the competence dimension of RESD-W and BPNS competence dimension was  $r = .21$  ( $p < .05$ ). The relationship between the relatedness dimension of RESD-W and BPNS relatedness dimension was  $r = .21$  ( $p < .05$ ).

**Table 3.4.** Correlation Table for RESD-W and Other Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
RSAUT	1												
RSCOM	.395**	1											
RSRLT	.459**	.596**	1										
RSTOT	.797**	.792**	.836**	1									
BPAUT	.170*	.087	.065	.138	1								
BPCOM	<b>.231**</b>	<b>.211**</b>	.178*	<b>.257**</b>	.739**	1							
BPRLT	<b>.223**</b>	<b>.243**</b>	<b>.214**</b>	<b>.280**</b>	.682**	.793**	1						
BPTOT	.228**	.198**	.167*	<b>.246**</b>	.892**	.925**	.909**	1					
BSIANX	<b>.292**</b>	<b>.223**</b>	<b>.177*</b>	<b>.290**</b>	-.086	.015	-.078	-.057	1				
BSIDEP	<b>.339**</b>	<b>.212**</b>	.139	<b>.292**</b>	-.053	.101	.007	.018	.854**	1			
NATTOT	<b>.328**</b>	<b>.222**</b>	<b>.189**</b>	<b>.311**</b>	.073	.002	-.019	.021	.192**	.240**	1		
NEG	<b>.250**</b>	<b>.223**</b>	<b>.310**</b>	<b>.324**</b>	-.158*	-.131	-.063	-.129	.444**	.382**	.070	1	
POZ	-.073	<b>-.157*</b>	-.090	-.128	.278**	.213**	.134	.230**	-.217**	-.261**	-.026	-.436**	1

Notes: \*  $p < .05$  \*\*  $p < .01$  \* RSAUT: autonomy irrational beliefs, RSCOM: competence irrational beliefs, RSRLT: relatedness irrational beliefs, RSTOT: total score of RESD-W scale, BPAUT: basic psychological needs support of autonomy, BPCOM: basic psychological needs support of competence, BPRLT: basic psychological needs support of relatedness, BPTOT: total score of BPNS, BSIANX: BSI's anxiety scores, BSIDEP: BSI's depression scores; NATTOT: total score of need for absolute truth scale; NEG: total score of negative emotions of JAWS, POZ: total score of positive emotions of JAWS.

### **3.10. Phase 8: Test Re-Test Reliability**

#### **3.10.1. Participants**

Forty-four (n=44) participants participated in the test retest design. 21 females (47.7%), 23 males (52.3%). Participants were aged 18-39 years, with a mean age of 25.43 (SD = 3.62). The sample included non-employed 11.4% (n= 5), part-time workers 15.9% (n=7), full-time workers 68.2% (n= 30), temporary workers 4.5% (n= 2). The education level of the participants was as follows: Graduate degree 38.6% (n= 17), bachelors' degree 27.3% (n=12), high school degree 15.9% (n=7), 44 middle school degree 13.6% (n=6) and primary school 4.5% (n=2).

#### **3.10.2. Procedures**

All participants took part on a voluntary basis. Test–retest reliability was conducted over a 2-week interval, where the first completion of the RESD-W was followed by a second completion of the scale two weeks afterwards. A meeting was held with the students for the retest procedure in which the scale was administrated collectively. Test–retest reliability was conducted using the Pearson product–moment correlation coefficient to examine the associations among the subscales at the two timepoints.

#### **3.10.3. Results**

The results revealed high test–retest reliability indicated by large correlation coefficients of  $r = .88$  for Total Score of RESD-W ( $p < .01$ ),  $r = .83$  for AIB ( $p < .001$ ),  $r = .77$  for CIB ( $p < .001$ ) and  $r = .79$  ( $p < .01$ ) for RIB (Table 8.1).

**Table 3.5.** RESD-W's Test Re-Test Reliability

<b>Factors</b>	<b>Applications</b>	<b><math>\bar{x}</math></b>	<b>SD</b>	<b>r</b>
<b>RESD-W</b>	Test	37.38	8.41	.83**
	Retest	37.06	8.98	
<b>AIB-W</b>	Test	13.93	3.67	.79**
	Retest	13.95	3.82	
<b>CIB-W</b>	Test	12.56	4.36	.77**
	Retest	12.31	4.24	
<b>RIB-W</b>	Test	10.88	3.05	.79**
	Retest	10.79	3.11	

Notes: \*  $p < .05$  \*\*  $p < .01$ .  $\bar{x}$ = Mean; SD= Standard Deviation, r= Correlations

### 3.11. Phase 9: Analyzes on Demographic Variables

#### 3.11.1. Participants

In this section, research variables were examined in terms of demographic characteristics of collected data for Criterion-related validity tests.

#### 3.11.2. Procedures

Analyses were conducted using one-way ANOVA, and the t-test. based on gender and education level. T-test provides 'analysis of differences of means on groups' and ANOVA is the method comparing several means the 'analysis of variance'. Variables of age groups and marital status' tables isn't included to report due to there is no significant results. Statistical significance was determined based on an alpha level of .05, and For subgroup comparisons, the assumption of homogeneity of variances was examined using the Levene's test. 95% confidence intervals of means were also generated.



### 3.11.3. Results

According to the analysis (Table 3.5), the mean scores of RESD-W scale (RSTOT) and the variables of autonomy irrational beliefs (RSAUT), competence irrational beliefs (RSCOM) and relatedness irrational beliefs (RSRLT) showed significant difference by gender. In all meanings, it seems that men have more irrational beliefs on basic psychological needs than women. There was no significant difference in other variables according to sex variables. In the depression variable, it was observed that women had more higher scores than men.

**Table 3.6.** T-tests results

Puanlar	Cinsiyet	N	$\bar{X}$	Ss	t	p
RSTOT	Female	116	47.23	9.52	-3.754	<b>.000</b>
	Male	75	52.60	9.83	-3.729	
RSAUT	Female	116	18.21	4.76	-2.179	<b>.031</b>
	Male	75	19.70	4.37	-2.220	
RSCOM	Female	116	14.93	3.59	-2.551	<b>.012</b>
	Male	75	16.30	3.65	-2.542	
RSRLT	Female	116	14.07	3.48	-4.425	<b>.000</b>
	Male	75	16.58	4.29	-4.232	
BPTOT	Female	116	33.89	7.02	-1.275	.204
	Male	75	35.21	6.87	-1.281	
BPAUT	Female	116	11.60	2.63	-.262	.793
	Male	75	11.70	2.68	-.262	
BPCOM	Female	116	11.54	2.46	-1.380	.169
	Male	75	12.04	2.36	-1.393	
BPRLT	Female	116	10.75	2.65	-1.869	.063
	Male	75	11.46	2.47	-1.897	
NATTOT	Female	116	15.19	5.37	.607	.545
	Male	75	14.72	5.22	.611	
NEG	Female	116	36.69	11.53	.205	.838
	Male	75	36.32	13.71	.198	
POZ	Female	116	48.89	11.70	.989	.324
	Male	75	47.13	12.52	.974	
BSIANX	Female	116	26.39	9.84	1.715	.088
	Male	75	23.89	9.86	1.714	
BSIDEP	Female	116	27.81	10.77	2.574	<b>.011</b>
	Male	75	23.78	10.25	2.601	

Notes:  $p < .05$  RSAUT: autonomy irrational beliefs, RSCOM: competence irrational beliefs, RSRLT: relatedness irrational beliefs, RSTOT: total score of RESD-W scale, BPAUT: basic psychological needs support of autonomy, BPCOM: basic psychological needs support of competence, BPRLT: basic psychological needs support of relatedness, BPTOT: total score of BPNS, BSIANX: BSI's anxiety scores, BSDEP: BSI's depression scores; NATTOT: total score of need for absolute truth scale; NEG: total score

of negative emotions of JAWS, POZ: total score of positive emotions of JAWS.

**Table 3.7.** Anova Results: Comperasion of RESD-W scores by Eductional Level

RESD-W	Education Levels	<i>N</i>	$\bar{X}$	<i>Ss</i>	<i>ANOVA RESULTS</i>		
					<i>SE</i>	<i>F</i>	<i>p</i>
RSAUT	Primary School	12	16.83	3.737	1.078	1,27	0,28
	Middle School Degree	6	16.16	4.119	1.681		
	High School Degree	44	19.47	4.100	.618		
	Bachelors' Degree	117	18.84	4.959	.458		
	Graduate Degree	12	19.16	4.344	1.254		
RCOM	Primary School	12	12.25	2.927	.844	2,87	0,02
	Middle School Degree	6	15.33	4.412	1.801		
	High School Degree	44	16.02	3.399	.512		
	Bachelors' Degree	117	15.51	3.637	.336		
	Graduate Degree	12	16.41	4.100	1.183		
RRLT	Primary School	12	12.66	3.749	1.082	1,42	0,22
	Middle School Degree	6	15.00	1.673	.683		
	High School Degree	44	15.27	4.019	.605		
	Bachelors' Degree	117	15.33	4.093	.378		
	Graduate Degree	12	14.08	3.776	1.090		
RSTOT	Primary School	12	16.83	3.737	1.078	2,17	0,73
	Middle School Degree	6	16.16	4.119	1.681		
	High School Degree	44	19.47	4.100	.618		
	Bachelors' Degree	117	18.84	4.959	.458		
	Graduate Degree	12	19.16	4.344	1.254		

Notes:  $p < .05$  RSAUT: autonomy irrational beliefs, RSCOM: competence irrational beliefs, RSRLT: relatedness irrational beliefs, RSTOT: total score of RESD-W scale

The ANOVA method assesses the relative size of variance among group means (between group

variance) compared to the average variance within groups (within group variance). Results of between groups Anova analysis show that groups only differ by RSCOM (Table 3.7). Results on RSAUT, RSRLT and RSTOT didn't have significant difference by groups on educational level. Participants who have graduate degree experience more irrational beliefs on competence than any other groups except relatedness. Another result indicate that who have primary school degrees have fewer irrational beliefs on competence and relatedness needs scores than any other group.



## **CHAPTER IV**

## DISCUSSION

### 4.1. Summary of Findings

The aim of the present paper was to develop the RESD-W scale. This study consisted of 8 phases including scale construction and item generation, testing conceptual consistency of the items and content adequacy assessments, determining the scale for items, explanatory factor analysis, determining the reliability of the scale with internal consistency assessment, confirmatory factor analysis, testing criterion-related validity, and test re-test analysis. In total, 607 participants were recruited for this study and it was adequate to conduct such study on scale development.

EFA and CFA results confirmed that a three-factor dimensions of RESD-W as AIB, CIB and RIB is the best model. The scale measures workers' irrational beliefs on three psychological needs (autonomy, competence, and relatedness) with a set of irrational belief items of demandingness, awfulizing, frustration intolerance and self-others-life (work, colleagues or tasks) downing. Theoretical expectations suggest that basic psychological needs have three components, however it is hard to advocate their orthogonality (Simsek, 2013). One of the common SDT measures is BPNS. Johnston and Finney (2010) suggest that the BPNS is not a three-factor scale but a two-factor scale as competence and autonomy. However, Ryan and Deci (2000) other most SDT research indicate that basic psychological needs have three components. In relation to this, it can be suggested that the RESD-W scale is coherent with SDT's theoretical bases. This result is consistent with other research. According to SDT, human motivation and happiness depends on three concepts called basic psychological needs as autonomy, competence, relatedness (Ryan & Deci, 2000). In RESD-W study, the exploratory factor analyses confirmed the three distinct structures name autonomy irrational beliefs, competence irrational beliefs and relatedness irrational beliefs. Confirmatory factor analysis is also confirmed the structure.

The reliability coefficients provided acceptable internal consistencies for the dimensions and the whole scale. The internal consistency value was high. Cronbach's Alpha value for the total scale was .81. The subscales were .71 for AIB, .73 for CIB, and .75 for RIB. Acceptable values of Cronbach alpha are the range value from 0.70 to 0.95 (Field, 2009; Tavakol & Dennick,

2011).

Test re-test analysis indicate that the test–retest reliability was acceptable and suggests that the scale is stable as an instrument. 44 participants responded to both the first and second assessments. were included in this analysis. A coefficient 0.75 were considered to be good test–retest reliability (Roach, 2006). RESD-W in total and subscales of AIB, CIB and RIB test-retest reliability was over  $r = .75$

#### **4.1.2. RESD-W and RESD-A Studies**

Three factor structured RESD-W scale founded similar with structure of RESD-A (Rational Emotive Self Determination Scale for Adolescents) which also has three factors: AIB, CIB and RIB (Artiran, 2015). The purpose of RESD-A is same with RESD-W. RESD-A (Artiran, 2015) measures irrational beliefs of three psychological needs of adolescents in school settings or in-home environment. The measure helps to find out if an adolescent has irrational beliefs which block her/his needs of autonomy, competence and relatedness.

Testing criterion-related validity provided promising results in this study. The scale was weakly and moderately related to other psychological constructs such as basic psychological needs support (autonomy support, competence support and relatedness support), finding the absolute truth about self (NAT), clinical level anxiety and depression and negative emotions in the workplace. However, the scale has no relationship (except CIB of RESD-W) with positive feelings. Future research is needed to investigate this issue in different sample to test RESD-W with positive variables.

Past research supported the findings of this research. In the development of RESD-A scale was revealed that the weak and moderate relationships with RESD-A and negative emotions, dysfunctional feelings, anger problems, emotional problems, anti-social behaviors, parental support of autonomy needs, relatedness needs and competence needs (Artiran, 2015).

Türkmen (2018) also founded correlation between RESD-A and child depression. In

Türkmen study, mother and father support on basic psychological needs is founded to be moderately correlated with RESD-A. Similar findings has been founded in Artiran's (2015) study: Parental supports of autonomy needs, relatedness needs and competence needs provided similar results with this research outcomes of support for basic psychological needs in work place correlated with RESD-W. In another study, RESD-A related to perfectionism and exam anxiety in adolescents (Demirci, 2018). In Demirci's study competence irrational beliefs (CIB) is found to be caused to perfectionism. In this research anxiety is also related to RESD-W.

#### **4.1.3. Other Related Research**

According the results, irrational beliefs on autonomy, competence and relatedness needs is related with anxiety, depression, NAT and negative feelings. While RESD-W is sensitive on negative psychological variables (e.g. anxiety, depression, NAT and negative) -results show that- The Basic Psychological Needs Support scale (Deci et al., 2001) is responsive to positive feelings. BPNS doesn't have significant relationship with negative variables.

In SDT literature basic psychological needs are related to a negative and positive affect, psychological well-being (Ryan & Deci, 2000, Baard et. al., 2004), performance (Vansteenkiste, Matos, Lens & Soenens, 2007), motivation (Gagne & Deci, 2005), job satisfaction (Arshadi, 2010; Sexton, 2013), and psychological ill-being (Nishimura & Suzuki, 2016) such as suicide ideation (Bureau, Mageau, Vallerand, Rousseau & Otis, 2012) and depression (Leow, Lee & Lynch, 2016).

In REBT research, irrational beliefs are related to distress (Dilorenzo, David, Montgomery, 2007), anxiety and depression (Oltean, Hyland, Vallieres & David, 2017), negative dysfunctional emotions (Mogoşe & Stefan, 2013), psychological ill-being (DiGiuseppe et al., 2014) and posttraumatic stress (Hyland, 2014).

Research conducted in Turkey it was found that weak and medium correlation exist between irrational beliefs and negative and positive variables such as with hopelessness (Kodan, 2013), depression and exam anxiety (Çivitci, 1998).

In terms of self-determination theory, some studies have been conducted in Turkish population. For example, in Kocayörük's (2012) study, in adolescents it found a correlation between psychological needs, parental perception and emotional well-being. Another research found that relationship between support for autonomy, satisfaction of basic psychological needs and subjective well-being (Çankaya, 2009).

These separate studies on SDT and REBT show that both theories are related to psychological realities. The results of this research overlap with the results of the research on these two theories. It may be economical to use both theories to increase the motivation levels of people in their working lives.

These results show that the irrational beliefs transform concept of basic psychological needs into a clinical scale. Because the BNPS scale generally contains positive statements. With this study it seems that adaptation of irrational beliefs to related concepts has been conceptualized in accordance with the basic assumptions of SDT.

#### **4.2. Conclusion**

According to the results, the RESD-W is a reliable and valid scale. This research also may open a door to a new approach for not only SDT but also REBT. While REBT concerns impact of irrational beliefs' on psychopathology, SDT focuses on human motivation and positive elements of psychology. Basic idea of RESD-W may lead the two theories to further point which satisfaction of basic psychological needs can be maintained by regulating irrational beliefs.

Development measurements in behavioral sciences is an important issue. If a conceptual theoretical structure is proposed, this theoretical structure must be measured truly at the same time. However, in REBT, scale studies have not yet been able to produce products that are as theorized. According to Karl Popper (1902-1994), a theory that can not be falsified is not a theory. REBT therefore has to be criticized at this point. Scales used in REBT should approve 4 irrational beliefs (DiGiuseppe et al., 2014). Yet, many scales in REBT such as first form of ABS scale DiGiuseppe, Robin, Leaf ve Gorman, 1989), last version of ABS scale: ABS-II (DiGiuseppe, Leaf., Exner, and

Robin (2017), SABS (Lindner, Kirkby, Wertheim, Birch, 1999); Irrational Beliefs Test and other measurement tools aren't reach the goal yet. 4 irrational beliefs are not states but traits. Therefore, REBT and CBT research need to work on better measures in the psychological constructs. To help bridge the gap between theory and practice, measurement tools are curicial. RESD-W is a newly constructed scale may give a new direction to REBT studies in the means of theoretical assumptions. According to Ellis (1994) situational or context-specific rational and irrational beliefs are stronger predictors of emotional disturbance than general or context-non-specific beliefs (Artiran, 2015). RESD-W is an attempt to context-specific (AIB, CIB and RIB) measurement.

For some, traditional psychotherapy such as Freud's psychanalysis undermines human potential to overcome psychological problems. REBT and CBT may believe the human potential however still hold the idea that we (psychologist) need to seek and treat negativities in human cognition and behaviors. It is stated that preventing disorders can be accomplished by building competence and skills, not by treatment of weaknesses (Seligman and Csikszentmihalyi, 2000). Individuals who have psychological problems additionally have desire to enjoy and having satisfaction in their life than to feel less anxious and sad. On the other side positive psychology has been criticized also. Positive psychology comes from traditional humanistic psychology (Gillham & Seligman, 200) and does not add anything original (Rios & Cornes, 2009). According to Lazarus (2003) positive psychology does not admire past literature in psychology and this is wrong to offer a new approach.

A clinical psychology theory such as REBT and CBT and a positive psychology theory such as SDT is brought together with this research to offer an integrated approach for economical and effective model in psychology. Both theories can and do have deficiencies. We need new expansions that rise on the basis of past theories for the development of psychology science and the emergence of more effective and useful approaches. RESD-Adolescents and RESD-Work Life may open a new door for clinical psychology as well as individual side of occupational psychology by assessing irrational beliefs on three basic psychological needs. W. James, A. Maslow, A. Ellis, M. Seligman, M. Ryan and E.L. Deci's ideas will continue to grow and future of the psychology may continue to the journey of well-being.

#### **4.3. Suggestions for Future Research**



This study recruited employers and employees and blue and white-collar workers together, so future research will be conducted on each group separately. Additionally, future research will further test this measure on the clinical population. The scale is needed to test with other concepts such as job satisfaction, fatigue, clinical disorders, positive feelings, creativity and productivity. Use of the RESD-W might benefit in longitudinal studies or randomized trials of clinical interventions for workers with psychological disorders. This would also inform us whether any change in RESD-W scores were associated with changes in psychological wellbeing and quality of work life.

#### **4.4. Methodological Limitations**

Findings from this sample (n=607) cannot be generalized to all workers or work life conditions. The study didn't include tests of convergent and discriminant validity. Item number RSD3 is questionable because of low factor loadings value. Participants scores were normally distributed and the findings confirmed reliability and the validity of the scale. However, RESD-W is still needed to clarify the means of relationships with other concepts in clinical and occupational psychology. This study is limited to only five variables to test RESD-W. Although the aim of the scale was to test work life issues, a considerable amount of the participants was unemployed.

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## APPENDICIES

## APPENDIX A

### Inform Consent Form

#### BİLGİLENDİRİLMİŞ ONAM FORMU

Gönüllünün Referans No: .....

Bir bilimsel araştırma çalışmasına katılmanız istenmektedir. Katılmak isteyip istemediğinize karar vermeden önce araştırmanın neden yapıldığını, bilgilerinizin nasıl kullanılacağını çalışmanın neleri içerdiğini ve olası rahatsızlık verebilecek konuları anlamanız önemlidir. Lütfen aşağıdaki bilgileri dikkatlice okuyunuz ve anlaşılmayan bir durum olduğunda araştırmacıya sorunuz.

**Araştırmanın adı** : Düşüncelerin motivasyon ve ruh sağlığı değişkenleri ile ilişkisine dair ölçek geliştirme çalışması

**Araştırmacıların isimleri** : Murat Artıran

**Tarih** : 05.08.2017

**Kurum** : Bu araştırma T.C. İstanbul Arel Üniversitesi Etik Kurulu izni ile yapılmaktadır.

**Araştırmanın Amacı**: Bilime katkı sağlamaktır. Araştırma sonucunda toplanan bilgiler tez çalışması olarak, bilimsel araştırma makalesi olarak akademik dergilerde yayınlama amaçlı kullanılacaktır. Araştırmaya Katılması Beklenen Katılımcı/Gönüllü Sayısı 250 kişidir.

**Kişisel Bilgileriniz Gizli Kalacak**: Kişisel bilgileriniz hiçbir şekilde bu yayınlarda bulunmayacaktır. Araştırma süresince kimlik bilgileriniz sadece bu onam formunda bulunacaktır. Sadece size verilmiş olan yukarıdaki referans numara yazılı olacaktır. Cevapladığınız anket formları üzerinde isminiz kullanılmayacaktır.

**Çalışmanın Konusu Nedir?** Araştırmanın konusu ölçek (anket) geliştirmek, güvenilirlik ve geçerlilik analizlerini yapmaktır.

#### Teşekkür ederiz:

- Vereceğiniz cevapların doğruluğu ve dürüstlüğü araştırmanın sonucunu doğrudan etkileyecektir.
- Sorularda doğru ve yanlış cevap yoktur. O nedenle başarısızlık veya başarılı olmak söz konusu değildir.
- Soruları cevaplarken bazı sorular sizde hoş duygular uyandırmayabilir, moral bozucu gelebilir, hatırlamak istemediğiniz anılarınızı çağırabilir. İstemediğiniz soruları boş bırakabilirsiniz. İsteddiğiniz zaman soruları cevaplamayı bırakabilirsiniz.
- Ortalama cevaplama süresi 30 dakikadır.

**Çalışmaya Katılma Onayı**: Yukarıdaki bilgileri araştırmacı ile ayrıntılı olarak tartıştım ve kendisi bütün sorularımı cevaplandırdı. Bu bilgilendirilmiş onam formunu okudum ve anladım. Bu araştırmaya katılmayı kabul ediyorum ve bu onay belgesini kendi hür irademle imzalıyorum. 18 yaşından büyüğüm.

Katılımcının (Kendi el yazısı ile):

Adı - Soyadı:

İmzası:

Tarih:

## APPENDIX B

**Demografik Bilgi Formu:**

İsim – Soyad: _____	
Yaşınız: _____	
Cinsiyetiniz:	Kadın      Erkek      Diğer
Şuan ki çalışma durumunuz:	a) Çalışmıyorum b) <u>Yarı</u> zamanlı çalışıyorum c) <u>Tam</u> zamanlı çalışıyorum d) <u>Dönemlik</u> çalışıyorum e) Proje bazlı çalışıyorum
Medeni durumunuz:	a) Bekar b) Evli c) Boşanmış d) Dul e) İlişkide
Eğitim Durumunuz.	a) Okur- yazar değil b) İlkokul c) Ortaokul d) Lise e) Üniversite f) Lisansüstü
Ekonomik durumuz. (Yaklaşık olarak ailenizin toplam geliri.)	a) 1400 ve altı b) 1401-2500 c) 2501-5000 d) 5001 ve üzeri e) Belirtmek istemiyorum
Çalıştığınız yer	a) Anonim Şirketi veya Holding b) Limited Şirketi c) Aile şirketi d) Şahıs şirketi e) Serbest f) Diğer
Çalıştığınız ortam	a) İç mekan (bina içi) b) Dış mekan (dışarıda) c) Hem iç hem dış mekan

**APPENDIX C**

Form in Turkish:

### Temel Psikolojik İhtiyaçların Desteklenmesi Ölçeği

<b>Lütfen her bir ifadenin genel olarak çalışma arkadaşlarınızla olan ilişkilerinizi ne ölçüde tanımladığını aşağıdaki ölçeklemeyi dikkate alarak değerlendiriniz.</b>	<b>Bana hiç uygun değil</b>	<b>Bana çok az uygun</b>	<b>Bana uygun</b>	<b>Bana oldukça uygun</b>	<b>Bana tamamen uygun</b>
1.Çalışma arkadaşlarımla birlikteyken olduğum gibi davranmakta özgür hissedirim.	1	2	3	4	5
2.Çalışma arkadaşlarımla birlikteyken kendimi yeterli bir kişi gibi hissedirim.	1	2	3	4	5
3.Çalışma arkadaşlarımla birlikteyken sevildiğimi ve bana özen gösterildiğini hissedirim.	1	2	3	4	5
4. Çalışma arkadaşlarımla birlikteyken kendimi yetersiz ve başarısız hissedirim.	1	2	3	4	5
5. Çalışma arkadaşlarımla birlikteyken olan bitenler hakkında düşüncelerimi kolaylıkla ifade edebilirim.	1	2	3	4	5
6. Çalışma arkadaşlarımla birlikteyken ilişkimizde oldukça mesafe algılarım.	1	2	3	4	5
7. Çalışma arkadaşlarımla birlikteyken kendimi oldukça yetenekli ve etkili hissedirim.	1	2	3	4	5
8. Çalışma arkadaşlarımla birlikteyken ilişkimizde oldukça yakınlık ve samimiyet hissedirim.	1	2	3	4	5
9. Çalışma arkadaşlarımla birlikteyken belirli açıdan kendimi kontrol edilmiş ve bastırılmış hissedirim.	1	2	3	4	5

Form in English:

**Basic Psychological Need Satisfaction Scale**

In My XXXX (WORK LIFE) Please respond to each statement by indicating how true it is for you. Use the following scale.

1. When I am with XXXXXXXX, I feel free to be who I am.
2. When I am with XXXXXXXX, I feel like a competent person.
3. When I am with XXXXXXXX, I feel loved and cared about.
4. When I am with XXXXXXXX, I often feel inadequate or incompetent.
5. When I am with XXXXXXXX, I have a say in what happens, and I can voice my opinion.
6. When I am with XXXXXXXX, I often feel a lot of distance in our relationship.
7. When I am with XXXXXXXX, I feel very capable and effective.
8. When I am with XXXXXXXX, I feel a lot of closeness and intimacy.
9. When I am with XXXXXXXX, I feel controlled and pressured to be certain ways.

**APPENDIX D**

Form in English:

### Job-related Affective Well-being Scale, JAWS

Below are a number of statements that describe different emotions that a job can make a person feel. Please indicate the amount to which any part of your job (e.g., the work, coworkers, supervisor, clients, pay) has made you feel that emotion in the past 30 days.

Please check <b>one</b> response for each item that best indicates how often you've experienced each emotion at work over the past 30 days.	Never	Rarely	Sometimes	Quite often	Extremely often
1. My job made me feel at ease					
2. My job made me feel angry					
3. My job made me feel annoyed					
4. My job made me feel anxious					
5. My job made me feel bored					
6. My job made me feel cheerful					
7. My job made me feel calm					
8. My job made me feel confused					
9. My job made me feel content					
10. My job made me feel depressed					
11. My job made me feel disgusted					
12. My job made me feel discouraged					
13. My job made me feel elated					
14. My job made me feel energetic					
15. My job made me feel excited					
16. My job made me feel ecstatic					

Note that the scale has 30 items.

Form in Turkish:

Aşağıda yer alan ifadeler yaptığınız işin sizde kişisel olarak hissettirebileceği duygulara ilişkindir. Lütfen son işinizi yaparken herhangi bir konuda (işin niteliği, çalışma arkadaşları, ücret, yönetici, müşteri vb.) hissettiğiniz duyguları işaretleyiniz.	ASLA	NADİREN	BAZEN	SIKÇA	DAİMA
01. İşimde kendimi <b>rahat</b> hissedirim.	1	2	3	4	5
02. İşimde kendimi <b>kızgın</b> hissedirim.	1	2	3	4	5
03. İşimde kendimi <b>huzursuz</b> hissedirim.	1	2	3	4	5
04. İşimde kendimi <b>kaygılı</b> hissedirim.	1	2	3	4	5
05. İşimde kendimi <b>sıkılmış</b> hissedirim.	1	2	3	4	5
06. İşimde kendimi <b>neşeli</b> hissedirim.	1	2	3	4	5
07. İşimde kendimi <b>sakin</b> hissedirim.	1	2	3	4	5
08. İşimde kendimi <b>kafası karışmış</b> hissedirim.	1	2	3	4	5
09. İşimde kendimi <b>hoşnut</b> hissedirim.	1	2	3	4	5
10. İşimde kendimi <b>depresif</b> hissedirim.	1	2	3	4	5
11. İşimde kendimi <b>kötü</b> hissedirim.	1	2	3	4	5
12. İşimde kendimi <b>cesareti kırılmış</b> hissedirim.	1	2	3	4	5
13. İşimde kendimi <b>coşkulu</b> hissedirim.	1	2	3	4	5
14. İşimde kendimi <b>enerjik</b> hissedirim.	1	2	3	4	5
15. İşimde kendimi <b>heyecanlı</b> hissedirim.	1	2	3	4	5
16. İşimde kendimi <b>mest olmuş</b> hissedirim.	1	2	3	4	5

**Not: Ölçek 30 maddedir. Burada sadece 16 maddesi verilmiştir.**

## APPENDIX E

Form in Turkish:

### **Mutlak Gerçeği Bulma İhtiyacı Ölçeği**

Kendi üzerinize düşündüğünüz zamanları dikkate aldığınızda, aşağıdaki her bir ifadenin sizi ne ölçüde tanımladığını değerlendiriniz.

A	B	C	D	E
Bana Hiç Uygun Değil	Bana Çok Az Uygun	Bana Uygun Uygun	Bana Oldukça Uygun	Bana Tamamen Uygun

1. Hep kendimle ilgili “gerçekleri” bulmak isterim.
2. Yaşadığım benle gerçek benin farklı olduğunu düşünürüm.
3. Bir gün gerçekten kim olduğumu keşfedeceğimi umut ederim.
4. Hep kendimle ilgili “gerçeklerin” ne olduğuna kafa yorarım.
5. Yaşadıklarımın çok onların gerçekten ne anlama geldiklerini anlamaya çalışırım.

Form in English:

### **Need for Absolute Truth Scale**

- 1- I always want to find the truth about myself.
- 2- I think I'm different from what I live with.
- 3- I hope that someday I will discover who I really am.
- 4- I always thinking what is the truth about myself.
- 5- For me I want to understand the real meaning of my life and not just what I live and the experiences I have".

## **APPENDIX F**



## Kısa Semptom Envanteri

Lütfen aşağıda verilen her bir belirtinin SİZDE BUGÜN DAHİL SON BİR HAFTADIR ne kadar var olduğunu aşağıdaki dereceleme ölçeğine göre cevap kağıdına işaretleyiniz.	Hiç Uygun Değil	Kısmen Uygun	Uygun	Oldukça Uygun	Tamamen Uygun
1. Yaşantınıza son verme düşünceleri.	1	2	3	4	5
2. Hiçbir nedeni olmayan korkular.	1	2	3	4	5
3. Kontrol edemediğiniz duygu patlamaları.	1	2	3	4	5
4. Başka insanlarla beraberken bile yalnızlık hissetmek.	1	2	3	4	5
5. Yalnız hissetmek.	1	2	3	4	5
6. Hüzünlü, kederli hissetmek.	1	2	3	4	5
7. Hiçbir şeye ilgi duymamak.	1	2	3	4	5
8. Ağlamaklı hissetmek.	1	2	3	4	5
9. Kolayca incinebilmek, kırılmak.	1	2	3	4	5
10. Uykuya dalmada güçlük.	1	2	3	4	5
11. Karar vermede güçlükler.	1	2	3	4	5
12. Otobüs, tren, metro gibi umumi vasıtalarla seyahatlerden korkmak.	1	2	3	4	5
13. Sizi korkuttuğu için bazı eşya, yer ya da etkinliklerden uzak kalmaya çalışmak.	1	2	3	4	5
14. Kafanızın “bomboş” kalması.	1	2	3	4	5
15. Gelecekle ilgili umutsuzluk duyguları.	1	2	3	4	5
16. Konsantrasyonda (dikkati bir şey üzerinde toplama) güçlük / zorlanmak.	1	2	3	4	5
17. Bedeninin bazı bölgelerinde zayıflık, güçsüzlük hissi.	1	2	3	4	5
18. Kendini gergin ve tedirgin hissetmek.	1	2	3	4	5
19. Ölme ve ölüm üzerine düşünceler.	1	2	3	4	5
20. Diğerlerinin yanındayken yanlış bir şeyler yapmamaya çalışmak.	1	2	3	4	5
21. Kalabalıklarda rahatsızlık duymak.	1	2	3	4	5
22. Dehşet ve panik nöbetleri.	1	2	3	4	5
23. Sık sık tartışmaya girmek.	1	2	3	4	5
24. Yalnız bırakıldığında / kalındığında sinirlilik hissetmek.	1	2	3	4	5
25. Yerinde duramayacak kadar tedirgin hissetmek.	1	2	3	4	5

## APPENDIX G

## CURRICULUM VITAE



Murat Artiran

e-mail: dr.muratartiran@gmail.com

### EDUCATION

<b>Ph.D. in Clinical Psychology</b> <i>Istanbul Arel University (Honor of graduating; GPA: 4.0)</i>	Istanbul, Turkey	2012-2015
<b>Master of Arts in General Psychology</b> <i>American Public University (GPA: 3.77)</i>	2009-2011 Charles Town, WV	
<b>Bachelor's Degree in Psychology</b> <i>Eastern Kentucky University</i>	2013-2016 Richmond, KY	
<b>Rational Emotive Behavior Therapy Training</b> <i>Albert Ellis Institute</i>	2010-2014 New York, ABD	
<b>Intensive English Program</b> <i>Auburn University</i>	2001-2001 Auburn, Alabama	

### EXPERIENCES

<b>Istanbul Arel University</b> <u>Asistant Professor</u>	2013-current
<b>ATC Center of Albert Ellis Institute - Istanbul</b> Clinical Psychologist – Director	Istanbul, Turkey 2014-current Istanbul
<b>A &amp; G.net, Long Island, New York</b> <u>Psychological Counselor</u> Counseling	2007-2012 New York

### SOME CERTIFICATIONS

- Rational Emotive Behavior Therapy and Cognitive Behavioral Therapy Supervisory Certificate (American Psychological Association-APA / 28 CE credits)  
*Albert Ellis Institute (AEI)* New York, 2014
- Rational Emotive Behavior Therapy and Cognitive Behavioral Therapy Associated Fellowship Certificate (American Psychological Association-APA / 28 CE credits)  
*Albert Ellis Institute (AEI)* New York, 2013
- Rational Emotive Behavior Therapy and Cognitive Behavioral Therapy Advanced Practicum Certificate (American Psychological Association-APA / 28 CE credits)  
*Albert Ellis Institute (AEI)* New York, 2012
- Rational Emotive Behavior Therapy and Cognitive Behavioral Therapy Primary Practicum Certificate (American Psychological Association-APA / 24 CE credits)  
*Albert Ellis Institute (AEI)* New York, 2012
- Motivational Interviewing with Individual Clients and Groups (3 CE credits)  
*Albert Ellis Institute (AEI)* New York, 2012
- Rogerian Child Centered Play Therapy  
(Association for Play Therapy - APT / 6 CE Credits)  
*Therapy With a Twist - Clinical Training Center* Bronx, New York, 2012
- REBT/CBT Evidence-Based Treatments for Trauma and PTSD (3 CE credits)  
*Albert Ellis Institute (AEI)* New York, 2012
- ADHD: Interventions for Children (3 CE credits)  
*Albert Ellis Institute (AEI)* New York, 2012
- REBT/CBT Evidence-Based Treatments For Obsessive-Compulsive Disorder (3 CE credits) *Albert Ellis*

*Institute (AEI)*

New York, 2012

- REBT/CBT Evidence-Based Treatments for Eating Disorders (3 CE credits)

*Albert Ellis Institute (AEI)*

New York, 2012

- Structural Equation Modelling in Scientific Research - Advanced Statistics Applications

*Istanbul Arel University (40 hours workshop)*

Istanbul, 2012

### **BOOKS**

*Rational Emotive Behavior Therapy in Sport and Exercise (Routledge Psychology of Sport, Exercise and Physical Activity) Hardcover – 5 Dec 2017. Book Chapter: **Rebounding from Injury and Increasing Performance Using Rational Emotive Behavior Therapy (REBT)***

### **BOOK TRANSLATIONS**

1. *Clinical Psychology- A Modern Health Profession* by Wolfgang Linden & Paul L. Hewitt Pearson Education.

Published by Nobel Press, Inc. Istanbul, Turkey. Book Translation from English to Turkish: Chapters of 5-7-10-12 and 13. 2013.

2. *A Practitioner's Guide To Rational Emotive Behavior Therapy (Third Edition)*. Authors: Raymond A.

DiGiuseppe, Kristene A. Doyle, Windy Dryden, Wouter Backx. Book Translation from English to Turkish:

3. *Emotional Regulations of Children and Adolescents* by Michael A. Southam – Gerow. Nobel Publishing / Counseling Series . 2014. Book translation from English to Turkish.

### **PROJECT EXPERIENCE**

#### **Research Assistant**

TUBITAK (The Scientific And Technological Research Council Of Turkey) 1001 Project  
- The Gap between Language and Experience and its Effects on Mental Health: The Importance of Language in Daily Life and Helping Process. 3 Years Long Project

My Task: Analyzing the data with Lisrel- Structural Equation Modeling