

**MEASUREMENT OF TRANSFORMATIONAL LEADERSHIP  
THROUGH  
A CONDITIONAL REASONING TEST**

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Approval of the Graduate School of Social Sciences

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## **ABSTRACT**

### **MEASUREMENT OF TRANSFORMATIONAL LEADERSHIP THROUGH A CONDITIONAL REASONING TEST**

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The aim of the current study is to assess transformational leadership proclivities based on the Conditional Reasoning Test approach (CRT; James, 1998). The CRT is a relatively new implicit assessment system that is used to identify the justification mechanisms (i.e. cognitive biases) indicative of specific motives which underlie personality (James, 1998). ‘Justification mechanisms’ (JMs) are rational and sensible explanations- in contrast to irrational and foolish- that people are inclined to produce for their behaviors and decisions (James, & Mazerolle, 2002; Kunda, 1990). People with different personalities and motives have different JMs. The power motive-with its’ JMs of agentic bias and power attribution bias-, the activity inhibition motive, the change motive-with its’ JMs of efficacy and personal responsibility inclination bias, positive connotation of change bias, and identification with change initiators bias-, and finally the exhibition motive were determined as the motives of leaders and transformational leaders. The present study sample included 234 participants; 81 in a leadership position and 153 in a subordinate position. The CRT that was developed had a moderate effect size in the prediction of whether or not employees occupied a leadership position, and improved prediction of position

over conceptually equivalent self-report counterparts. Furthermore, CRT had a significant moderate association with subordinate ratings of the target leaders' transformational leadership style offering significant incremental variance over leader's self-rated transformational leadership perceptions, personality, and motivation to lead. The study contributes to the literature on implicit personality assessment via conditional reasoning using justification mechanisms and to the assessment of leadership.

**Keywords:** conditional reasoning test, leadership, transformational leadership

## ÖZ

### KOŞULLU MUHAKEME TESTİ İLE DÖNÜŞTÜRÜCÜ LİDERLİĞİN ÖLÇÜLMESİ

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Çalışmanın amacı; “Koşullu Muhakeme Testi” yöntemi (CRT; James, 1998) kullanılarak “Dönüştürücü Liderliğin” ölçümü için test geliştirme ve bu testin ölçüt-bağıntılı geçerliğini incelemektir. Koşullu Muhakeme Testi, bireylerin kişiliklerinin altında yatan güdülerini inceleyerek kendilerini doğrulama mekanizmalarını (bilişsel yanlılık gibi) ölçmektedir (James, 1998). Kişiler kendi davranışlarının nedenlerini akla uygun bir şekilde açıklama güdüsü içindedirler (James, & Mazerolle, 2002; Kunda, 1990). Bu amaçla, kişiler muhakeme yöntemlerine dayanarak davranış seçimlerini doğrulama eğilimindedirler ve bu muhakeme yöntemine Doğrulama Mekanizması adı verilir. Farklı kişilik özelliklerine sahip bireylerin farklı Doğrulama Mekanizmaları vardır. Dönüştürücü Liderlik tipi incelenirken de, bu liderlik tipini oluşturan güdüler Koşullu Muhakeme yöntemi ile araştırılmıştır. Dönüştürücü liderliğin doğrulama mekanizmaları olarak; güç güdüsü ve bu güdünün alt güdülerinden temsil güdüsü ve güce atıfta bulunma güdüsü; etkinliği engelleme güdüsü; değişim güdüsü ve bu güdünün alt güdülerinden fayda sağlama ve kişisel sorumluluk alma güdüsü; değişime pozitif yaklaşma güdüsü ve değişimi başlatan kişilerle bağlantı kurma güdüsü ve son olarak kendini gösterme güdüsü tespit edilmiştir.



Bu çalışmaya katılan 234 katılımcının 81'i lider pozisyonunda 153'ü çalışan pozisyonunda yer almaktadır. Liderliği ölçen Koşullu Muhakeme Testi insanların lider pozisyonunda olup olmadığını etki büyüklüğü olarak orta derecede yordamaktadır ve, Koşullu Muhakeme Testi öz-beyana dayalı yönetme motivasyonu ve kişilik özelliklerinin üzerinde artan geçerlik sağlamıştır. Ayrıca, yapısal geçerlik kapsamında, dönüştürücü liderliği ölçen Koşullu Muhakeme Testi çalışanların lideri için verdikleri dönüştürücü liderlik değerlendirmeleri ile orta büyüklükte anlamlı korelasyon göstermiştir ve liderlerin öz beyana dayanan dönüştürücü liderlik algıları, kişilikleri ve yönetme motivasyonlarının üzerinde artan geçerlik sağlamıştır. Bu çalışma, gizil kişilik ölçümü ile ilgili literatüre ve liderlik potansiyelinin ölçülmesine katkı sağlamaktadır.

**Anahtar kelimeler:** koşullu muhakeme testi, liderlik, dönüştürücü liderlik

*To The Most Valuable Person In My Life My Daughter Duru DEMİRAN,  
and My Dearest Husband Volkan DEMİRAN  
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# **CHAPTER I**

## **INTRODUCTION**

### **1.1 Overview**

The aim of the current study is to assess transformational leadership proclivities based on the Conditional Reasoning Test approach (CRT; James, 1998). Several CRTs have been shown to have superior criterion-related validities as compared to the self-report counterparts of the same constructs (James, & Mazerolle, 2002). The CRT is a relatively new implicit assessment system that is used to identify the justification mechanisms (i.e. cognitive biases) indicative of specific motives which underlie personality (James, 1998). People try to produce sensible explanations for their behaviors because they want to believe their behaviors are justified, which is to say are rational or sensible in contrast to irrational and foolish (James, & Mazerolle, 2002; Kunda, 1990). For that purpose, people rely on reasoning processes for justifying their choice of behaviors or decisions, and this reasoning process is referred to as ‘justification mechanisms’. People with different personalities have different justification mechanisms. In order to test the transformational leadership style, the underlying personality tendencies and motives were investigated through conditional reasoning test. First the literature on leadership and how leadership proclivities are related to certain motives and personality styles are reviewed. Specific cognitive biases are identified based on this literature and were utilized in developing the CRT-Transformational Leadership measure.

### **1.2 Leadership**

Modern-day organizations need to achieve higher level of performance in order to struggle with high demands of the competitive global market and traditional organizational bureaucracy. Organizational power is not sufficient to meet the needs of today’s market because traditional organizations seem to be inflexible in terms of delivering goods and services at the expected level of speed and quality. Therefore, organizations reorganize their standards and departments to change the work environment with an aim to meet the needs of modern technology. Changing norms about proper behavior that result from the changing structure, working standards and

employment policies often challenge or take a stand against present cultures (Cartwright, 2003). So, many organizations see effective leaders in the organization as a competitive advantage and invest money to leader development programs (Training, 2005; Vicere, & Fulmer, 1998). Organizations also integrate leadership assessments into their selection systems to hire people who have leadership abilities as it is claimed that the contribution of leaders to the organization is high and they can increase profitability (Northouse, 2010).

### **1.3 Methods of Leader Assessment**

A leader in an organization can be selected in a number of ways that includes appointment by high authorities, simple rotation or democratic election, leaderless group discussion, cognitive ability test, personality tests, structured interviews and simulations (Hogan, Curphy, & Hogan, 1994; Pandey, 1976). Goldman, Bolen and Martin (1961) studied the election and appointment methods of leaders and they found that groups with appointed leaders performed more poorly than groups with non-appointed leaders in which the leader emerges in the group. In addition, the effect of leadership selection methods on group performance was investigated by Goldman and Fraas (1965). The selection procedures were (1) electing the leader based on group vote, (2) selecting the leader in terms of their ability to perform the group task, (3) selecting the leader randomly by the experimenter, (4) no leader was appointed. According to the results, performance was best when a leader was selected in terms of ability to perform the group task followed by when a leader was selected by a group, when a leader was selected randomly by the experimenter and lastly the no leader group condition.

The other leader selection method is leaderless group discussion (LGD) which is a technique generally used for studying leader emergence and leadership potential. According to Howard (1997) LGD has been an integral part of assessment centers and it has been used for leader selection for over 60 years. In LGD, a group of people which is generally composed of job candidates and team members come together and discuss a problem to solve it. The important thing is that no leader is appointed to these discussion groups. During the discussion, candidates exchange

their ideas, interact with each other and this situation creates an opportunity to assume a leadership position in the group. Also, trained observers observe and rate each participant in terms of their leadership potential and also rate the naturally emerging informal leader in the group. Furthermore, sometimes group members rate each other's emergent leadership behaviors (Ensari, Riggio, Christian, & Carlsaw, 2011).

Furthermore, in order to select successful leaders, psychologists measure cognitive ability and personality, apply structured interviews, and use simulations in assessment centers (Papadopoulos, 2012; Hoffman, Woehr, Maldagen-Youngjohn, & Lyons, 2011; Hogan, Curphy, & Hogan, 1994). On the other hand, Hogan et al. (1994) stated that these assessment methods are not used by many organizations because organizations may be unaware or reluctant to use psychological devices. Many organizations including academic departments, petty officers, shop supervisors, military and sergeants in the protective services select leaders from their workforce. For example they choose a first-line supervisor as a leader according to their technical talents, not based on their leadership skills. In other words, someone whose performance is high compared to others in the department is chosen as the leader. With such claims, the question of why psychologists are not participating more in leader selection arose. Among the potential reasons as to why organizations do not make use of scientific selection methods, Hogan et al. (1994) stated that (1) investigator's empirical research results are too narrow that practitioners think it is irrelevant for practice, (2) researchers are too careful about generalizing beyond their findings that they look like having nothing to say, (3) organizations think that psychologists' service would cost them more than a poor selection decision, (4) psychologists' status is low for their views to be considered, and (5) psychologists are generally unaware about political realities enclosing selection.

Even though organizations do not make fair use of the scientific selection methods, psychological research has shown that specific cognitive and personality variables are associated with leadership emergence and effectiveness (e.g. Bartone, Snook, & Tremble, 2002, Bass, 1990; Judge, Bono, Ilies, & Gerhardt, 2002; Stogdill,

1948). For example, Rotem, Schneider, Wasserzug and Zelker (2008) showed that the personality dimensions of attentiveness, assertiveness, interpersonal skills, managerial skills, patience, conflict management, maintaining a broad organizational perspective, adopting and leading change, professional knowledge, and charisma were rated as important predictors of effective nursing leaders. Bartone et al. (2002) investigated the association between cognitive variables and effective leadership where cognitive variables were specified as spatial judgment, college entrance exam scores, problem solving, social judgment skills, and logical reasoning. Their analysis yielded significant correlations between effective leadership and college entrance exam scores, social judgment and logical reasoning, but with small effect sizes ( $r$  range = .07 to .12).

Moreover, in the meta-analytic study of Hoffman and colleagues (2011), 25 individual differences variables related to effective leadership behavior were investigated. They grouped 25 individual differences into two categories of personality-and-intelligence and knowledge-and-skills. According to the results of the study, personality-and-intelligence ( $\rho = .27$ ) and knowledge-and-skills ( $\rho = .26$ ) all had approximately the same effects size. Furthermore, large correlations were found between leader effectiveness and charisma, decision making, management skills, problem solving skills, and interpersonal skills which ranged from .30 to .57.

Researchers investigating the personality trait theories of leadership seek to solve the two questions of what traits differentiate leaders from followers and what the size of those differences are (Bass, 1990). Early research suggested that leadership emergence and effectiveness were poorly predicted by personality (Stogdill, 1948). However, recent studies claimed that personality traits explained a significant portion of the variance in leadership (e.g., Ensari et al., 2011; Judge et al., 2002). The next section provides a review of the nature of leadership, followed by its correlates including personality.

#### **1.4 Conceptualization of Leadership**

In an effort to capture the varying personality correlates of leadership emergence and/or effectiveness, one would benefit from looking at different

conceptualizations of leadership. There are different ways to explain leadership (Shertzer & Schuh, 2004). For example, according to Northouse (2010), leadership is a process in which a person affects a group of individuals in order to accomplish a common goal. Furthermore, Hogan et al. (1994) claimed that leadership is a process all about making other people believe in putting aside their self-interests and chase a common goal that is important for group success.

Political scientist Burns (1978) stated that “leadership is one of the most observed and least understood phenomenon on earth” (p.3). There are many studies that investigated the leadership concept and its’ effects on organizational outcomes. Trait and contingency theories (Fiedler, 1965), normative decision theories (Vroom & Yetton, 1973), behavioral and managerial approaches (Lippitt & White, 1943; Stogdill, 1963), leader-follower exchange theories (Danserau, Graen, & Haga, 1975), transactional and charismatic leadership studies (Bass, 1985) are among different leadership models or conceptual frameworks. Furthermore, leadership is a topic studied not only in psychology, but also in other disciplines, such political science, theology, education, history and philosophy, and each discipline has its unique contribution to our understanding of the phenomenon of leadership. Different study designs such as qualitative and quantitative studies that included case studies, laboratory experiments have been conducted in understanding leadership (Klenke, 1993).

A review of the recent literature on leadership would indicate that transformational leadership has received considerable research attention, largely due to consistent results suggesting its effectiveness in terms of employee well-being (Barling, Slater, & Kelloway, 2000; Bass, 1985;). The concept *transformational leadership* was first investigated by Downton (1973) and then the concept was further developed by Burns (1978). In his book, Burns divided political leaders into two categories that were transformational and transactional leaders. He claimed that transformational leadership was more than the compliance of followers, and that it included understanding the needs, values and beliefs of the followers. On the other

hand, transactional leadership emerges when leaders have an opportunity to cooperate with their followers to get something valued.

Bass (1985) carried Burns's leadership styles into the organizational management literature and investigated these two types of leadership styles more deeply. According to Bass (1985), transformational leaders try to improve colleagues', subordinates', followers' or clients' awareness about their goals. He further claimed that this enlightenment would occur with a leader who has vision and self-confidence. Also, he claimed that transformational leaders do not choose popular beliefs, but they rather argue with other people for what they believe to be right or good for the followers. On the other hand, he explained transactional leaders as leaders who try to improve and maintain the quality and quantity of performance. Transactional leaders give something to followers that they want and in turn they expect something from their followers.

Bass (1985) proposed a model in which transformational leadership was explained with four dimensions which were idealized influence, inspirational motivation, intellectual stimulation and individualized consideration. In idealized influence the transformational leader behaves as a role model for the followers and followers admire, respect and trust the leader and try to behave like the leader. Inspirational motivation was conceptualized as motivating followers with behaviors which results in resurgence of the team work, enthusiasm and optimism. Intellectual stimulation was defined as supporting followers to be innovative by encouraging them to question the accepted opinions. Leaders get together with followers to find solutions to problems. Finally, individualized consideration was conceptualized as understanding and accepting individual differences, behaving like a coach, and trying to deal with each follower's needs separately (Bass, 1998).

### **1.5 Individual Differences Variables Associated with Leadership**

Judge et al. (2002) meta-analytically reviewed trait correlates of leadership based on 222 correlations from 73 samples using the Five-Factor model of personality (Costa & McCrae, 1985) as an organizing framework. The strongest correlate of leadership was extraversion ( $\rho = .31$ ), followed by conscientiousness,

neuroticism, openness to experience and agreeableness with the magnitude of correlations ranging from .08. to .28. Neuroticism ( $\rho = -.24$ ) negatively correlated with leadership. In addition to these, the authors also meta-analyzed the relationship between lower-order personality traits (i.e., facets) and leadership and they found that leadership moderately correlated with dominance, sociability, achievement, dependability with the correlations of .37, .37, .35 and .30 respectively, and found small correlation for self-esteem and locus of control which were .13 and .19 (See Table1).

In the meta-analytic study of Hoffman et al. (2011), moderate correlations with dominance and creativity which were .31 and .35 and smaller correlations for energy, honesty/integrity, achievement motivation, self-confidence, oral communication and written communication ranging from .24 to .29 were reported.

Furthermore, Ensari et al. (2011) meta-analyzed individual differences as predictors of leader emergence in 45 studies utilizing leaderless group discussions (LGD). They found that the relationship between leader emergence in LGD was significantly predicted by authoritarianism, creativity, masculinity, extraversion and intelligence (Fisher's  $z$  ranged from .32 to .39) and by the trait of antagonism, conscientiousness, leadership experience/potential, openness to experience, self-esteem/efficacy, social skills and emotional stability (Fisher's  $z$  ranged from .12 to .20). No significant relationships were found with agreeableness, femininity or neuroticism.

In O'Connor and Jackson (2010)'s study there were four different tasks in which each task was designed to reveal and measure the specific leadership dimensions of initiating structure, high consideration, non-aggressiveness, persuasiveness and also production rate. Each participant rotated through the different tasks and group members rated each other on "emergent leadership" in each task separately. Finally, it was found that leader emergence was independent from specific tasks indicative of leader's various behaviors or productivity; however a significant portion of variance in leaders' emergence was explained by the personality characteristics of harm-avoidance and cooperativeness. To sum up, the



researchers claimed that regardless of the specific situation or task some people tend to appear as the leader based on their personality characteristics.

### **1.6 Individual Differences Variables Associated with Transformational Leadership**

In the literature, researchers examined the relationship between transformational leadership and personality. For example, in the study of Judge and Bono (2000) extraversion ( $\beta = .15$ ) and agreeableness ( $\beta = .23$ ) positively predicted transformational leadership effectiveness and openness to experience ( $r = .20$ ) and transformational leadership effectiveness correlated significantly; however no significant relationship was observed with neuroticism and conscientiousness. In addition to these, when facets of Big Five dimensions were investigated, it was found that three facets of extraversion which were assertiveness, positive emotions and activity, four facets of openness to experience feelings which were feelings, actions, ideas and values, and finally four facets of agreeableness which were trust, straightforwardness, altruism and tender-mindedness significantly correlated with transformational leadership with the correlation coefficients ranging from .13 to .17.

Furthermore, Bono and Judge (2004) meta-analyzed the relationships between the five factors of personality and ratings of transformational leadership behaviors. In their investigation of the dimensions of transformational leadership, they combined idealized influence and inspirational motivation which they labelled as charisma. According to the results of the study, extraversion ( $\rho = .22$ ) and neuroticism ( $\rho = -.17$ ) were related to charisma. Also, agreeableness ( $\rho = .21$ ) and openness to experience ( $\rho = .22$ ) were related to charisma, however their credibility values included zero. Furthermore, it was indicated that intellectual stimulation was related to extraversion ( $\rho = .18$ ) and neuroticism ( $\rho = -.12$ ). Similar results were found for individualized consideration with extraversion ( $\rho = .18$ ) and neuroticism ( $\rho = -.10$ ). Finally, extraversion ( $\rho = .24$ ) and neuroticism ( $\rho = -.17$ ) were related to the composite of transformational leadership dimensions.

Aside from the Five Factor Model of personality, Van Eeden, Van Cilliers, and Van Deventer (2008) found that transformational leaders had high scores on

traits related to influencing others, assertiveness, willingness to express themselves and taking the lead. Also, they found that, transformational leaders were open to suggestions, involved others in decision making and they questioned the majority decisions. In addition to these Yukl and Van Fleet (1992) claimed that effective leaders are high in energy, stress tolerance, integrity, emotional maturity and self-confidence.

Dubinsky, Yammarino, and Jolson (1995) investigated the personal characteristics related to the dimensions of transformational leaders and found small and significant correlations between behavioral coping and inspirational leadership ( $r = .29$ ) and between risk taking and charismatic leadership ( $r = .25$ ). Furthermore, Hartog and Belschak (2012) studied the relationship between job autonomy, self-efficacy and transformational leadership. They described job autonomy as a personality characteristic in which people seek alternative ways to perform the task, take more responsibility and have direct influence on the outcomes. According to the results transformational leadership significantly correlated with self-efficacy ( $r = .21$ ) and job autonomy ( $r = .40$ ). Moreover, Peterson, Walumbwa, Byron, and Myrowitz (2009) indicated that transformational leaders among CEOs of high-tech companies showed behaviors related to hope, optimism and resiliency.

In addition, transformational leaders' personality was investigated by Khoo and Burch (2008) to see whether or not such leaders demonstrate aberrant personality tendencies that are also known as the "dark side of leadership". They indicated that transformational leadership could be predicted by colorful-histrionic personality ( $\beta = .44$ ), inversely by avoidant personality ( $\beta = -.35$ ), and inversely by narcissistic personality ( $\beta = -.32$ ). That is, transformational leaders have a tendency to be expressive, animated and dramatic, have a desire to be the center of attention; do not take the risk of not being liked by others; and do not overestimate their capabilities, do not show unusual self-confidence. Similar to these, Resick, Whitman, Weingarden, and Hiller (2009) found that narcissism ( $r = -.50$ ) and core self-evaluations ( $r = .52$ ) significantly related to transformational leadership. According to their claim, people who are high on core-self-evaluation have a positive outlook

and believe that they can control the things that happen and are responsible for their actions, thus they can easily motivate their followers by creating a vision and in the light of that vision all people work together with confidence. It appears that, transformational leaders display healthy and desired personality characteristics, in addition to being attention seekers.

To sum up, it has been concluded that extraversion and its facets which were assertiveness, positive emotions and activity were the most powerful predictors of transformational leadership, followed by neuroticism. Furthermore, other than the five factor model variables, self-efficacy, self-confidence, core-self evaluations, high energy, stress tolerance, integrity, and emotional maturity were indicated as the personality characteristics for transformational leadership. Surprisingly, histrionic, avoidant (negatively) type personalities which were generally assumed as personality disorders were found strongly related to transformational leadership (Table 2). Also, in the current study it is assumed that not only personality affects transformational leadership but also people's motives and needs play a significant role to understand transformational leadership which is discussed in the following section.

**Table 1: Leadership and Related Personality Characteristics**

Trait/Motive	Study	Criterion	Effect size	Measure used	Sample size	Sample characteristics
Extraversion	Judge, Bono, Ilies and Gerhardt (2002)	Meta-Analytic	$\rho=.31$	Empirical scales, Explicit	73 study	Manger and follower
Openness to Experience	Judge, Bono, Ilies and Gerhardt (2002)	Meta-Analytic	$\rho=.24$	Empirical scales, Explicit	73 study	Manger and follower
Agreeableness	Judge, Bono, Ilies and Gerhardt (2002)	Meta-Analytic	$\rho=.08$	Empirical Scales, Explicit	73 study	Manger and follower
Neuroticism	Judge, Bono, Ilies and Gerhardt (2002)	Meta-Analytic	$\rho=-.24$	Empirical Scales, Explicit	73 study	Manger and follower
Conscientiousness	Judge, Bono, Ilies and Gerhardt (2002)	Meta-Analytic	$\rho=.28$	Empirical Scales, Explicit	73 study	Manger and follower
Locus of control	Judge, Bono, Ilies and Gerhardt (2002)	Meta-Analytic	$\rho=.13$	Empirical Scales, Explicit	73 study	Manger and follower
Self Esteem	Judge, Bono, Ilies and Gerhardt (2002)	Meta-Analytic	$\rho=.19$	Empirical Scales, Explicit	73 study	Manger and follower
Sociability	Judge, Bono, Ilies and Gerhardt (2002)	Meta-Analytic	$\rho=.37$	Empirical Scales, Explicit	73 study	Manger and follower
Dominance	Judge, Bono, Ilies and Gerhardt (2002)	Meta-Analytic	$\rho=.37$	Empirical Scales, Explicit	73 study	Manger and follower
Achievment	Judge, Bono, Ilies and Gerhardt (2002)	Meta-Analytic	$\rho=.35$	Empirical Scales, Explicit	73 study	Manger and follower
Dependability	Judge, Bono, Ilies and Gerhardt (2002)	Meta-Analytic	$\rho=.30$	Empirical Scales, Explicit	73 study	Manger and follower

**Table 2: Transformational Leadership and Related Personality Characteristics**

Trait/Motive	Study	Criterion	Effect size	Measure used	Sample size	Sample characteristics
Extraversion	Judge and Bono (2000)	Follower perception, Self report	$\beta = .15$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
	Bono and Judge (2004)	Meta-Analytic	$\rho = .22$	Empirical scales, Explicit	1,706	Follower
Assertiveness	Judge and Bono (2000)	Follower perception, Self report	$r = .16$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
	Judge and Bono (2000)	Follower perception, Self report	$r = .15$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
Positive emotions	Judge and Bono (2000)	Follower perception, Self report	$r = .13$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
	Judge and Bono (2000)	Follower perception, Self report	$r = .20$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
Activity	Judge and Bono (2000)	Follower perception, Self report	$\rho = .22$	Empirical Scales, Explicit	1,706	Follower
	Judge and Bono (2000)	Follower perception, Self report	$r = .17$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
Openness to experience	Judge and Bono (2000)	Follower perception, Self report	$r = .14$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
	Bono and Judge (2004)	Meta-Analytic	$r = .15$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
Feelings	Judge and Bono (2000)	Follower perception, Self report	$r = .17$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
	Judge and Bono (2000)	Follower perception, Self report	$r = .14$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
Actions	Judge and Bono (2000)	Follower perception, Self report	$r = .15$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
	Judge and Bono (2000)	Follower perception, Self report	$r = .17$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
Ideas	Judge and Bono (2000)	Follower perception, Self report	$\beta = .23$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
	Judge and Bono (2000)	Follower perception, Self report	$\rho = .21$	Empirical Scales, Explicit	1,706	Follower
Values	Judge and Bono (2000)	Follower perception, Self report	$r = .15$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
	Judge and Bono (2000)	Follower perception, Self report	$r = .16$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
Agreeableness	Judge and Bono (2000)	Follower perception, Self report	$r = .14$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
	Bono and Judge (2004)	Meta-Analytic	$r = .13$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
Trust	Judge and Bono (2000)	Follower perception, Self report	$\rho = .17$	Empirical Scales, Explicit	1,706	Follower
	Judge and Bono (2000)	Follower perception, Self report	$r = .17$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
Straightforwardness	Judge and Bono (2000)	Follower perception, Self report	$r = .16$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
	Judge and Bono (2000)	Follower perception, Self report	$r = .14$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
Altruism	Judge and Bono (2000)	Follower perception, Self report	$r = .13$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
	Judge and Bono (2000)	Follower perception, Self report	$r = .17$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
Tender-mindedness	Judge and Bono (2000)	Follower perception, Self report	$r = .13$	NEO-PI-R, MLQ 5X, ACS Explicit	260	Manger and follower
	Bono and Judge (2004)	Meta-Analytic	$\rho = .17$	Empirical Scales, Explicit	1,706	Follower

**Table 2: Transformational Leadership and Related Personality Characteristics (Continued)**

Trait/Motive	Study	Criterion	Effect size	Measure used	Sample size	Sample characteristics
Abstract orientation	Dubinsky, Yammarino and Jolson	140 follower perception self report	r = -.40	MLQ, Personality Test, Explicit	174	Manger (34) and follower(150)
Behavioral Coping	Dubinsky, Yammarino and Jolson	140 follower perception self report	r = .29	MLQ, Personality Test, Explicit	174	Manger (34) and follower (150)
Risk Taking	Dubinsky, Yammarino and Jolson	140 follower perception self report	r = .25	MLQ, Personality Test, Explicit	174	Manger(34) and follower (150)
Self-Efficacy	Hartog and Belschak (2012)	Followler perception, Self report	r = .21	PI, PPB, CLO, Explicit	158	Manger and follower
Job autonomy	Hartog and Belschak (2012)	Followler perception, Self report	r = .40	PI, PPB, CLO, Explicit	158	Manger and follower
Colorful-Histrionic	Khoo and Burch (2008)	Self-report	$\beta$ =.44	MLQ, HDS, Explicit	80	Manager
Cautious-Avoidant	Khoo and Burch (2008)	Self-report	$\beta$ =-.35	MLQ, HDS, Explicit	80	Manager
Bold- Narcissist	Khoo and Burch (2008)	Self-report	$\beta$ =-.32	MLQ, HDS, Explicit	80	Manager
Narcissism	Resick, Whitman, Weingarden and Hiller (2009)	Historiometric analyses	r = -.50	TLI, ACL, Explicit	53	Manager
Core-self evaluation	Resick, Whitman, Weingarden and Hiller (2009)	Historiometric analyses	r = .52	TLI, ACL, Explicit	53	Manager
Influencing others	Eeden, Cilliers, Deventer ( 2008)	Self-report	n.r.	MLQ 5X, OPQ32,16PF, Explicit	n.r.	Manager
Assertiveness	Eeden, Cilliers, Deventer ( 2008)	Self-report	n.r.	MLQ 5X, OPQ32,16PF, Explicit	n.r.	Manager
Willing to express themselves	Eeden, Cilliers, Deventer ( 2008)	Self-report	n.r.	MLQ 5X, OPQ32,16PF, Explicit	n.r.	Manager
Taking the lead	Eeden, Cilliers, Deventer ( 2008)	Self-report	n.r.	MLQ 5X, OPQ32,16PF, Explicit	n.r.	Manager

MLQ= Leadership Assessment Itiveotory, Multifactor Leadership Questionnaire, PI=Personal Initiative, PPB= Prosocial Proactive Behavior, CLO= Dutch Charismatic Leadership in Organizations

MLQ5X = Multifactor Leadership Questionnaire Form 5X , OPQ32 = Occupational Personality, Questionnaire version 32 , 16PF = Sixteen Personality Factor Questionnaire,

HDS = Hogan development survey, JDS = Job Diagnostic Survey , ACS = Affective Commitment Scale, TLI = Transformational Leadership Behavior Inventory, ACL =Gough Adjective Check List

### **1.7 Need and Motive Correlates of Transformational Leadership**

McClelland linked personality characteristics to peoples' needs and described a leadership motive pattern in order to understand the effective managers who occupy top positions in organizations. In McClelland and Burnham's (1976) study researchers applied the Thematic Apperception Test (TAT) to managers and then scored their written stories to shown pictures and found that successful managers showed similar motives. According to this leadership motive profile an effective leader has to be high in the need for power (*n* Power) that is the leader wants to be a decision maker and influence all final decisions and other people. The effective leader has to be low in the need for affiliation (*n* Affiliation). Leaders who are low in *n* Affiliation make critical decisions without worrying about being disliked by their followers. According to this view, self-control is important because in order to maintain the rules and regulation of the organization, leaders have to be concerned with the organizational system. The other need is need for achievement (*n* achieve) and people with high and moderate *n* Achievement try to develop themselves to perform better and not force other people to do better. However, it was found that, *n* for Achievement is successful in small businesses and not for big companies, because people with the need for achievement try to enhance their personal gains and this personal achievement results in business success in small companies. However, transformational leaders in big companies generally do not show *n* Achievement because leaders in big companies do not only enhance personal success, but also try to increase the group gain. In other words, their basic aim is to enhance group performance not personal performance.

The final motive is activity inhibition which means people try to achieve organizational goals by following rules and procedures rather than concerning their personal goals and it was claimed that being high in activity inhibition is related to effective leadership. To sum up, according to the Leadership Motive Pattern (LMP), the predictors of successful leaders were high Power motivation (*n* Power), low Affiliation motivation (*n* Affiliation) high Activity Inhibition (A.I.) and moderate

Achievement motivation (McClelland, 1975; McClelland & Boyatzis, 1982; McClelland & Burnham, 1976, McClelland, Koestner & Weinberger, 1989).

Also, McClelland and Burnham (1976) investigated what makes or motivates a good manager and they found that even though common sense suggests that *n* Achievement leads people to behave in a way of an effective manager, high *n* achievement motivate people to do something for their own success and expect short-term feedback on their performance to see how well they are doing. However effective leaders have to do more than this; they have to influence others and create an environment in which all people are willing to perform for the organization. In light of these arguments they claimed that *n* power is a stronger motivational factor for effective leaders because, people who have high *n* power have a desire to be strong, have an impact and influence on others. Furthermore, authors emphasized that low *n* affiliation and high activity inhibition are important motivational factors for effective leaders. Moreover, Foti and Hauenstein's study (2007) yielded similar results; they found significant relationship between dominance, which is the most important component of power, and leadership emergence and leadership effectiveness.

Furthermore, Fisher (2009) investigated effective leaders' characteristics and claimed that managers and leaders who want to be successful should try to realize employee needs and motives and suggested opportunities to do so. These personality variables were thought as related to activity inhibition. Similarly, House, Spangler and Woycke (1991) investigated the needs of achievement, power, affiliation and activity inhibition in relation to the performance of the US Presidents. In the study, historians rated each of 31 US Presidents in terms of their needs and motives. According to the coders' perceptions, significant correlations between needs and leader performance were reported, for example *n* Power ( $r = .52$ ) and Activity Inhibition ( $r = .39$ ) positively and Affiliation ( $r = -.37$ ) negatively related to Presidents' performance. Also, although they did not find a significant relationship with *n* Achievement and Presidential performance, they found a significant negative



relationship with presidential charisma, presidential direct action, presidential social performance which ranged from -.19 to -.21.

To sum up, the findings reported above concerning needs are related to the concept of leadership in general and not specifically to transformational leadership. When the concept of transformational leadership is investigated deeply, it could be expected that *n* Achievement is not related to transformational leadership because as mentioned before *n* Achievement is a motive that generally motivates people to behave in a way of an effective manager, these types of leaders generally care about their personal success. However, for transformational leaders their group's well-being has priority. Similarly, low *n* Affiliation which is related to effective leadership in general is not thought to relate to the concept of transformational leadership as transformational leaders are interested in their followers' problems and they do not want to lose followers' motivation by behaving in a non-emphatic manner. When the definitions of *n* Power and Activity Inhibition are investigated, it makes sense that these motivational factors would also relate to the transformational leadership concept because transformational leaders want to be decision makers, influence other people and also achieve organizational goals by following rules and procedures rather than concerning their personal goals (McClelland & Burnham, 1976).

Such motives have also been shown to be correlated with personality traits. According to Costa and McCrae (1988), the Big Five personality factors and facets are related to Murray's (1938) needs; for example they found that extraversion was significantly correlated with change, dominance, exhibition, nurturance, play, sentience, affiliation, and desirability ( $r$  range = .32 to .62) and extraversion's facet of assertiveness is significantly correlated with dominance, exhibition, achievement, and desirability ( $r$  range = .34 to .64). Also activity correlated with dominance, endurance, exhibition, achievement, and desirability ( $r$  range = .23 to .37) Furthermore, openness to experience significantly correlated with change, sentience and understanding ( $r$  range = .40 to .55) and its facets of actions was related to change ( $r = .56$ ), ideas was related to achievement and understanding by .38 and .67 respectively. Finally, conscientiousness was positively related to achievement,

endurance, order and display ( $r$  range = .42 to .60) and was negatively related to impulsivity ( $r = -.39$ ). Such associations emerged as needs direct behaviors and explain traits (Murray, 1938). The needs of dominance (power), exhibition, activity inhibition, and achievement also related to McClelland's leadership motive profile (James, & Mazerolle, 2002). It appears that the personality factors of Extraversion, Openness, Conscientiousness that are correlates of leadership in general (and Extraversion as a consistent correlate of transformational leadership specifically) are expressions of the needs that underlie leadership as well.

To conclude, in the light of the available empirical evidence, extraversion and openness to experience appear to be related to effective leadership and also these personalities are related to Murray's needs of power, dominance, exhibition, display, and change. When the common threads to the personality and motive correlates of leadership are identified together, McClelland's needs of high  $n$  Power and high activity inhibition appear to be important motivators for transformational leadership together with motives for change and exhibition. Thus, drawing from the literature on the Big Five correlates, aberrant personality correlates, and motives that are discussed above in relation to transformational leadership in particular and occupying leadership positions in general, we identified the following motives and justification mechanisms: Power motive with the JMs of Power Attribution Bias, Agentic Bias; Activity Inhibition Motive, Change Motive with the JMs of Positive/Negative Connotation of Change, Efficacy and Personal Responsibility Inclination Bias and Identification with Change Initiators, and Exhibition Motive. These motives are described in details in the following section 1.11 but before that, problems with self-report assessments are discussed to show why the literature needs new implicit measures to assess personality.

### **1.8 Problems with Self-report Assessments**

Most aforementioned results are based on self-report assessments of manager's personalities and leadership style which yielded modest correlations with criteria at best. Self-report assessments are open to intentional or unintentional response biases. Response bias has become a highly controversial topic in

psychological measurement after 100 years of debate. In order to understand the critics about response bias, definitions of some important constructs such as positive impression management, negative impression management are given below.

According to the McGrath, Mitchell, Kim, and Hough (2010) response bias is responding inaccurately to an indicator in a consistent manner which results in systematic error in prediction. The motivation behind response bias depends on positive impression management and negative impression management. Positive impression management (PIM) is defined as not reporting the implicit tendencies that relate to negative attributes. Positive impression management is also known as “socially desirable responding”; “impression management”; “underreporting”. Negative Impression management (NIM) refers to answering questions in an abnormal manner that aim to present substantive indicators of negative attributes or show themselves as having some psychological problems. Negative impression management is also known as “faking bad”, “over reporting”. According to McGrath et al.’s investigation the studies that included objective criteria yielded a suppression or moderation effect of social desirability on criterion-related validities.

Personality questionnaires in particular and self-report measures in general are criticized because if participants are intended to generate a particular impression of them, they intentionally can fake their answers. In their meta-analytic study Ones and Viswesveran (1998) found that if participants were instructed to fake the personality test, subjects can enhance their scores by over .50 standard deviations on personality measures. Krahe, Becker, and Zöllter (2008) examined whether or not response distortion occurs without explicit instructions in the light of a specific personality profile that is necessary for being admitted to a specific job. They found that participants unintentionally distort the response on the personality questionnaire according to the demand characteristics of simulated job requirements without any explicit faking instruction. Moreover, they claimed that standard personality scales such as the NEO-PI-R could be easily distorted to the extent that examinees can perceive the required qualifications of the test-taking situation. In their study, they designed two experiments in which they made extraversion a salient personality

characteristic in the test condition by demonstrating a film and a text priming “extraverted” characteristics. In these studies they utilized the job description of a journalist as the stimulus. They found that exposure to an “extraverted-prime” enhanced self-ratings of extraversion in comparison to the no-prime control condition. In addition, no such rating distortion was observed for the other four personality factors of agreeableness, neuroticism, openness and conscientiousness. To sum up, individuals presented themselves more extraverted in the personality scales when they were exposed to a situational cue that activated their extraversion-related schemas. According to Krahe and Hermann (2003) similar unintentional response distortion primed by the situation was replicated in another study focusing on the conscientiousness factor.

Stark, Chernyshenko, Chan, Lee, and Drasgow (2001) compared scores on the 16 PF scales across samples of job applicants and non-applicants. They found that the distributions of scores for the applicant group were shifted towards the higher end for the subscales of conscientiousness and emotional stability as compared to the non-applicant group. Differential item functioning (DIF) analysis also revealed differences on the ‘location’ parameter across the applicant and non-applicant groups. They found that individuals who apply for a job scored higher on Conscientiousness and Emotional Stability personality scales which generally correlate positively with job performance.

Furthermore, Densten and Sarros (2012) investigated the relationship between impression management and leadership behaviors in 635 Australian CEOs. They showed that leaders responded to the self-report leadership scales in a socially desirable way and in order to test their claim, they distributed self-report Transformational Leadership Inventory and Leader Reward and Punishment Questionnaire to measure self-reported leadership behaviors and the Marlowe-Crowne Social Desirability Scale to measure social desirability. Results revealed that self-deception and impression management significantly predicted self-reported leadership behaviors. Self-deception was a unique predictor for the self-reported leadership behaviors related to fostering the acceptance of group goals, providing an

appropriate role model, intellectual stimulation, providing individual support and contingent reward ( $\beta$  range = .10 to .14) . Also, impression management scores significantly predicted three self-reported leadership behaviors, which were fostering the acceptance of goals, providing individual support, and contingent punishment ( $\beta$  range = .09 to .19).

To conclude, self-report assessments have some validity and reliability problems and in order to solve these problems some implicit assessment methods have been developed to measure individual differences and used in organizational contexts. Two of these methods The Thematic Apperception Test assessing motives and Conditional Reasoning Tests (CRT) are described below together with a review on the format and validities of CRT questions.

### **1.9 Implicit Personality and Assessments**

Generally, it was assumed that social behaviors operate under conscious control but now so much evidence supports the claim that social behavior generally involves activity with an implicit or unconscious manner (Greenwald & Banaji, 1995). Greenwald and Banaji (1995) defined implicit cognition as an implicit construct (e.g. Attitude) which is the introspectively unidentified (or inaccurately identified) trace of past experience that mediates a response. They also claimed that implicit cognitions and self-reported (conscious or explicit) cognition are different from each other. In order to measure these implicit cognitions, indirect measurements are theoretically necessary because indirect measurements do not inform the applicants of what is being assessed (Greenwald & Banaji, 1995). McClelland, Koestner and Weinberger (1989) claimed that implicit motives are not under the control of our cognitive processes; they are more primitive in nature and emerge from affective experiences, whereas self-attributed motives are under our conscious control and they are open to being evaluated cognitively. The implication is that assessing implicit motives would avoid response distortions in personality assessments.

Thematic Apperception Test (TAT; Morgan & Muray, 1935) is a projective test in which the person is presented with a set of pictures and asked several

questions that would lead the person to make up stories. The person makes comments for each picture by writing stories and then the examiner evaluates each picture to determine the dominant motive. The TAT has been extensively used to assess the implicit needs of achievement, power, and affiliation (McClelland & Boyatzis, 1982; Van Emmerik, Gardner, Wendt, & Fischer, 2010). However, the meta-analytic review by Spangler (1992) yielded a small criterion-related validity ( $\rho = .17$ ). Another criticism to using TAT is its scoring as it depends on the practitioner's subjective evaluations and the time it takes to administer and score (Jacobs & McClelland, 1994).

In sum using explicit self-report personality assessments are prone to response distortion and projective tests such as the TAT yield small validities, comparable to those of self-report assessments which render the time consuming use of TAT inefficient. In the current study, the Conditional Reasoning Test (CRT; James, 1998) approach of assessing implicit motives, which has yielded larger validities as compared to self-report measures or the TAT, is proposed as a means to assess potential transformational leadership. The CRT is discussed in the following section.

### **1.10 Conditional Reasoning Test Approach**

According to James (1998) people are motivated to know that their choice of behaviors are justified, rather than being irrational and so people try to justify their behaviors and give supportive explanations to their behavioral choices by using various reasoning strategies. The reasoning processes people employ are known as justification mechanisms (JMs). JMs can be used to capture people's dispositional inclinations. The choice of a behavior is generally the product of implicit motives such as the motive to achieve and people with different motives use different JMs to rationalize their behavior. James and Mazerolle (2002) claimed that justification mechanisms are shaped by implicit biases that help people to shape, define, and give meaning to their perceptions, evaluations, considerations and expectations in order to adapt to their environment.

According to James (1998), people with different dispositional characteristics show different reactions. For example, some people are motivated to achieve and some people are motivated to avoid failure. According to their motivation they show different JMs. The differential reasoning process which is conditional on their underlying motives is called “conditional reasoning”. To sum up Conditional Reasoning test is a new instrument that is used to understand underlying latent motives by assessing the particular beliefs (JMs) that individuals use to rationalize or justify their choice of behaviors.

### **1.10.1 Format of the CRT**

The format of the test was proposed by James (1998) and the main idea of the test is capturing the JMs of the underlying motive in question by engaging the test taker in a reasoning process (i.e. aggression, achievement motivation). CR questions are a type of inductive reasoning problem in which subjects are asked to arrive at a conclusion from a set of options.

In general, CR questions are posed as inductive reasoning problems which have four alternative answering options. One of the options is related to the justification mechanism of the related construct such as achievement motivation. Another option is related to the justification mechanism of the opposite end of the related construct such as fear of failure or a logical option which does not indicate any JM. The last two options are illogical response alternatives. When respondents try to identify the rational and irrational statements, they assume that they use their inductive reasoning skills however; in fact their reasoning is guided by their implicit assumptions which also represent their motivational tendencies and personality (James, 1998; James, McIntyre, Glisson, Bowler, & Mitchell, 2004). An example of a CR question measuring aggression is shown below. People who select Alternative D in this example tend to distrust powerful entities, which represents a cue for aggression as this alternative relates to the JM of hostile attribution bias.

James (1998) also proposed a scoring system for CRT questions in which participants are given +1 for their choices tapping into the JM that measure a particular motive (e.g. aggression) and -1 for choosing choices tapping into the JM

that measure the opposite of the target motive (e.g. prosocial). Illogical choices receive a score of zero. Scores on all questions are summed and high scores indicate higher levels of the assessed motive (e.g. aggression) (James & Mazerolle, 2002).

**Table 3: Illustrative Conditional Reasoning Questions for Measuring Aggression (James, McIntyre, Glisson, Green, Patton, LeBreton, Frost, & Russel, 2005):**

American cars have gotten better in the past 15 years. American carmakers started to build better cars when they began to lose business to the Japanese. Many American buyers thought that foreign cars were better made.

Which of the following is the most logical conclusion based on the above?

- A. America was the world's largest producer of airplanes 15 years ago.
- B. Swedish carmakers lost business in America 15 years ago.
- C. The Japanese knew more than Americans about building good cars 15 years ago.
- D. American carmakers built cars to wear out 15 years ago so they could make a lot of money selling parts.

### **1.10.2 Validities of the Conditional Reasoning Measures**

LeBreton, Barksdale, Robin, and James (2007) reported that compared to traditional self-report questionnaires that aim to directly measure explicit (conscious) self-perceptions, the conditional reasoning test aims to measure implicit (unconscious) biases arising from various latent motives. Several CRTs have been developed to assess the construct of achievement motivation, aggression, and leadership which are important for organizations. Furthermore, in those studies, the underlying justification mechanisms for these constructs have been detected and measured. The following sections present information on these measures, their JMs and criterion-related validity evidence.

The first application studies of the Conditional Reasoning approach aimed to measure the dispositional component of relative motive strength (RMS) which was defined as the strength of the motive to achieve in relation to the strength of the motive to avoid failure. The main purpose of the RMS assessment system is



measuring whether or not achievement motivation transcends or suppresses the motivation to avoid failure and this assessment is done by identifying what kind of justification mechanisms people have for approaching achievement-oriented objectives or avoiding achievement oriented objectives. In other words if a person tends to find logical appeals which enhance the justification of approach over avoidance, we can say that this person's achievement motivation dominates avoidance motive and vice-versa (James, 1998).

James (1998) used CRT-RMS and American College Testing (ACT) exam which is a kind of critical intellectual skills test to predict mean test scores which indicated whether a student passed or failed the course. Results showed that the correlation of CRT-RMS and ACT was high ( $r = .49$ ). When the mean course test scores were regressed on the two predictors it was found that ACT accounted for 61% variance in the test scores and RMS was responsible for an additional 39% variance in academic test performance. Thus, CRT-RMS was shown to have an important unique and significant contribution in the prediction of academic performance over and the above cognitive abilities. Furthermore, the implicit CRT did not correlate significantly with its conceptual self-report counterparts of WOFO (Work and Family Orientation Scale assessing achievement orientation) and Test Anxiety with correlations of .12 and -.08, respectively (James, 1998). The bifurcation of implicit and explicit measures of the same construct is known as the dissociation hypothesis (James & Mazerolle, 2002).

The CRT-RMS Test questions were developed in the light of six primary justification mechanisms for achievement motivation, identified in the literature by James's (1998), which were personal responsibility inclination, opportunity inclination, positive connotation of achievement striving, malleability of skills, efficacy of persistence, identification with achievers. The definitions of Justification Mechanisms for achievement motivation are presented in Appendix A.

Bergman, McIntyre, and James (2004) investigated the aggressive behaviors in work settings by focusing on people's attempts to rationalize their hostile behaviors, via Conditional Reasoning Test of Aggression (CRT-A). This test

developed by James and McIntyre (2000) included 22 CR questions and these questions were developed according to the seventh grade reading level. CR questions based on a “verbal-visual” version was called VCRT-A. VCRT-A questions were developed according to reading level of fifth to sixth grade. In this scale CR questions are shown both verbally and written on television, also photographs and written formats are represented together (James & Mazerolle, 2002). The test was developed in the light of James’s (1998) six primary justification mechanisms for aggression which were hostile attribution bias, derogation of target, implicit harmful intent, victimization by powerful “others”, potency bias and anti-social reasoning bias.

Bing, Stewart, Davison, Green, McIntyre, and James (2007) used both implicit and explicit assessment methods for measuring aggressive behaviors. In order to measure implicit aggression, they used the nine-item version of the VCRTA and to measure explicit aggression they used the Angry-Hostility facet of the NEO-PI-R. According to the results of the study, VCRTA did not correlate significantly with the self-report aggression scale ( $r = .05$ ) which means conditional reasoning explains the implicit component of aggressive personality, but it does not capture the explicit view of one self as assessed by self-report scales of the same construct. Furthermore, according to the moderated hierarchical multiple regression analyses, implicit and explicit aggression scales interacted in significantly predicting counterproductive behaviors such as traffic violations and active organizational deviance. In other words, when scores on the explicit aggression scale and scores on the implicit aggression scale were both high, counterproductive behaviors were observed to be highest. When explicit aggression test scores were high but implicit aggression test scores were low a decrease was observed in counterproductive behaviors. So, it can be claimed that the implicit scales (e.g. CRT) captured observed behaviors better than explicit scales.

Furthermore, in James, McIntyre, Glisson, Bowler, and Mitchell’s (2004) study which emphasized empirical validation of CRT-A, it was found that patrol officers with high scores on CRT-A, also had lower scores on performance ratings ( $r$

= -.49). Temporary workers who had high scores on CRT-A were seen as unreliable ( $r = .43$ ) and nuclear facility operator and package handlers who had high scores on CRT-A also reported high absenteeism with correlation coefficients of .42 and .34 respectively. Correlations reported for CRT-A which are approaching strong effect sizes are uncorrected observed correlations. The definitions of Justification Mechanisms for aggression are presented in Appendix B.

### **1.11 Conditional Reasoning Measurement System for Leadership**

CRT-L is a recent instrument used to measure implicit motives and traits related to leadership (James & LeBreton, 2011). According to James and LeBreton (2011) people who have high aggression motivation take on the role of a toxic leader who behaves unethically to their followers and gives importance to self-interests. However, the same study also claimed that aggression expressed towards achieving organizational goals could be a key trait for successful leadership. They also investigated the effects of the power motive in predicting effective leadership and define the justification mechanisms of power motivation. To sum up, power and aggression were found as related implicit motives and the researchers tested these motives with CRT-L which included 25 multiple-choice inductive reasoning questions. The definitions of all the Justification Mechanisms for leadership are presented in Appendix C.

The early version of CRT-L yielded promising results. James and LeBreton (2011) tested CRT-L in 101 managers and assistant managers in a large retail company and initial validities were found as .44 for monthly store sales and .46 for monthly store profit. Wright (2011) studied the CRT-L in samples of psychology students and MBA students but the results of the study showed inconclusive results. Participants nominated three of their classmates for one of the categories of leadership, being powerful, or being a toxic leader. According to the results of the study, the correlation between CRT-Leadership scale and leader peer nomination (LPN) ( $r = .37$ ) and peer power nomination (PPN) ( $r = .38$ ) were only significant in the psychology student sample. Furthermore, the same results were obtained for the CRT-Power subscale such that correlations between CRT-L Power scale and LPN ( $r$

= .43) and PPN ( $r = .46$ ) were significant only in the psychology student sample. Non-significant correlations in the MBA sample approached zero with the exception of the CRT-L and LPN association ( $r = .19$ ). Furthermore, non-significant correlations were found between CRT scales and toxic leader nominations (TPN).

### **1.11.1 Rationale for Developing a CRT Measure for Assessing Transformational Leadership and Related Justification Mechanisms**

CRT measures assessing aggression and achievement motivation have promising validities in the literature. However, the current CRT-L by James showed inconsistent associations with criteria across samples. Moreover, the content domain of leadership was narrow-focused; James and LeBreton (2001) focused only on the motives of power and aggression. In the present study, I aimed to assess a wider scope of underlying motives that would be indicative of transformational leadership. The Conditional Reasoning Test for transformational leadership (CRT-TL) included the related justification mechanisms of power motive that James included. Furthermore, the motives for activity inhibition, exhibition and change which are related transformational leadership motives as identified in the literature formed the basis of the assessment. Related JMs of all these motives are described in the following section.

According to the literature reviewed and the critical incident results that are mentioned under the Methods section, I deduced that power, activity inhibition, change and exhibition are related justification mechanisms of transformational leadership. The first motive is power which was investigated by Mclelland and Burnham's (1976) Leadership Motive Profile and James and LeBreton (2011). They claimed that effective leaders have a desire to act powerful and they show this motive by acting in leadership positions. James and LeBreton stated that Power Attribution Bias, Agentic Bias, Social Hierarchy Orientation Bias and Leader Intuition Bias are the justification mechanisms of the Power Motive. Social Hierarchy Orientation Bias and Leader Intuition Bias were not specifically related to transformational leadership, they were more related to the authoritative leader. Agentic Bias and Power Attribution Bias were determined as the related justification

mechanisms of the power motive of transformational leadership.

The second motive is Activity Inhibition which was investigated by Mclelland and Burnham's (1976) Leadership Motive Profile. They stated that leaders who had high activity inhibition placed importance on group performance, and not on personal performance and tried to achieve organizational goals by following rules and procedures rather than being concerned with their personal goals. In the light of these literature findings, it was assumed that activity inhibition is a related motive of transformational leadership in the present study.

The third motive is Change which is determined by the researchers in the light of the personality studies of the transformational leadership. In the personality and trait studies of leadership, it could be seen that transformational leaders not only try to lead their followers but also they try to make the conditions better for followers' own sake. Also, efficacy and personal responsibility inclination bias, positive connotation of change and identification with change initiators were determined as the justification mechanisms of the change motive in the light of studies by Bindl and Parker (2010) and the theory of Schwarts (2012). All these studies emphasize the importance of the Change motive in order to be successful individuals in the work settings.

The final motive is Exhibition which is also determined by the researchers according to the personality studies of transformational leadership. In the literature, it was indicated that people who have self-confidence and a desire to exhibit themselves in a group, show themselves up as a leader, try to make an impression and try to be seen and heard in order to make their subordinates follow them. Such individuals have high personal energy and use this energy to enthrall the followers with the exhibition motive. The JM of the related constructs are shown in Table 4.

The aim of the present study was to generate a new CRT-TL scale and test this scale with a sample of employees in leadership and non-leadership positions in organizations. The validity of the newly developed scale was investigated through the criteria of occupying a leadership position or not and followers' perceptions of their leaders' transformational leadership styles. In the development of the CRT,

questions were formed on a theoretical and rational basis. Questions to be retained in the test were determined with a criterion-keying approach by correlating leadership position and follower perceptions with each of the CRT questions as this is an initial examination of the test's validity. Thus, the investigation proceeded through research questions rather than specific hypotheses. Hence, the first research question was *“Does leadership proclivities assessed with the newly developed CRT predict being in a leadership position or not?”*

Due to the expected dissociation between explicit and implicit measures, the construct validation of the new measure was studied by correlating the newly developed CRT with follower perceptions. According to Connelly and Ones (2010) others' ratings provide superior validities (corrected  $r$ 's = .18 to .69) as compared to self-ratings (corrected  $r$ 's = .00 to .31) in the prediction of academic and job performance. Thus, the construct validity of the CRT was investigated through subordinates' evaluations about their leaders and the second research question was *“Does transformational leadership proclivities assessed with the newly developed CRT predict follower perceptions of their leaders' level of transformational leadership?”*

Finally, as the self-report counterparts of motivation to lead and transformational leadership, and the theoretically-related personality factors were shown to predict leadership in the literature (Avolio, Bass, & Jung, 1999; Bono & Judge, 2004; Kark & Dijik, 2007), these variables were also entered into the equation to study the third research question: *“How does the newly developed CRT compare to already existing predictors of leadership and transformational leadership?”*

**Table 4: Transformational Leadership and Related Justification Mechanisms**

	<p><b>Transformational Leaders</b></p> <p><b>Agentic Bias:</b> When attempting to think rationally and objectively about strategic decisions, POs instinctively take the perspective of the agents or initiators of actions. Consequently, their thinking often evidences a propensity to confirm (e.g., build logical support for) the agents’ ideas, plans, and solutions. These ideas, plans, and solutions are viewed as providing logically superior strategic decisions. The key to the Agentic Bias is the perspective from which people frame and reason. POs instinctively look down; that is, they identify with the people (like themselves) who reside in management positions, create strategic plans, and then lead others to carry out the plans. In the perspective of the transformational leadership, TLs analyze who is the influential, capable, successful and strong party in a strategic situations and then TLs identify themselves with these type of people.</p>	<p><b>Non- Transformational Leaders</b></p> <p><b>Non- Agentic Bias:</b> People with weak or nonexistent power motives, whom we will refer to as “NPs,” instinctively look up. When thinking about strategic decisions, they take the perspectives of those lower in the organization, who are affected by the decisions and actions (James, &amp; LeBreton, 2011).</p>
<p><b>POWER</b> (James, &amp; LeBreton, 2011)</p>	<p><b>Power Attribution Bias:</b> Reasoning with this bias reflects a predisposition to logically connect the use of power with positive behavior, values, and outcomes. Acts of power are interpreted in positive terms such as “taking initiative”, “assuming responsibility”, and being “decisive”. These same acts are logically associated with positive outcomes, such as organizational survival, stability, effectiveness, and success. The powerful are viewed as talented, experienced, and successful leaders. In like manner, successful leadership is rationally attributed to the use of power. The Power Attribution Bias stands in contrast to the tendency of society, including a great many NPs, to correlate the exercise of power with entitlement, corruption, and tyranny. More specifically, the power motive is held culpable for (a) placing personal gain ahead of group welfare, (b) the seeking of influence simply in order to dominate others, (c) the willingness to use threat and coercion in order to gain power, status, and entitlements, and (d) the building of organizations ruled by narcissistic tyrants who oppress, exploit, and victimize subordinates and employees.</p>	<p><b>Non-Power Attribution Bias:</b> NPs who make attributions that those seeking power are dishonest or corrupt believe their framing and analyses are logical and rational. POs on the other hand are predisposed to infer that seeking power is necessary for the survival of the collective and the achievement of important goals. Basically, POs desire to engage in power clearly places them on the defensive in a climate that tends to frame power in derogatory terms. Justification mechanisms such as the Power Attribution Bias are needed to give POs ostensibly objective and rational reasons for engaging in acts of power (James, &amp; LeBreton, 2011).</p>

**Table 4: Transformational Leadership and Related Justification Mechanisms (Continued)**

	<b>Transformational Leaders</b>	<b>Non-Transformational Leaders</b>
<b>ACTIVITY INHIBITION</b>	<p><b>Activity Inhibition:</b> Try to achieve organizational goal by following rules and procedures rather than concerning their personal goals. People with this motive have self-control and in any crisis situations, they do not think about themselves but about the welfare of think their followers and try to enhance followers input.</p>	<p><b>Non-activity Inhibition:</b> People who have low activity inhibition motive would choose choices and actions that would enhance their own gains and find it reasonable to use all resources in order to make themselves favorable.</p>
<b>CHANGE (Bindl, &amp; Parker, Schwarts theory)</b>	<p><b>Efficacy and personal responsibility inclination bias:</b> People frame change as possible, and that the self/coworkers/work unit does have the resources for successful change. Such people assumes responsibility for change and positively frames the opportunity as one that can be controlled with personal initiation and persistence in demanding situations.</p>	<p><b>Non-Efficacy and lack of Personal Responsibility Bias :</b> Frame change as a difficult, non-controllable process and such people frames the possibility of change as something that can be pursued by others and does not assume responsibility (e.g. it is not responsibility, I do not need to care about it)</p>
	<p><b>Positive connotation of change:</b> Frame change as a chance to improve rather than a risky endeavor. Change is associated with improving, gaining competitive advantage, braveness, and intelligent, whereas conservation is viewed as being restrained, non-improvement, and remaining indifferent to issues in the work unit, institution, or group. Also such people show Positive connotation of excitement that they prefer enthusiasm and stimulation over contentment in which work, action, and challenge are involved in feeling happy.</p>	<p><b>Negative connotation of change:</b> Frame change as a risk in terms of economic outcomes or a threat to harmonious relationships. Wants to conserve procedures, relationships, and traditions as they are because views stability as secure. Change is associated with unfavorable terms like risky, uncertainty (fear of the unknown), unorthodox, unruly, whereas stability is views as rule-consciousness, security. Also, such people show Positive connotation of contentment that they prefer to be happy without any action or challenge. See status quo, conformity and passiveness (not rocking the boat) as the roads to contentment.</p>
<b>EXHIBITION</b>	<p><b>Identification with change initiators:</b> People with the change motive identify with such initiators and frame them as being brave, powerful, admirable. A leader with such a motive would welcome suggestions from subordinates and frame their initiations for change as positive.</p>	<p><b>Lack of Identification with change initiators Bias:</b> A leader with no real change motive may see suggestions for change coming from subordinates as a threat.</p>
	<p><b>Exhibits:</b> Try to make an impression and to be seen and heard in order to make their subordinates to follow them. Such people excite, amaze, fascinate, entertain, shock, intrigue, amuse or entice their followers. People with high exhibition motive try to make their subordinates to believe themselves. They have high personal energy and they use this energy to enthrall the followers.</p>	<p><b>Non-Exhibits:</b> People with low exhibition tend to be more reserved and less outspoken. Also people with this motive view as shy, quite, acquiescent, calm and who have low self-confident.</p>



## **CHAPTER II**

### **METHOD**

In the current study, scale development and validation were conducted through three phases. The first phase was the initial development of the CRT which included identifying paragraph questions with multiple response options that would indicate two rational (one with a leadership JM and one with an opposite JM or lack of it) and two irrational choices. Development of questions involved two methods which are described below: 1) identification of literature passages and historical events that could be transformed into a question with JM alternatives, 2) *collecting* critical incidents to identify the behavioral expressions of justification mechanisms related to transformational leadership (Pre-Study 1). Each method is conveyed under the section on development of the CRT.

The second phase was conducted in order to gauge the construct validity of the CRT assessed through cognitive labs (O'Shea, Driskell, Goodwin, Zbylut, & Weiss, 2004) with participants who were in leader and non-leader positions (Pre-Study 2). The third phase was conducted to study the research questions in terms of the validity of the CRT as compared to self-reports measures, as they relate to occupying a leadership position and follower perceptions (Main Study).

#### **2.1 Development of the CRT**

##### **2.1.1 Identifying CRT Stems from Literature Exam Questions and Factual Information**

Several question stems were developed from the website in which Turkish literature passage questions were located. These Turkish literature passages were used to assess high-school students' Turkish language skills. The related passages were detected from there and then not only passages but also response options were modified according to the related justification mechanisms of Transformational Leadership. Moreover, some of these questions were Turkish literature passage questions which were used by ÖSYM (Student Measuring, Selection and Placement Center in Turkey) in the past years and they were also modified. Some of the inductive reasoning passages were developed with the help of Wikipedia.com from

which information about factual events or people were used as the input to stimulate attributions using justification mechanisms. (<http://www.dilforum.com/forum/archive/index.php/t-11388.html>,<http://www.turkceciler.com/paragraf-bilgisi-test-sorulari.html>,  
<http://dokuman.osym.gov.tr/pdfdokuman/2013/OSYS/24.03.2013%20YGS.pdf>,  
<http://www.edebiyatogretmeniyiz.com/paragraf-55-cikmis-sorular.html>). Moreover, the other CRT questions were generated from critical incidents that was described in the Pre-study 1.

## **2.2 Pre-Study1: Collecting Critical Incidents**

Collecting critical incidents was the first step of the current study. The method of critical incidents is both a reliable and valid technique that is used to create a comprehensive and detailed description of the typical performance by collecting specific and important behavioral facts (Flanagan, 1954 & Woolsey, 1986). In the present study, the aim of collecting critical incidents was twofold: 1) to create several CRT question stems (paragraphs) with events reflecting organizational affairs that people in leadership positions have to tackle, 2) to determine behavioral expressions of the underlying motives of transformational leadership that would serve in the formulation of question sets.

### **2.2.1 Participants**

The participants of the study were 15 leaders (six women and nine men) who worked in different professional areas in both in public and the private sector organizations. All of them were influential leaders in their specific professions. Their educational levels ranged from holding a bachelor's degree to a PhD degree. Participants' age ranged from 28 to 60 years with work experience ranging from seven to 40 years.

### **2.2.2 Instruments and Procedure**

Convenient sampling was applied in order to reach people who occupied a leadership position. Leaders participated in an interview voluntarily. Before conducting the interview, the aim of the study was clearly explained and the participants provided their consent. The interviews took approximately 20 minutes.

The interview sheet contains eight questions that were designed to ask participants their leadership performance. In the first part of the interview, participants were asked to think about a specific situation in which his/her leadership performance was successful and also, if their followers thought the same way. In the second part of the interview, participants were asked to think about a specific situation, this time in which his/her leadership performance was not successful and also, if their followers thought the same way. Following questions posed were: “What was the situation?” “Under which circumstances did the situation take place”, “How did your followers respond and what did they say?”, “What makes you think this interaction with the followers was successful/not successful?” The interview form used to obtain critical incidents is shown in Appendix D.

### **2.2.3 Results**

Thirty critical incidents were content analyzed. Each interview was analyzed in details. The important and related cases were detected and these cases were used in the CRT development procedure by changing the name of the participant, company and professions. For example, in an interview one participant said that *“according to the promotion procedure of the company, employees who worked less than 5 years in the company would not be promoted. However, last year some staff were promoted who had worked in the company less than 5 years and this situation bothered some employees who had not been promoted and worked more than 5 years. There was a decrease in their motivation and this situation affected their performance so I organized a private meeting with each employee who were in that situation. We revealed their strengths and weaknesses and we planned a special training program for each person. I shared this plan with the Human Resources Department and some of the training expenses were paid by the company. This situation motivated my personnel and they were more passionate about their job.”*

This real job experience was transformed into a CRT question:

“According to the promotion procedure of the Company X, if there is a vacant position, employees who worked 5 years or more are automatically promoted. But this year some employees with less than 5 years of experience

were promoted whereas some employees with more than 5 years of experience were not promoted. The negative atmosphere arising from this situation was noticed by the manager and he successfully managed to overcome it by arranging one-to-one interviews and creating action plans which allowed a more peaceful working environment again.”

Which conclusion can be derived about the manager in the above text?

- A) He convinced the employees that they are valuable to the company. **(Non-agentic Bias)**
- B) Current problems were caused by the decisions that are taken during the employing. (Illogical)
- C) He sought for an effective way of convincing the employee about the management’s decisions. **(Agentic Bias)**
- D) The lack in the mid-level management staff is weakening the management-employee relations. (Illogical)

One other example response from interviews was like the following:” *I was the leader of a project group and we were responsible for completing a new project within one month. However, when I checked through the process, I realized that the team had worked very slowly without any reason and the same situation was experienced before. So, I decided to take control of the case and approved to punish the responsible employee to avoid future situations by cancelling the monthly premium.*” This real job experience was transformed into a CRT question:

Ahmet realized the team reached a stage of the project in 30 days that was planned to be finished in 10 days. He decided to punish his team by cancelling the monthly premium as the team was repeating their mistakes about the time management.

Which conclusion can be derived about the manager in the above text?

- A) Procedures and principles of employing children under the age of 16 should be reviewed. (Illogical)
- B) These problems are caused by the inequality between the number of male and female employees. (Illogical)

C) Ahmet applied his management initiative since the employees failed to meet the expectations. (**Power Attribution Bias**)

D) Ahmet punished the employees before examining the causes of the malfunctions in team management. (**Non-Power Attribution Bias**)

As a result, out of 27 CRT questions, 10 inductive reasoning passages were developed in the light of critical incidents, 12 inductive reasoning passages were developed in the light of the web sites, and finally five questions were generated in the light of researchers' experiences,.

### **2.3 Pre-Study2: Construct validation of CRT**

After developing question sets, the second phase was testing the construct validation of the newly developed CRT and construct validation of CRT was assessed through cognitive labs (Study 2). Cognitive lab is a kind of verbal protocol analysis that is used for item revision procedure. Cognitive lab sessions include participants who have different backgrounds from each other and these people declare their opinion about the items of the scale during the cognitive lab (O'Shea et al., 2004). The aim of these cognitive labs was to assess whether or not each item activated implicit assumptions that were relevant to the construct and once activated, whether or not the implicit assumptions guided which response option appeared most reasonable. According to the results of the cognitive lab studies, all questions were revised and the revised CRT questions were examined by three academicians in the Industrial and Organizational Psychology field in order to assess the new question set's construct validation.

#### **2.3.1 Participants**

First cognitive lab included eight professionals, five of them were working in a leader position and three of them were working in a follower position. Their educational level ranged from bachelor's degree to PhD degree and the participants' age ranged from 30 to 50 years with a work experience that ranged from three to 27 years. Four of the participants were women and four of the participants were men. Second cognitive lab included six graduate students and five research assistants

specializing in Industrial/Organizational and also in Social Psychology. Seven of them were women and four of them were men.

### **2.3.2 Instruments and Procedure**

The 27 CRT questions were divided into two sets to be distributed to different groups of participants so that participants would not experience cognitive fatigue. One set included 13 questions and the other set included 14 questions. Participants were divided into two groups and each session included four participants. In the first session four people (two in a leader position and two in a follower position) worked on 14 questions. In the second session four people (three in a leader position and one in a follower position) worked on 13 questions.

In all sessions, question sets were distributed to participants for them first to answer the CRT questions. After everyone finished working on the test, the researcher handed out the questions that would probe participants to articulate why they selected a particular response. This was done for each question. Specifically, they were asked why they selected their chosen option for the particular question. Also, for the second logical response that was not chosen, test takers were asked why they did not select that particular response. In addition they were asked whether they thought someone might choose that option even though they themselves did not choose it and what would such people need to assume to have that option appear reasonable. These questions were based on the cognitive lab procedure developed and recommended by O'Shea et.al. (2004). Researchers took note of all responses.

The same procedure was applied to the graduate student group of six and the research assistant group of five. Fourteen questions were investigated by graduate students and 13 questions were examined by research assistants. Each cognitive lab session took approximately two hours. The interview form of the cognitive lab studies are shown in Appendix E.

### **2.3.3 Results**

After all these cognitive labs, all responses were taped and the frequencies of the responses were analyzed (See Appendix F and G) and modifications were done to the CRT questions according to the participants' reactions to the questions. For

example, if participants said that they could not derive any answer from the passage, then researchers changed the response options. Moreover, if participants who were in a leader position selected the answer which did not include any bias, then these leaders were asked why they selected that particular choice instead of the other choices. According to their statements, response options were examined in light of JMs and expected motives, and modified by the researchers when deemed plausible. Also the same procedure was followed for non-leaders. If participants who were in a non-leader position selected the answer which did not include any bias, then they were asked why they selected the particular choice instead of the other choices. Also, some respondents stated that, some question passages were too long and they could not concentrate on the question and in the light of their statements, some questions were shortened.

After that, 27 questions were examined by three I/O Psychologists. They were provided with detailed definitions for each bias and they were asked to read each bias and its' justification mechanisms and then read the question sets with their response options. They were asked to state whether or not each question and response options measured the related bias and write their comments for each question.” The last modifications were done in the questions according to their suggestions. Altogether, researchers conducted six meetings and after all these meetings, researchers dropped one question and made some revisions on 25 questions.

## **2.4 Main Study**

### **2.4.1 Participants**

Data were collected from 81 managers/leaders and 153 subordinates/followers. Out of 81 leaders, 24 of them were women and 57 of them were men. Also, three of them graduated from high school, two of them graduated from 2 year collage, 41 of them had a bachelor degree, 35 of them had master's and PhD degrees. The age of the leaders ranged from 22 to 58 ( $M = 37.93$ ,  $SD = 8.11$ ). Out of 153 subordinates, 65 of them were women and 88 of them were men. Furthermore, seven of them graduated from high school, six of them graduated from two year collages, 97 of them had a bachelor degree, 42 of them had master's and PhD degrees. The age

of the subordinates ranged from 20 to 52 ( $M = 31.55$ ,  $SD = 7.02$ ). Out of 81 leaders, 15 leaders worked in a company size between 1-50, 17 leaders worked in a company size between 51-250, four leaders worked in a company size between 251-500, and 45 leaders worked in a company with more than 500 employees. Out of 66 leaders, six of them reported to be responsible for one to three subordinates, 19 of them were responsible for four to six subordinates, 10 of them were responsible for seven to nine subordinates and 31 of them were responsible for 10 and more subordinates. Finally, out of 66 leaders, 19 leaders reported that there was no leadership position under their position, 18 leaders reported that there was one leadership position under their position, 14 leaders reported two, nine leaders reported three, and six leaders reported at least four leadership positions under their position.

#### **2.4.2 Procedure**

The surveys were distributed to 33 different private organizations including energy, traffic, health, finance, education sectors, automotive industry, pharmaceutical industry, defense industry, finance, software companies, consulting firms, and telecommunications companies in Turkey. All surveys were distributed in an envelope to ensure anonymity. Participants' name and their supervisors' name were not requested. The match of leader and follower question sets were accomplished with the coded envelopes, for example; first leaders' envelope was coded as L1 and this leaders' followers' envelopes were coded as L1-1, L1-2, L1-3 and so on. Leaders' question set included CRT, Multifactor Leadership Questionnaire 5X for Leaders (MLQ 5X; Avolio & Bass, 1995), the Big Five Inventory (BFI; Benet-Martinez & John, 1998) and Motivation to Lead (MTL; Chan & Drasgow, 2001). Subordinates' question set included the CRT, MLQ 5X for Subordinates, BFI and MTL which are described in the next section.

#### **2.4.3 Measures**

##### **2.4.3.1 Conditional Reasoning Test to Assess Leadership Proclivities**

The newly developed Conditional Reasoning Test was used to measure the underlying motives of transformational leadership which are power, activity inhibition, change and exhibition. Furthermore, the power motive included two



relevant justification mechanisms that are agentic bias and power attribution bias. Also, the change motive included three justification mechanisms which were efficacy and personal responsibility inclination bias, positive connotation of change, and identification with change initiators.

The CRT had 26 questions with five measuring the power attribution bias, six measuring agentic bias, three measuring activity inhibition bias, six measuring exhibition, two measuring efficacy and personal responsibility inclination bias, two measuring positive connotation of change, and two measuring identification with change initiators. CR questions have four alternative answer choices. One choice includes a justification mechanism of the related motive and is scored with + 1, one choice includes a justification mechanism of the opposite end of the related motive and is scored with -1 and finally the remaining two choices include illogical answers and are scored with 0 (James, 1998). Three sample questions are demonstrated in Appendix H.

#### **2.4.3.2 Multifactor Leadership Questionnaire 5X (MLQ-5X) (Avolio, & Bass, 1995)**

Multifactor Leadership Questionnaire 5X (MLQ-5X; Avolio & Bass, 1995) was used to measure transformational leadership. Mind Garden had the Turkish version of the MLQ-5X's copyright, so copyright was purchased from Mind Garden in order to use this scale in the current study (See Appendix N). The MLQ-5X measures four dimensions of transformational leadership that are idealized influence, inspirational motivation, intellectual stimulation and individualized consideration. The psychometric properties of the scale yielded positive results such as estimates of internal consistency reliabilities were above .70 for all scales and validities were investigated by Avolio, Bass, and Jung (1995). The construct validity of MLQ based on its factorial structure is reported in Avolio, Bass, and Jung (1999). Also, the Cronbach alpha for the overall MLQ scale was reported to be .86 (Muenjohn & Armstrong, 2008)

MLQ-5X includes 20 items rated on a 5-point scale ranging from '0 = not at all' to '4 = frequently'. The leader and follower forms are independent from each

other. In the leader form leaders evaluated themselves. Sample questions for each of the dimensions are “I seek differing perspectives when solving problems,” “I talk optimistically about the future,” “I go beyond self-interest for the good of the group,” and “I spend time teaching and coaching.” In the follower form, followers evaluate their leader on the same scales. Sample questions for the scales are “Seeks differing perspectives when solving problems,” “Talks optimistically about the future,” “Goes beyond self-interest for the good of the group” and “Spends time teaching and coaching.”

#### **2.4.3.3 Motivation to Lead (MTL) (Chan, & Drasgow, 2001)**

Second self-report measure was the Motivation to Lead scale (MTL) which was used for understanding the relationship between individual differences and various leader behaviors (See Appendix L). The scale includes 27 items, nine of which measure affective identity which refer to personal desires to lead. Sample questions are “Most of the time, I prefer being a leader rather than a follower when working in a group,” “I have a tendency to take charge in most groups or teams that I work in.” Nine items measure motives related to personal gain. Sample questions are “I am only interested to lead a group if there are clear advantages for me,” “If I agree to lead a group, I would never expect any advantages or special benefits.” Finally, nine items measure social norms and expectations and form the social-normative scale. Sample questions were “I feel that I have a duty to lead others if I am asked,” “It is an honor and privilege to be asked to lead.” Items are measured on a 5-point scale which range from “Strongly Disagree” to “Strongly Agree”. Internal consistency reliabilities with alpha coefficients  $r_{sngrd}$  from .65 to .91 and also validities were investigated by Chan and Drasgow (2001).

#### **2.4.3.4 Big Five Inventory (BFI) (Benet-Martinez, & John, 1998)**

The Big Five Inventory (Benet-Martinez, & John, 1998) measures the five personality dimensions of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. The measure has 44 items rated on a 5-point scale ranging from Strongly Disagree to Strongly Agree. Across all cultures, the internal reliabilities of the BFI scales ranged from .70 to .79 (Schmitt, Allik, McCrae,

& Benet-Martinez, 2007). The Turkish version of the BFI which was translated by Sümer and Sümer (2002) and validated by Sümer, Lajunen, and Özkan in 2005 was used. Sample Questions are; “I see myself as someone who...” “Is talkative,” “Tends to find fault with,” “Does a thorough job,” “Is depressed, blue.” (See Appendix K).

## **CHAPTER III**

### **RESULTS**

The aim of the present study was to develop a new implicit instrument using the conditional reasoning approach in order to measure transformational leadership. In order to do this, the present study tried to answer the following questions. To study the criterion-related validity, it was investigated whether or not CRT predicted being in a leadership position or not. Construct validity of the CRT was investigated based on the relationship between CRT and follower perceptions of their leaders' transformational style. Finally, the present study sought to answer how the CRT compares to already existing predictors of leadership and transformational leadership.

#### **3.1 Data cleaning and screening**

Before starting the analysis, all variables were examined for accuracy of data entering, missing data, and detecting any univariate and multivariate outliers. Missing cases were replaced with the series mean as they were less than 5% of the variable. For the missing cases of the CRT, mean replacements were not performed because the scoring of the test is not suitable for this; so instead of mean replacement, a score of "0" was given to the missing cases. Furthermore, to reveal outliers, first multivariate outliers were detected by Mahalanobis distance. One extreme case was detected and was deleted. After this operation, univariate outliers were detected by Z-scores and four cases were deleted.

#### **3.2 Factor Analyses of the Scales, Descriptive Statistics, and Correlations**

Before the investigation of the research questions, BFI, MTL and MLQ were factor analyzed. Principal Axis Factoring analysis was run with direct oblimin rotation for all scales. All scales were forced to extract the number of factors expected with respect to the literature. According to the results, items loaded under their respective scales, but certain exceptions were observed with some items theoretically developed for the BFI openness to experience and agreeableness factors and the MTL non-calculative and social normative factors. These items lowered the reliability of the scales so four items were deleted from openness to experience, two

items were deleted from agreeableness, one item was deleted from the MTL non-calculative factor and finally two items were deleted from the social normative factor. MLQ factors were formed according to its manual. CRT questions were not factor analyzed but the Kuder-Richardson (K-R) reliability based on polyserial correlations, in which each CRT question was coded as 1 (bias present) and 0 (bias not present), was found .62 for the entire set of 26 CRT questions. All CRT Questions were correlated with the variable indicating occupying a leadership position or not in order to retain the questions that provided the maximal differentiation between leaders and non-leaders. A decision was made to select items with correlations of .07 and higher as items below .07 typically displayed around null associations. Accordingly, out of 26 CRT questions, 17 of them had higher correlations than .07. Polyserial correlations with total test scores were high than .30 for these 17 items and lower than .30 for the remaining nine items which provided further justification for eliminating them. These 17 CRT questions were used to generate the CRT-Lead scale (CRT-L) and the KR-20 internal consistency reliability was found as .68. CRT-L included two power bias questions, five agentic bias questions, three change bias questions, five exhibition bias questions, and two activity inhibition bias questions.

Furthermore, the 26 CRT questions were correlated with subordinates' perceptions of their leaders transformational behaviors based on the MLQ, because as mentioned before, the construct validation would be investigated by correlating the CRT with others' ratings (Connelly & Ones, 2010). According to the results, 11 CRT questions correlated with subordinates' MLQ evaluations of their leader's transformational leadership style with correlations above .09. Also it was revealed that these 11 questions' polyserial correlations with total test scores were high than .30. These 11 CRT questions were used to generate the CRT-Transformational Leadership scale (CRT-TL). CRT-TL included three change bias questions, two exhibition bias questions, four agentic bias questions, and two activity inhibition bias questions. It could be seen that although the CRT-L composite included two power attribution bias questions, the CRT-TL composite did not include any power

attribution bias questions. The mean, standard deviation, minimum, maximum, number of items of scales, number of people that responded to the scales and reliabilities are shown in Table 5.

**Table 5. Descriptive Statistics of Study Variables**

Variable	Mean	SD	Min.	Max.	# of items	# of people filled the test	A
CRT	7.06	5.16	-5.00	24.00	26	234	.62 (K-R)
CRT- L	4.66	4.34	-9.00	17.00	17	234	.68 (K-R)
CRT-TL	2.71	3.22	-8.00	9.00	11	234	
Extraversion	3.69	0.67	1.38	5.00	8	234	.77
Agreeableness	4.14	0.49	2.14	5.00	7	234	.62
Conscientiousness	4.09	0.56	2.00	5.00	9	234	.77
Neuroticism	2.48	0.66	1.00	4.75	8	234	.78
Openness to experience	4.05	0.61	1.33	5.00	6	234	.80
MTL-Affective Identity	3.82	0.63	1.67	5.00	9	213	.84
MTL-Social Normative	3.53	0.62	1.57	5.00	7	213	.72
MTL-Non-calculative	3.49	0.62	1.88	5.00	8	213	.72
MTL-Overall	3.62	0.44	1.83	4.67	24	213	.81
MLQ (L)-Idealized Attributed	3.27	0.48	2.00	4.00	4	66	.51
MLQ (L)-Idealized Behavior	3.38	0.48	2.25	4.00	4	66	.65
MLQ (L)-Inspirational Motivation	3.23	0.49	1.50	4.00	4	66	.66
MLQ (L)-Intellectual Stimulation	3.26	0.41	2.00	4.00	4	66	.49
MLQ (L)-Individualized Consideration	3.25	0.51	1.50	4.00	4	66	.65
MLQ (L)-Overall	3.28	0.37	2.30	3.90	20	66	.86
MLQ (S)-Idealized Attributed	2.87	0.90	0.25	4.00	4	168	.86
MLQ (S)-Idealized Behavior	2.83	0.78	0.50	4.00	4	168	.75
MLQ (S)-Inspirational Motivation	2.80	0.82	0.25	4.00	4	168	.83
MLQ (S)-Intellectual Stimulation	2.84	0.73	0.75	4.00	4	168	.78
MLQ (S)-Individualized Consideration	2.71	0.86	0.00	4.00	4	168	.82
MLQ (S)-Overall	2.81	0.73	0.50	4.00	20	168	.95

Notes. CRT:-Conditional Reasoning Test (scores can range from -26 to 26); CRT-L: Conditional Reasoning Test-Leadership (scores can range from -17 to 17); CRT-TL: Conditional Reasoning Test-Transformational Leadership (scores can range from -11 to 11); MTL: Motivation to lead; MLQ (L): Leaders filled Multifactor Leadership Questionnaire; Motivation to lead; MLQ (S): Subordinates filled Multifactor Leadership Questionnaire.

When bivariate correlations of the study variables based on leaders' self-ratings were analyzed, it can be seen that none of the CRT scales significantly correlated with any demographic information such as age, sex, education, number of subordinates that leaders were responsible for, total years of leading and firm size which means CRT scales' scores were independent from respondents' demographic characteristics.

Furthermore, in the current study, the followers' evaluation about their leaders' transformational leadership style were aggregated to test the construct validity of the scale and correlations of study variables based on leader's self-ratings and aggregated follower ratings revealed that the social normative factor of MTL was significantly correlated with CRT-Transformational Leadership and CRT-Lead with correlation coefficients of .24 and .26, respectively but no significant relationship was found for the entire set of 26 CRT questions. MLQ subscales self-rated by leaders showed significant correlations with CRT scales. For example, 26-question CRT set significantly correlated with Idealized Behavior ( $r = .29$ ), Inspirational Motivation ( $r = .25$ ), Individualized Consideration ( $r = .37$ ), CRT-Lead significantly correlated with Idealized Behavior ( $r = .32$ ), Inspirational Motivation ( $r = .29$ ), Individualized Consideration ( $r = .40$ ) and finally CRT-TL significantly correlated with Idealized Attributed ( $r = .28$ ), Idealized Behavior ( $r = .29$ ), Inspirational Motivation ( $r = .25$ ), Individualized Consideration ( $r = .32$ ). However, intellectual stimulation did not reveal any significant correlations with CRT scales with the correlation coefficients ranging from .11 to .22. Similarly, although idealized influence showed a significant correlation with CRT-TL, there were no significant relationship between idealized attributed and 26 questions of CRT and CRT-Lead (See Table 6).



**Table 6 : Correlations of Study Variables Based on Leader's Ratings and Aggregated Follower Ratings**

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Leaders ratings<sup>a</sup></b>															
1- Age	1														
2- Sex	.11	1													
3- Education	.14	.27*	1												
4- # of subordinates responsible for	.11	-.03	.00	1											
5-Total years of leading	.75**	.09	.01	.12	1										
6-Number of leader position (under)	.42**	.04	-.07	.40**	.52**	1									
7-Firm size	.24	-.17	-.20	-.05	.003	-.17	1								
8-CRT-26 Question	-.12	-.13	-.22	.08	.04	.08	-.06	1							
9-CRT-L	-.06	-.14	-.21	.17	-.03	.05	-.003	.91**	1						
10-CRT-TL	.01	-.08	-.14	.06	.07	.03	.05	.76**	.73**	1					
11-Extraversion	-.11	-.11	.02	-.12	-.08	-.07	-.09	.003	-.06	-.11	1				
12-Aggregableness	-.15	.006	.03	-.12	-.01	-.01	.01	-.03	.003	.01	.02	1			
13-Consciousness	-.02	-.07	.05	.20	-.22	.11	.07	.08	.15	.04	-.01	.39**	1		
14-Neuroticism	.09	.001	-.03	-.17	.26*	-.04	-.06	.04	.04	.18	-.33**	-.27*	-.27*	1	
15-Openness to experience	-.12	.05	-.03	.06	-.06	-.07	.02	.13	.09	.12	.21	.13	.20	-.22*	1
16-MTL-Affective Identity	-.02	-.12	.12	.37**	.04	-.15	.10	.05	.06	.03	.19	.05	.17	-.29**	.13
17-MTL-Social Normative	-.09	-.07	.01	.21	-.04	.05	.08	.20	.26*	.24*	-.06	.12	.13	-.05	.02
18-MTL-Non-calculative	.23*	.003	-.06	.11	-.01	.04	.13	-.15	-.10	-.09	-.23	-.08	.01	-.13	-.07
19-MLQ-Idealized Attributed	-.04	.004	-.05	.04	-.01	.01	.35**	.20	.18	.28*	.17	.17	.25*	-.21	.21
20-MLQ-Idealized Behavior	.02	-.13	-.12	.14	-.02	-.06	.18	.29*	.32**	.29*	.09	.20	.39**	-.12	.29*
21-MLQ-Inspirational Motivation	-.04	.02	-.10	.17	-.05	-.07	.31*	.25*	.29*	.25*	.31*	.25*	.22	-.28*	.25*
22-MLQ-Intellectual Stimulation	.16	.02	-.18	.04	.08	.04	.44**	.11	.15	.22	-.12	.28*	.26*	-.02	.29*
23-MLQ-Individualized Consideration	-.10	-.16	-.23	.04	-.01	-.08	.18	.37**	.40**	.32**	.08	.20	.26**	-.05	.24
24-MLQ-Idealized Attributed (Agg.)	.09	.06	-.08	.17	.06	-.07	.13	.02	.05	.32*	-.11	-.10	-.04	.13	.13
25-MLQ-Idealized Behavior (Agg.)	-.02	.08	-.08	.10	-.06	-.04	.07	.08	.12	.39**	-.22	.04	.03	.11	.05
26-MLQ-Inspirational Motivation (Agg.)	-.20	.08	.06	-.02	-.24	-.29*	.07	.06	.06	.29*	-.08	-.09	-.06	.12	.18
27-MLQ-Intellectual Stimulation (Agg.)	-.15	.07	-.06	.08	-.09	-.18	.05	.18	.18	.35*	-.07	-.08	.04	.17	.21
28-MLQ-Individualized Consideration (Agg.)	.006	-.04	-.09	-.06	-.06	-.18	.13	-.10	-.06	.25	-.07	-.10	-.10	.22	.10
29- MLQ- Overall (Agg.)	-.08	.07	-.08	.06	-.08	-.17	.10	.06	.09	.38**	-.11	-.06	-.07	.16	.15
30-MLQ-Overall (Leader)	-.07	-.01	-.18	.11	-.005	-.004	.37**	.32**	.35**	.36**	.15	.28**	.38**	-.17	.33**

**Table 6: Correlations of Study Variables Based on Leader's Ratings and Aggregated Follower Ratings. (Continued)**

Variable	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
<b>Leaders ratings<sup>a</sup></b>															
16-MTL-Affective Identity	1														
17-MTL-Social Normative	.32**	1													
18-MTL-Non-calculative	.16	.02	1												
19-MLQ-Idealized Attributed Behavior	.35**	.24	-.23	1											
20-MLQ-Idealized Behavior	.29*	.29*	.04	.51**	1										
21-MLQ-Inspirational Motivation	.39**	.49**	-.18	.45**	.61**	1									
22-MLQ-Intellectual Stimulation	.21	.30*	.17	.50**	.50**	.46**	1								
23-MLQ-Individualized Consideration	.26*	.16	-.14	.50**	.59**	.46**	.39**	1							
24-MLQ-Idealized Attributed Behavior (Agg.)	-.04	.09	.02	.17	.18	.20	.25	-.09	1						
25-MLQ-Idealized Behavior (Agg.)	-.13	.04	.14	.10	.21	.07	.24	-.06	.82**	1					
26-MLQ-Inspirational Motivation (Agg.)	-.09	-.004	.05	-.02	.09	.08	.05	-.10	.73**	.72**	1				
27-MLQ-Intellectual Stimulation (Agg.)	-.03	-.004	.04	.12	.18	.05	.16	-.03	.73**	.77**	.71**	1			
28-MLQ-Individualized Consideration (Agg.)	-.18	-.10	.03	.08	.09	.03	.15	-.19	.81**	.79**	.72**	.77**	1		
29-MLQ-Overall (Agg.)	-.11	.01	.06	.10	.17	.10	.19	-.10	.91**	.91**	.86**	.89**	.92**	1	
30-MLQ-Overall (Leader)	.39**	.38**	-.10	.77**	.83**	.77**	.72**	.77**	.17	.13	.02	-.12	.03	.11	1

*Notes.* CRT:-Conditional Reasoning Test; CRT-L: Conditional Reasoning Test-Leadership; CRT-TL: Conditional Reasoning Test-Transformational Leadership; MTL: Motivation to lead; MLQ: Multifactor Leadership Questionnaire; Agg: Subordinates' evaluations about their leaders' leadership style were aggregated; \* $p < .05$ , \*\* $p < .01$

### 3.3 Investigation of the Research Questions

#### 3.3.1 Criterion-related validation of CRT-L

Binary Logistic Regression analysis was performed to assess prediction of membership in terms of occupying a leader position or not on the basis of 17 questions of the Conditional Reasoning Test (CRT-L). Two -2 log-likelihood ratios were compared before and after iterations. First -2 log likelihood ratio which is 301.88 decreased to 264.71 when was CRT-L entered into the model. Addition of CRT-L to the model significantly predicted the probability of being in a leader position or not ( $\chi^2 (1, 234) = 37.16, p < .001$ ). Hosmer-Lemeshow test was non-significant ( $\chi^2 (8, 234) = 13.12, ns$ ) indicating that the data fit the model well. Twenty percent variance in being in a leader position or not could be explained by the CRT-L. The overall accurate classification rate was 74.8, which is higher than the by chance classification rate of 68.5 based on priors. When investigating the membership of being in a leader position or not, it was seen that CRT-L better predicted not being in a leader position (92.8%) than being in a leader position (40.7%). According to the result, CRT-L (Wald = 29.81, (Exp) $B = 1.24, p < .001$ ) significantly predicted being in a leader position or not. The odds of being in a leadership position increased by 0.24 for every one unit of change in CRT-L.

Furthermore, hierarchical binary logistic regression was used to test the incremental prediction of CRT-L over conceptually equivalent self-reported motivation to lead-affective identity and the relevant self-report personality factors which were extraversion, openness to experience, conscientiousness and neuroticism in the prediction of leadership position. The two -2 log-likelihood ratios before and after entering the CRT-L were compared and according to the results, first -2 log likelihood ratio which was 263.61 decreased to 234.77. The model with the variables of motivation to lead-affective identity, extraversion, openness to experience, conscientiousness and neuroticism was found significant ( $\chi^2 (5, 213) = 16.23, p = .006$ ). The goodness of fit to the data assumption was satisfied because Hosmer-Lemeshow test was not significant ( $\chi^2 (8, 213) = 9.06, ns$ ). Furthermore, motivation to lead-affective identity, extraversion, openness to experience, conscientiousness

and neuroticism accounted for 10% variance in being in a leader position or not. The overall accurate classification rate was 65.3, which is lower than the by chance classification rate of 66.9. The model better predicted not being in a leader position (88.9%) than being in a leader position (24.4%). However, according to the Wald statistics of these variables, all of them were greater than the level of significance of .05 which means, none of these variables have an impact on the odds of occupying a leadership position.

When CRT-L was entered into the model, the block was found significant ( $\chi^2 (1, 213) = 28.85, p < .001$ ). Also, Hosmer-Lemeshow test was not significant ( $\chi^2 (8, 213) = 8.62, ns$ ) and the goodness of fit to the data assumption was satisfied. The chi-square difference of the Block 1 and Blok 2 was significant ( $\chi^2 (1, 213) = 28.85, p < .001$ ) which means the inclusion of CRT-L significantly improved prediction of a leadership position. Furthermore, it was found that, CRT-L accounted for 16% additional variance over the theoretically-related motive and personality variables assessed with self-reports. CRT-L (Wald = 23.63, (Exp)B = 1.23,  $p < .001$ ) significantly predicted being in a leader position or not. The analysis indicated that each one unit increase in the CRT-L increases the odds of being in a leadership position by a factor of 0.23. After addition of CRT-L, the overall accurate classification rate was found 73.7 which is higher than the by chance classification rate of 66.9 and also it was revealed that the model better predicted not being in a leader position (87.4%) than being in a leader position (50%).

**Table 7. Hierarchical Logistic Regression Analysis of CRT-L Over MTL and Related Personality Variables Assessed in the Prediction of Position**

Criterion	B	SE	Wald	Exp(B)	Chi square	Nagelkerke R	
						Square	Square
Blok 1:							
BFI Extraversion	0.20	0.27	0.56	1.21	16.23*	0.10	
BFI Openness to Experience	-0.14	0.27	0.25	0.87			
BFI Conscientiousness	0.45	0.30	2.24	1.58			
BFI Neuroticism	-0.40	0.25	2.51	0.67			
MTL Affective Identity	0.47	0.28	2.94	1.60			
Blok 2:							
BFI Extraversion	0.25	0.27	0.87	1.29	28.85**	0.26	
BFI Openness to Experience	-0.22	0.29	0.58	0.80			
BFI Conscientiousness	0.38	0.33	1.38	1.47			
BFI Neuroticism	-0.51	0.27	3.54	0.60			
MTL Affective Identity	0.41	0.30	1.80	1.50			
CRT-TL	0.21	0.04	23.6**	1.23**			

Dependent Variable: Leader-Non leader. \* $p < .05$ , \*\* $p < .001$

### 3.3.2 Construct validation of CRT-TL

Before testing the construct validity of CRT-TL, subordinates' MLQ-based evaluations of their leaders' transformational leadership style were aggregated. In order to justify aggregation, agreement of follower perceptions of a common group leader was analyzed using the intraclass correlation coefficient (ICC). ICC value was used to evaluate whether or not subordinates who work with the same leader had similar perceptions about their leader. The calculation of the ICC (see Equation 1) is based on ANOVA components and higher values indicate that subordinates working with a common leader share similar perceptions and that perception differences across groups arise from working with a different leader. In the equation  $k$  corresponds to the average number of subordinates that evaluated their leader, which in the data set was three. According to the rule of thumb; in order to decide whether or not the data could be aggregated, the ICC result has to be higher than .12 (James, 1982). In the present study ICC was found to be .29 which means that 29 per cent of variance in subordinates' perceptions of their leader's transformational style can be explained by group membership (that is, working with a specific leader).

#### Equation 1.

$ICC = \frac{[BMS - WMS]}{[BMS + (k - 1) * WMS]}$  Where;

BMS: between mean square of follower perceptions

WMS: within mean square

k: average number of followers in a leader's work group

Transformational leadership would be best explained by how subordinates evaluate their leader, rather than leaders' self-evaluations. Thus, the correlation between CRT-TL and subordinates' MLQ evaluations was examined with the purpose of investigating the construct validation of CRT. According to the results, CRT-TL scores of leaders and subordinates' MLQ evaluations were significantly and positively correlated ( $r = .38$ ) which means the higher scores the leader gets from CRT-TL, the higher their subordinates evaluate that leader as a transformational leader.

Hierarchical regression was performed to test the incremental prediction of CRT-TL over conceptually equivalent scales of the leaders' self-reported motivation to lead-affective identity, the relevant self-report personality factors which were extraversion and neuroticism, and leaders' self-reported MLQ in the prediction of subordinates' transformational style evaluations about their leaders. Two analyses were performed because of the sample size that only 61 leaders were evaluated by their subordinates in the present study. Hence, in the first analysis, firstly subordinates' evaluations of their leaders based on the MLQ were regressed on leaders' self-ratings of personality variables theoretically related with transformational leadership which were extraversion and neuroticism from BFI and the affective identity subscale from the MTL scale. Secondly, CRT-TL questions were entered in the second step. As it can be seen in Table 8, the first model was non-significant. None of the variables significantly predicted subordinate perceptions but CRT-TL added significant incremental variance over the first model ( $F_{\text{Change}}(1,56) = 8.78, p = .04$ ). CRT-TL significantly predicted subordinates' MLQ scores based on the evaluation of their leaders,  $\beta = .37, t(56) = 2.96, p = .04$ . Although extraversion, neuroticism and affective identity did not significantly explain any variance in subordinates' MLQ score for their leaders, CRT-TL accounted for an additional 13% of variance in subordinates' leader evaluations. In the second analysis, firstly subordinates' evaluations of their leaders based on the MLQ were regressed on leaders' self-rated MLQ scores and secondly CRT-TL was entered in the equation. The first model did not reveal significant results; leaders' self-reported transformational style did not explain any variance in subordinates' perceptions of their style, however in the second step CRT-TL added significant incremental variance over the first model ( $F_{\text{Change}}(1,58) = 8.9, p = .04$ ). CRT-TL significantly predicted subordinates' MLQ scores based on the evaluation of their leaders,  $\beta = .39, t(58) = 2.98, p = .04$ . Although leaders' own perceptions of style did not significantly explain any variance in subordinate perceptions, CRT-TL was responsible for an additional 13% of variance in subordinates' leader evaluations.

**Table 8. Hierarchical Regression Analysis Testing the Predicting Power of CRT Over BFI (Extraversion and Neuroticism), MTL (Affective Identity) and MLQ Assessed by Leaders.**

Criterion	B	Std. Error	$\beta$	T	R <sup>2</sup>	R <sup>2</sup> change	F	F change
<b>First Analysis</b>								
Step 1:					.03	.03	.61	.61
BFI_Extraversion	-0.08	0.15	-0.07	-0.49				
BFI_Neuroticism	0.13	0.15	0.14	0.86				
MTL-Affective Identity	-0.01	0.16	-0.01	-0.06				
Step 2:					.16*	.13*	2.71*	8.78*
BFI_Extraversion	-0.01	0.15	-0.01	-0.08				
BFI_Neuroticism	0.08	0.14	0.09	0.59				
MTL-Affective Identity	-0.07	0.15	-0.07	-0.45				
CRT-TL	0.06	0.02	0.37	2.96				
<b>Second Analysis</b>								
Step 1:					.01	.01	.72	.72
MLQ	0.17	0.20	0.11	0.85				
Step 2:					.14*	.13*	4.86*	8.9*
MLQ	-0.06	0.20	-0.04	-0.29				
CRT-TL	0.06	0.02	0.39	2.98				

Dependent Variable: Subordinates' MLQ Evaluations \* $p < .05$



### 3.4 Noteworthy Correlations of Study Variables

On the one hand, the CRT-TL had a moderate but significant correlation ( $r = .36$ ) with leaders' self-evaluations on the MLQ but on the other hand it had non-significant relationships of .06 and .07 with the total scores of MTL and BFI scales as rated by the leaders, respectively. The CRT-Lead also demonstrated a moderate and significant correlation with leaders' self-reported MLQ ( $r = .35$ ) and similarly revealed non-significant relationships with self-reported MTL and BFI with the correlation coefficients of .11 and .07, respectively. According to the dissociation hypothesis the self-report scales and implicit scales that measure the same construct should reveal small and non-significant relationships. In the current study, both implicit and self-report scales that measured motivation to lead and transformational leadership showed moderate correlations with each other and these noteworthy findings are discussed in the discussion section in detail.

Moreover, there were no significant relationships between leaders' self-report MLQ scores and subordinates' aggregated MLQ scores which meant that leaders and their followers had different views about a particular leader's style.

Also, when the CRT-TL correlates of leaders' self-evaluations of transformational leadership were examined together with correlates of subordinates' evaluations of their leaders; it was observed that two power attribution bias questions were inversely related to subordinates' perceptions of transformational leadership, but positively related to leader's own perceptions of transformational leadership. Moreover, although leaders' opinion about their transformational leadership style did not show any significant relationship with subordinates' evaluations, leaders' MLQ score yielded significant correlation with their implicit test scores (CRT scales) (See Table 6) that are discussed in the discussion section.

## **CHAPTER IV**

### **DISCUSSION**

#### **4.1. Investigation of the Research Questions**

The aim of the current study was to generate a new implicit questionnaire based on the Conditional Reasoning Test approach to measure transformational leadership. Conditional Reasoning Testing is a relatively new technique that is used to identify underlying motives by measuring particular beliefs (JMs) that people have when they rationalize or justify their choice of behaviors. Conditional Reasoning Test questions are a type of inductive reasoning problems and try to capture the JMs of underlying motives by making test takers use their reasoning processes (James, 1998).

Before testing the research questions, a long period of time was devoted to developing the CR questions on a theoretical basis. First of all, the literature was reviewed in terms of which personality variables, motives and justification mechanisms were used to describe and understand leadership and transformational leadership. Secondly, critical incidents were collected in order to determine behavioral displays of the underlying motives of transformational leadership. CR questions were developed in the light of the critical incidents results and web surveys. These CR questions were investigated in terms of their construct validity in cognitive lab studies which included leaders, non-leaders, research assistants and academic personnel.

According to the results, out of 26 CR questions, 17 of them significantly differentiated leaders and non-leaders from each other. The relationship between leadership and Five-Factor model of personality was reviewed meta-analytically by Judge et al. (2002) and they revealed that the strongest correlates of leadership was extraversion, neuroticism, conscientiousness and openness to experience with the magnitude of correlations ranging from .24 to .31. In addition to these, as regards to the literature, the most relevant factor from MTL is affective identity with leadership (Chan & Drasgow, 2001). Hence, motivation to lead-affective identity, extraversion, and openness to experience, conscientiousness and neuroticism and CRT-L were

analyzed in the prediction of leadership position and it was found that CRT-L accounted for additional variance in explaining being in a leader and non-leader position. According to Connelly and Ones (2010) others' ratings provide superior validities as compared to self-ratings in the prediction of academic and job performance so leaders' CRT test scores were correlated with subordinates' MLQ test scores in order to investigate the construct validity of the scale. Results revealed that 11 CR questions significantly correlated with subordinates' MLQ test scores whereas the most relevant Big Five personality factors which were extraversion and neuroticism (Bono & Judge, 2004) and self-report leaderships scales which were MTL and leaders self-evaluated MLQ did not explain transformational leadership. When CRT-TL was entered in the equation, the model was found significant.

In the literature, James and LeBreton (2011) developed a CRT questionnaire that aimed to measure leadership. Researchers indicated that power and aggression were the implicit motives related with leadership and tested these motives with their CRT-L which included 25 multiple-choice inductive reasoning problems. The early version of CRT-L yielded promising results and they found that managers and assistant managers' CRT-L scores were related to monthly store sales ( $r = .44$ ) and monthly store profit ( $r = .46$ ) in a large retail company. James and LeBreton (2011) correlated their scales' scores with real work life output but in the current study leaders' CRT scores were correlated with subordinates' perceptions of their leaders' level of transformational style. The present study also tested the CRT in terms of its prediction power and results revealed that CRT predicted leadership and transformational leadership better than other self-report scales that were used in the literature. The emphasis on transformational leadership distinguished the current measure from the already existing CRT measure of leadership.

Furthermore, in the literature CRT-L (James & LeBreton, 2011) was tested in samples of psychology and MBA students in which the peer nomination technique was used as a criteria in order to define leaders and non-leaders, nevertheless the study showed inconclusive results (Wright, 2011). However, in the current study, participants were not nominated as leaders and non-leaders, instead they were

occupying a leader or subordinate position in their real life work settings and this situation strengthens the findings of the present study.

Additionally, the literature claimed that although self-report and implicit scales were developed to measure parallel constructs, these two types of measures assess different facets of an individual's motivational states, so these scales were independent from each other (McClelland et al., 1989). In an earlier study, in order to show this dissociation, the relationship between the self-report scale of Interpersonal Dependency Inventory used to assess interpersonal dependency in clinical, laboratory and field settings, and the projective measure of Rorschach Oral Dependency was investigated. Results revealed that these scales fulfilled the dissociation criteria and demonstrated modest positive correlations (Bornstein, 2002). Furthermore, James (1998) researched the dissociation between implicit and explicit measures and found that CRT assessing achievement motivation showed non-significant relationships with self-report counterparts which were WOFO ( $r = .12$ ) and TAT ( $r = -.08$ ) and claimed that implicit measures did not correlate significantly with their self-report counterparts and called it the dissociation hypothesis. Moreover, Wright's (2011) investigation of the CRT leadership also supported the dissociation hypothesis where the correlation between CRT-L and self-reported Motivation to Lead scale scores showed a significant but small correlation in the psychology student sample ( $r = -.19$ ), and a small non-significant correlation in the MBA student sample ( $r = -.14$ ).

Similar findings were observed in other studies for example; Winter, John, Stewart, Klohnen and Duncan (1998) reviewed the trait and motive concepts and they argued that these two concepts represent two fundamentally different elements of personality and also they found that extraversion measured with self-report scales were not related to affiliation ( $r = .10$ ) and power ( $r = -.09$ ) measured with the TAT. Bing, LeBreton, Davison, Migetz, and James (2007) measured the achievement motivation with self-report scale and CRT-Achievement Motivation Scale and they revealed that the two moderately correlated with each other ( $r = .31$ ). Frost, Ko, and James (2007) investigated aggressiveness with CRT-Aggression scale and The

Angry Hostility Scale from NEO-PI-R and results indicated that the two had a small and non-significant relationship with each other ( $r = .06$ ). All of these results demonstrated that implicit and self-report scales measure a different component of personality. Similar to previous results, the present study revealed that the CRT-Lead scale and CRT-TL scales had non-significant relationships with the self-report counterparts of MTL and had significant but moderate relationships with the MLQ factors.

Another noteworthy result that was obtained in the present study was that although subordinates' evaluations of their leaders' transformational leadership style did not significantly correlate with leaders' self-reported style, leaders' implicit CRT scores did. When the implicit measurement literature was investigated it was indicated that the effectiveness of implicit measures, such as TAT, were investigated through others' ratings. Lindzey and Tejessy (1956) stated that other people's evaluations were a more reliable way of understanding ones' overt behaviors so this relationship needed to be investigated in future studies. Moreover, Davids (1973) investigated aggression levels of emotionally disturbed boys through the TAT and used their psychologist's prediction concerning their aggressive behaviors and also the child care staff's evaluations about the subject's aggressive behaviors as criteria. Thus, it could be claimed that the significant relationship between subordinates' ratings and leaders' CRT ratings were more sensible because, in the literature the relationship between overt behaviors and implicit measures was investigated through others' ratings and in the current study, subordinates evaluated their leaders' overt leadership style so this finding was not surprising. To sum up, it can be claimed that measuring leadership as an implicit way is more reliable than measuring it with self-reports because implicit measures captured people's real intentions and behaviors that were displayed to the environment.

Also, McClelland et al. (1989) yielded supporting results to our argument. They claimed that although implicit measures have been found to predict operant behaviors, self-report measures have been found to predict respondent's idealized behaviors as self-report measures are affected by explicit social incentives. That's

why participants respond to the questions in a socially desirable way. In self-reported measures, people responded to the questionnaires with a desire to act in a certain way but seemed unable to do so consistently in real life. However, implicit measures captured people's automatized tendencies that have been acquired on the basis of life experiences therefore showed themselves later in life automatically. In the present study, it was aimed to capture the automatized modes of thinking with the CRT questions.

One other interesting finding was that leaders with stronger power motives perceived themselves as more transformational leaders, but inversely subordinates evaluated leaders with high scores on the CRT power-motive questions as having less transformational leadership ( $r$  range of questions was from  $-.13$  to  $-.18$ ). These results demonstrated that although leaders thought in good faith that showing power to subordinates was justifiable in the competitive organizational context and made someone a successful leader; subordinates evaluated the same leaders as undesirable. In fact, mean leader MLQ ratings were higher than mean subordinate MLQ ratings for the respective leader. Paired sample t-tests were run for MLQ scores of leaders and subordinates, and it was found that each MLQ factor was significantly different from each other. Subordinates' evaluations of their leader's style were independent from leaders' self-reported evaluations.

Furthermore, measuring subordinates' perceptions of their leaders' transformational leadership style in order to predict leaders' effectiveness was an important contribution to the literature. According to the definition of transformational leadership, such a leadership style is more than the compliance of followers in which leaders try to understand the needs, values and beliefs of their followers and improve subordinates' awareness about the goals and inspire them with their vision and self-confidence. The effectiveness of transformational leadership is more related to the follower's satisfaction about the leaders (Bass, 1985). Furthermore, the literature revealed that transformational leadership was directly related to positive organizational outcomes, for example, subordinates whose leaders demonstrated transformational leadership behaviors were more satisfied with

their leaders and more satisfied with their jobs (Bono, & Judge, 2003, Dwyer, Bono, Snyder, Nov, & Berson, 2013, Judge, & Bono 2000). The present study paid attention to this relationship and investigated the effectiveness of transformational leadership through subordinates' evaluations about their leaders.

To sum up, the newly developed CRT scale that aimed to measure leadership revealed statistically significant and practically useful results. This new instrument offered incremental prediction over the self-report scales that are already in use, such as MTL and MLQ. The present study provides initial support for the newly developed CRT. One set of questions forming the CRT-Lead scale can be used to predict leadership positions and another set of questions forming the CRT-TL can be used to better predict subordinate's perceptions of their leader's transformational style.

#### **4.2 Strengths of the Study**

The current study aimed to contribute to the leadership literature by offering a reliable and valid measure of leadership (specifically transformational leadership) using an implicit assessment technique to avoid the drawbacks of self-report assessments. In general, self-report measurements are used to identify leaders and transformational leaders; however it is known that self-report measurements are open to response distortion. Thus, there was a need to develop new measurement techniques to measure leadership like implicit assessment techniques. James (1998) had introduced an implicit CRT measure for leadership. The present study made a further contribution to implicit assessments of leadership with the CRT-TL in predicting subordinate perceptions of their leaders' transformational leadership style.

The test development stage of the current study was long-drawn out and a labor intensive process was followed by researchers. The data from literature findings and from real life experiences were combined successfully to rationally determine the related motives and justification mechanisms of transformational leadership. Furthermore, CR questions were generated attentively for the related JMs by the researchers, so many cognitive labs and meetings were designed to ascertain that the CR questions had construct validity. During these stages, each and every

suggestion made by the participants was examined and necessary modifications in the questions were undertaken in order to improve the validity of the questions. As a result, the CRT significantly predicted leaders and transformational leaders better than the self-report personality, motivation to lead, and transformational leadership tests.

This new instrument measures the implicit motives of the personality in an implicit way in which respondents do not know whether or not their leadership capacity is being assessed so they cannot distort their responses in a socially desirable way. Thus, CRT-Lead and CRT-TL have the potential to be utilized as a selection tool for leaders in work settings.

According to the literature results of CRT and present study's results, it can be claimed that CRT is a credible instrument to measure implicit motives because of its significant results. In the literature CRT was used to measure aggression, achievement motivation, power and leadership and demonstrated promising results. In addition to these noteworthy results, the current study revealed additional support for the use of the conditional reasoning technique by demonstrating initial results in terms of criterion and construct validities of the CRT-Leadership.

Regarding the dissociation hypothesis, implicit measures are not expected to correlate highly with their self-report counterparts (James, 1998, James & Mazerolle, 2002). In our study, CRT-L and CRT-TL did not have high correlations with their self-report counterparts which were MTL and MLQ. Dissociation hypothesis was satisfied.

The data were collected from different companies with different firm sizes and from different work areas, and locations (Ankara and İstanbul in Turkey) that means the sample included variety. Thus, these properties strengthen the generalizability of the study findings.

Lastly, each test set was distributed to the participants in a private envelope and in order to match the leaders' and subordinates tests, specific codes were given to envelopes. This method was followed for each participant as it was assumed that ensuring anonymity would increase participation. For this reason, many important



and successful leaders and their teams from international firms were willing to attend the present study.

### **4.3 Limitations of the Study and Future Suggestions**

The present study has several limitations which should be considered in the interpretation of the results. In the present study, empirical criterion-keying was used when the relationships between the CRT and external criteria were examined. The main idea of empirical keying is to maximize the prediction of external criteria. Even though this approach was criticized as it was claimed to decrease the internal consistency of the scale (Guion, 1965; Jones, 1977), the internal consistency of items in the newly developed CRT was adequate. This is because the test questions were not selected empirically from a large pool of questions that span different constructs, but were developed carefully on theoretical and rational grounds. Thus, it could be argued that the empirical criterion-keying procedure used in the present study has strengthened the predictive power of the scales. Moreover, according to Jones (1977), comparing the validity of empirical keying and rational keying approaches, where rational keying was based on analytic procedures on theoretical assumptions and expert judgements and factor-analysis, did not yield significant differences between these two types of keying procedure. Thus, using an empirical keying procedure may not have posed a serious problem in the current study. Nevertheless, due to the circulatory nature of retaining questions and validating the measure using the same criteria, the present study is in need of being replicated with new samples.

Furthermore, only 153 subordinates evaluated their leader's leadership style and also for some leaders only two subordinates evaluated their leader and this might have resulted in restricted range of evaluation about leader. Future studies can make use of larger samples for more reliable aggregated results.

Culture specificity might be the second limitation of the study that means the development stages of the CR questions were tested in Turkey. The participants may have evaluated the CR questions in the light of their cultural point of view because CR questions are solved with the implicit thoughts. Implicit thoughts, beliefs, attitudes, and expectations may be shaped by culture. Thus, future studies may

examine the power of the CRT in different cultural settings.

Finally, more studies need to be conducted to further support the predictive power of CRT in different work settings that would also include a variety of work and organizational outcomes.

## REFERENCES

- Avolio, B. J., Bass, B. M. (1995). *Multifactor Leadership Questionnaire Technical Report*. Redwood City, CA: Mind Garden.
- Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organisational Psychology*, 72, 441-446.
- Barling, J., Slater, F., & Kelloway, E. K. (2000). Transformational leadership and emotional intelligence: An exploratory study. *Leadership and Organization Development Journal*, 21(3), 157 – 161.
- Bartone, P. T., Snook, S. A., & Tremble, T. R. (2002). Cognitive and personality predictors of leader performance in west point cadets. *Military Psychology*, 14(4), 321–338.
- Bass, B. M. (1985). *Leadership and Performance Beyond Expectations*, New York, The Free Press.
- Bass, B. M. (1990). *Bass and Stogdill's handbook of leadership*. New York: Free Press.
- Bass, B. M. (1998). *Transformational Leadership: Industrial, Military, and Educational Impact*. New Jersey, Lawrence Erlbaum Associates Publishers.
- Benet-Martinez, V., & John, O. P. (1998). Los Cinco Grandes across cultures and ethnic groups: Multitrait-multimethod analyses of the Big Five in Spanish and English. *Journal of Personality and Social Psychology*, 75, 729-750.
- Bergman, S.M, McIntyre, M. D., & James, L. R. (2004). Identifying the aggressive personality. *Journal of Emotional Abuse*. 4, 81-93.

- Bindl, U., & Parker, S. K. (2010) *Proactive Work Behavior: Forward-Thinking and Change Oriented Action in Organizations* In: Zedeck, Sheldon, (ed.) *Apa Handbook of Industrial and Organizational Psychology*. American Psychological Association, Washington, USA.
- Bing, M. N., LeBreton, J. M., Davison, H. K., Migetz, D. Z., & James, L. R. (2007). Integrating implicit and explicit social cognitions for enhanced personality assessment: A general framework for choosing measurement and statistical methods. *Organizational Research Methods, 10*, 136-181.
- Bing, M. N., Stewart, S. M., Davison, H. K., Green, P. D., McIntyre, M. D., & James, L. R. (2007). An integrative typology of personality assessment for aggression: Implications for predicting counterproductive workplace behavior. *Journal of Applied Psychology, 92*(3), 722–744.
- Bono, J. E., & Judge, T. A. (2003). “Self-Concordance at Work: Toward Understanding the Motivational Effects of Transformational Leaders.” *Academy of Management Journal, 46*, 554–71.
- Bono, J. E., Judge, T. A. (2004). Personality and transformational and transactional leadership: A meta-analysis. *Journal of Applied Psychology, 89*(5), 901–910.
- Bornstein, R. F. (2002). A process dissociation approach to objective, projective test score interrelationships. *Journal of Personality Assessment, 78*, 47–68.
- Burns, J.M. (1978) *Leadership*. New York. Harper & Row.
- Cartwright, S. (2003). New forms of work organization: Issues and challenges. *Leadership and Organization Development Journal, 24*(3), 121 – 122.
- Chan, K., & Drasgow, F. (2001). Toward a theory of individual differences and leadership: Understanding the motivation to lead. *Journal of Applied Psychology, 86*(3), 481-498.

- Connelly, B. S., & Ones, D. S. (2010) An other perspective on personality: Meta-analytic integration of observers' accuracy and predictive validity. *Psychological Bulletin*, 136(6), 1092-1122.
- Costa, Jr. P. T., & McCrae, R. R. (1988). Personality processes and individual differences from catalog to classification: Murray's needs and the five-factor model. *Journal of Personality and Social Psychology*. 55(2), 258-265.
- Dansereau, F., Graen, G., & Haga, W. J. (1975). A vertical dyad linkage approach to leadership within formal organizations: A longitudinal investigation of the role making process. *Organizational Behavior and Human Performance*, 13, 46–78.
- Dauids, A. (1973). Aggression in thought and action of emotionally disturbed boys. *Journal of Consulting and Clinical Psychology*, 40(2), 322-327.
- Densten, I. L., & Sarros, J. C. (2012). The impact of organizational culture and social desirability on Australian CEO leadership. *Leadership and Organization Development Journal*, 33(4), 342-368
- Downton, J. V. (1973). *Rebel Leadership: Commitment and Charisma in the Revolutionary Process*. New York, NY, US: Free Press.
- Dubinsky, A. J. ,Yammarino, F. J., & Jolson, M. A. (1995). An examination of linkages between personal characteristics and dimensions of transformational leadership. *Journal of Business and Psychology*, 9(3), 315-335.
- Ensari, N., Riggio, R. E., Christian, J., Carslaw, G. (2011). Who emerges as a leader? Meta analyses of individual differences as predictors of leadership emergence. *Personality and Individual Differences*, 51, 532–536.
- Fiedler, F. (1965). “*Engineer the Job to Fit the Manager*”, Harvard Business Review, September-October, pp. 115-122.

- Fisher, E. A. (2009). Motivation and leadership in social work management: A review of theories and related studies. *Administration in Social Work, 33*, 347–367.
- Flanagan, J. C. (1954). The critical incident technique. *Psychological Bulletin, 51*(4), 327-358.
- Foti, R. J., & Hauenstein, N. M. A. (2007). Pattern and variable approaches in leadership emergence and effectiveness. *Journal of Applied Psychology, 92*(2), 347-355.
- Frost, B. C., Ko, C. E., & James, L. R. (2007). Implicit and explicit personality: A test of a channeling hypothesis for aggressive behavior. *Journal of Applied Psychology, 92*, 1299-1319.
- Greenwald, A. G., & Banaji, M. R. (1995) Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review, 102*(1), 4-27.
- Goldman, M., Bolen, M. E., & Martin, R. B. (1961). Some conditions under which groups operate and how this affects their performance. *Journal of Social Psychology, 54*, 47- 56.
- Goldman, M., & Fraas, L. A. (1965). The effects of selection on group performance. *Sociometry, 28*, 82-88.
- Guion, R. M. *Personnel testing*. New York: McGraw-Hill, 1965.
- Hartog, D. N., & Belschak, F. D. (2012). When does transformational leadership enhance employee proactive behavior? The role of autonomy and role breadth self-efficacy. *Journal of Applied Psychology, 97*(1), 194–202.
- Hoffman, B. J., Woehr, D. J., Maldagen-Youngjohn, R., & Lyons, B. D. (2011). Great man or great myth? A quantitative review of the relationship between individual differences and leader effectiveness. *Journal of Occupational and Organizational Psychology, 84*, 347–381.

- Hogan, R., Curphy, G. J., & Hogan, J. (1994). What we know about leadership: Effectiveness and personality. *American Psychologist*, *49*(6), 493-504.
- House, R. J., Spangler, W. D., & Woycke, J. (1991). Personality and charisma in the U.S. Presidency: A psychological theory of leader effectiveness. *Administrative Science Quarterly*, *36*, 364-396.
- Howard, A. (1997). A reassessment of assessment centers: Challenges for the 21<sup>st</sup> century. *Journal of Social Behavior and Personality*, *12*, 13-52.
- Jacobs, R. L., & McClelland, D. C. (1994). Moving up the corporate ladder: A longitudinal study of the leadership motive pattern and managerial success in women and men. *Consulting Psychology Journal*, *46*(1), 32-41.
- James, L. R. (1982). Aggregation bias in estimates of perceptual agreement. *Journal of Applied Psychology*, *67*, 219-229.
- James, L. R. (1998). Measurement of personality via conditional reasoning. *Organizational Research Methods*, *1*, 131-163.
- James, L. R., & McIntyre, M. D. (2000). *Conditional Reasoning Test of Aggression Test Manual*. San Antonio, TX: Psychological Corporation.
- James, L. R., & Mazerolle, M. D. (2002). Chapter 3: Personality variables (pp. 71-93) & Chapter 4 (pp. 107 - 122, 150-152). *Personality in Work Organizations*. Sage Series.
- James, L. R., McIntyre, M. D., Glisson, C. A., Bowler, J. L., & Mitchell, T. R. (2004). The conditional reasoning measurement system for aggression: An overview. *Human Performance*, *17*(3), 271-295.
- James, L. R., McIntyre, M. D., Glisson, C. A., Green, P. D., Patton, T. W., LeBreton, J. M., Frost, B. C., & Russell, S. M. (2005). A conditional reasoning measure for aggression. *Organizational Research Methods*, *8*(1), 69-99.

- James, L. R., LeBreton, J. M., Mitchell, T. R., Smith, D. R., DeSimone, J. A., Cookson, R., & Lee, H. J. (2011). *Use of Conditional Reasoning to Measure the Power Motive*. In R. S.
- Jones, A.P. (1977). Emprial item keying versus a rational approach to analyzing a psychological climate questionnaire. *Applied Psychological Measurement, 1* (4), 489-500.
- Judge, T. A., & Bono, J. E. (2000). Five-factor model of personality and transformational leadership. *Journal of Applied Psychology, 85*(5), 751-765.
- Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology, 87*(4), 765–780.
- Kark, R., & Van Dijk, D. (2007). Motivation to lead, motivation to follow: The role of the self-regulatory focus in leadership processes. *Academy of Management Review, 32*(2). 500–528.
- Klenke, K. (1993). Meta-analytic studies of leadership: Added insights or added paradoxes? *Current Psychology: Developmental, Learning Personality, Social, 12*(4), 326-343.
- Khoo, H. S., Burch, & G. S. J. (2008). The dark side' of leadership personality and transformational leadership: An exploratory study. *Personality and Individual Differences, 44*, 86–97.
- Krahe, B., Becker, J., & Zöllter, J. (2008). Contextual cues as a source of response bias innpersonality questionnaires: The case of the NEO-FFI. *European Journal of Personality, 22*, 655–673.
- Krahe, B., & Hermann, J. (2003). Verfälschungstendenzen im NEO-FFI: Eine experimentelle überprüfung. *Zeitschrift für Differentielle und Diagnostische Psychologie, 24*, 105-117.



- Kunda, D. (1990). The case for motivated reasoning. *Psychological Bulletin*, 108, 480-498.
- LeBreton, J. M., Barksdale, C. D.; Robin, J., & James, L. R. (2007). Measurement issues associated with conditional reasoning tests: Indirect measurement and test faking. *Journal of Applied Psychology*, 92(1), 1–16.
- Lindzey G, & Tejessy C. (1956). Thematic Apperception Test: Indices of aggression in relation to measures of overt and covert behavior. *American Journal of Orthopsychiatry*, 26(3), 567-576.
- Lippitt, R., & White, R. K. (1943). *Child behavior and development: A course of representative studies*. Barker, Roger G. (Ed); Kounin, Jacob S. (Ed); Wright, Herbert F. (Ed); pp. 485-508; New York, NY, US: McGraw-Hill.
- McClelland, D. C. (1975). *Power: The inner experience*. New York: Irvington-Halsted-Wiley.
- McClelland, D. C, & Burnham. D. (1976). Power is the great motivator. *Harvard Business Review*, (25), 159-166.
- McClelland, D. C., & Boyatzis, R. E. (1982). Leadership motive pattern and long-term success in management. *Journal of Applied Psychology*, 67(6), 737-743.
- McClelland, D. C., Koestner, R., & Weinberger, J. (1989). How do self-attributed and implicit motives differ? *Psychological Review*. 96(4), 690-702.
- McGrath, R. E., Mitchell, M., Kim, B. H.& Hough, L. (2010). Evidence for response bias as a source of error variance in applied assessment. *Psychological Bulletin*, 136(3), 450-470.
- Morgan, C. D., & Murray, H. A. (1935). A method for investigating fantasies: The Thematic apperception test. *Archives of Neurology and Psychiatry*, 34, 298-306.

- Muenjohn, N., & Armstrong, A. (2008) Evaluating the structural validity of the multifactor leadership questionnaire (MLQ), capturing the leadership factors of transformational-transactional leadership. *Contemporary Management Research, 4 (1)*, 3-14.
- Murray, H. A. (1938). *Explorations in Personality*. New York: Oxford.
- Northouse, P. G. (2010). *Leadership Theory and Practice* (5th ed.). Thousand Oaks, CA: Sage.
- O'Connor, P. J., & Jackson, C. J. (2010). Applying a Psychobiological Model of Personality to the Study of Leadership. *Journal of Individual Differences, 31(4)*, 185–197.
- Ones, D. S., & Viswesvaran, C. (1998). The effects of social desirability and faking on personality and integrity assessment of personnel selection. *Human Performance, 11*, 245-269.
- O'Shea, P. G. Driskell, J. E. Goodwin, G. F.; Zbylut, M. L., & Weiss, S. M. (2004). *Development of a Conditional Reasoning Measure of Team Orientation*. American Institutes For Research Washington Dc.
- Pandey, J. (1976). Effect of leadership style, personality characteristics and method of leader selection on members' and leader's behavior. *European Journal of Social Psychology, 6*, 475-489.
- Papadopoulos, E. W. U. (2012). *The predictive validity of a technology enhanced assessment center method for personnel selection*. Dissertation. Walden University.
- Patrick C., Dwyer, P. C., Bono, J. E., Snyder, M., Nov, O., & Berson, Y. (2013). Sources of volunteer motivation transformational leadership and personal motives influence volunteer outcomes. *Nonprofit Management & Leadership, 24 (2)*, 181-205.

- Peterson, S. J., Walumbwa, F. O., Byron, K., & Myrowitz, J. (2009). CEO positive psychological traits, transformational leadership, and firm performance in high-technology start-up and established firms. *Journal of Management*, 35(2), 348-368.
- Resick, C. J., Whitman, D. S., Weingarden, S. M., & Hiller, N. J. (2009). The bright-side and the dark-side of CEO personality: Examining core self-evaluations, narcissism, transformational leadership, and strategic influence. *Journal of Applied Psychology*, 94(6), 1365–1381.
- Rotem O., Schneider A., Wasserzug S. & Zelker R. (2008). Nursing leaders of tomorrow: A peer selection process. *Journal of Nursing Management* 16, 915–920.
- Schmitt, D. P.; Allik, J., McCrae, R. R., & Benet-Martinez, V. (2007). The geographic distribution of big five personality traits patterns and profiles of human self-description across 56 nations. *Journal of Cross-Cultural Psychology*, 38 (2), 173-212.
- Shertzer, J. E., & Schuh, J. H. (2004). College student perceptions of leadership: Empowering and constraining beliefs. *NASPA Journal*, 42(1), 111–131.
- Spangler, W. D. (1992). Validity of questionnaire and TAT measures of need for achievement: Two meta-analyses. *Psychological Bulletin*, 112(1), 140-154.
- Stark, S., Chernyshenko, O. S., Chan, K., Lee, W. C., & Drasgow, F. (2011). Effects of the testing situation on item responding: Cause for concern. *Journal of Applied Psychology*, 86(5), 943-953.
- Stogdill, R. M. (1948). Personal factors associated with leadership: Survey of literature. *The Journal of Psychology*, 25, 35–71.
- Stogdill R. M. (1963). *Manual for the leader behavior description questionnaire: Form XII*. Columbus, OH: Ohio State University Bureau of Business Research, College of Commerce and Administration.

- Sümer, N., & Sümer, H. C. (2002). *Adaptation of BFI in a Turkish sample*. Unpublished manuscript.
- Sümer, N., Lajunen, T., & Özkan, T. (2005). *Big five personality traits as the distal predictors of road accident involvement*, (Ed. G. Underwood) Ch.18, *Traffic and Transport Psychology*, 215-227.
- Schwartz, S. H. (2012). An overview of the Schwartz Theory of basic values. *Online Readings in Psychology and Culture*, 2(1).
- Training (2005). Industry report 2005. Training, 14–28.
- Van Eeden, R., Cilliers, F., & Van Deventer, V. (2008). Leadership styles and associated personality traits: Support for the conceptualization of transactional and transformational leadership. *South African Journal of Psychology*, 38 (2), 253-267.
- Van Emmerik, H., Gardner, W. L., Wendt, H., & Fischer, D (2010). Associations of culture and personality with McClelland's motives: A cross-cultural study of managers in 24 countries. *Group & Organization Management*, 35, 329-367.
- Vicere, A. A., & Fulmer, R. M. (1998). *Leadership by Design*. Boston, MA: Harvard Business School.
- Vroom, V. H., & Yetton, P. W. (1973). *Leadership and decision making*. Pittsburgh, PA: University of Pittsburgh Press.
- Winter, D. G., John, O. P., Stewart, A. J., Klohnen, E. C., & Duncan, L. E. (1998). Traits and motives: Toward an integration of two traditions in personality research. *Psychological Review*, 105, 230-250.
- Wright, M. A. (2011). *Investigating the validity of the conditional reasoning test for leadership*. Unpublished doctoral dissertation, Georgia Institute of Technology, USA

Woolsey, L. K. (1986). The critical incident technique: An innovative qualitative method of research. *Canadian Journal of Counselling, 20*(4), 242-254.

Yukl, G., & Van Fleet, D. D. Theory and research on leadership in organizations. In M.D. Dunnette and L.M. Hough (Eds), *Handbook of Industrial and Organizational Psychology, 3*, 147-97.

## APPENDICES

### Appendix A: Justification Mechanisms for Achievement Motivation

(James, 1998)

<p>1. <b>Personal responsibility inclination:</b> Tendency to favor personal factors such as initiative, intensity and persistence as the most important causes of performance on demanding tasks.</p>
<p>2. <b>Opportunity inclination:</b> Tendency to frame demanding tasks on which success is uncertain as “challenges” that offer “opportunities” to demonstrate present skills, to learn new skills, and to make a contribution.</p>
<p>3. <b>Positive connotation of achievement striving:</b> Tendency to associate effort(intensity, persistence ) on demanding tasks to dedicate”, “concentration”, “commitment” and “involvement”.</p>
<p>4. <b>Malleability of skills:</b> Tendency to assume that the skills necessary to master demanding tasks can, if necessary, be learned or developed via training, practice and experience.</p>
<p>5. <b>Efficacy of persistence:</b> Tendency to assume that continued effort and commitment will overcome obstacles or any initial failures that might occur on a demanding task.</p>
<p>6. <b>Identification with achievers:</b> Tendency to empathize with the sense of enthusiasm, intensity and striving that characterize those who succeed in demanding situations. Selectively, focus on positive incentives that occur from succeeding.</p>

## Appendix B : Justification Mechanisms for Aggression (James, 1998)

**1. Hostile Attribution Bias:** A propensity to sense hostility and perhaps even danger in the behavior of others. The alarm and feelings of peril engendered by this heightened sensitivity to threat trigger a concern for self-protection. Apprehension about self-preservation enhances the rational appeal of self-defense, thus promoting the self-deceptive illusion that aggression is justified.

**2. Potency Bias:** A proclivity to focus thoughts about social interactions on dominance versus submissiveness. The actions of others pass through a perceptual prism primed to distinguish (a) strength, assertiveness, dominance, daring, fearlessness, and power from (b) weakness, impotence, submissiveness, timidity, compliance, and cowardice. Fixations on dominance versus submissiveness generate rationalizations that aggression is an act of strength or bravery that gains respect from others. Failing to act aggressively shows weakness.

**3. Retribution Bias:** A predilection to determine that retaliation is more rational than reconciliation. This bias is often stimulated by perceptions of wounded pride, challenged self-esteem, or disrespect. Aggression in response to the humiliation and anger of being demeaned is rationalized as justified restoration of honor and respect.

**4. Victimization by Powerful Others Bias:** A bias to see inequity and exploitation in the actions of powerful others. The ensuing perceptions of oppression and victimization stimulate feelings of anger and injustice. This sets the stage for rationalizing aggression as a legitimate strike against oppression and a justified correction of prejudice and injustice. This sets the stage for rationalizing aggression as a legitimate strike against oppression and a justified correction of prejudice and injustice.

**5. Derogation of Target Bias:** This bias consists of an unconscious tendency to characterize those one wishes to make (or has made) targets of aggression as evil, immoral, or untrustworthy. To infer or associate such traits with a target makes the target more deserving of aggression.

**6. Social Discounting Bias:** A proclivity to frame social norms as repressive and restrictive of free will. Perceptions of societal restrictiveness promote feelings of

reactance. These feelings furnish a foundation for justifying socially deviant behaviors such as aggression as ways to liberate oneself from repressive social customs and to exercise one's lawful right to freedom of expression.



## Appendix C: Justification Mechanisms for Power (Leadership)

(James, & LeBreton, 2011)

**1. Agentive Bias:** When attempting to think rationally and objectively about strategic decisions, POs instinctively take the perspective of the agents or initiators of actions. Consequently, their thinking often evidences a propensity to confirm (e.g., build logical support for) the agents' ideas, plans, and solutions. These ideas, plans, and solutions are viewed as providing logically superior strategic decisions. The key to the Agentive Bias is the perspective from which people frame and reason. POs instinctively look down; that is, they identify with the people (like themselves) who reside in management positions, create strategic plans, and then lead others to carry out the plans. People with weak or nonexistent power motives, whom we will refer to as "NPs," instinctively look up. When thinking about strategic decisions, they take the perspectives of those lower in the organization, who are affected by the decisions and actions.

**2. Social Hierarchy Orientation:** Reasoning from this orientation reflects implicit acceptance of hierarchical authority structures as the primary form of human organization. Reasoning is often based on the unstated, and for many POs, unrecognized premise that disproportionate influence, privilege, and distribution of resources are rational ways of organizing and leading (as opposed to egalitarian power structures). The unstated assumptions they identify are thus likely to be supportive of the premise. An assumption such as the following is illustrative: Decisions can be made quickly without lengthy discussion or dissent. NPs on the other hand are unlikely to be supportive of the premise because they do not implicitly accept hierarchical authority structures as the primary and most natural form of human organization. In fact, they may well be disposed to reason that power structures that involve disproportionate influence, privilege, and distributions of resources often produce less than optimal decisions. The unstated assumptions they identify are thus likely to be critical of the premise.

**3. Power Attribution Bias:** Reasoning with this bias reflects a predisposition to logically connect the use of power with positive behavior, values, and outcomes.

Acts of power are interpreted in positive terms such as “taking initiative”, “assuming responsibility”, and being “decisive”. These same acts are logically associated with positive outcomes, such as organizational survival, stability, effectiveness, and success. The powerful are viewed as talented, experienced, and successful leaders. In like manner, successful leadership is rationally attributed to the use of power. The Power Attribution Bias stands in contrast to the tendency of society, including a great many NPs, to correlate the exercise of power with entitlement, corruption, and tyranny. More specifically, the power motive is held culpable for (a) placing personal gain ahead of group welfare, (b) the seeking of influence simply in order to dominate others, (c) the willingness to use threat and coercion in order to gain power, status, and entitlements, and (d) the building of organizations ruled by narcissistic tyrants who oppress, exploit, and victimize subordinates and employees. NPs who make attributions that those seeking power are dishonest or corrupt believe their framing and analyses are logical and rational. POs on the other hand are predisposed to infer that seeking power is necessary for the survival of the collective and the achievement of important goals. Basically, POs desire to engage in power clearly places them on the defensive in a climate that tends to frame power in derogatory terms. Justification mechanisms such as the Power Attribution Bias are needed to give POs ostensibly objective and rational reasons for engaging in acts of power.

**4. Leader Intuition Bias:** Decisions and actions appear more reasonable (to POs) when they are based on resources and strategies that confer power to the leader. POs are predisposed to intuitively think of strategies that confer power to themselves (or people like themselves). NPs will be significantly less prone to intuitively identify these same types of strategies as promising. What has likely happened here is that, over the years, POs selectively attended to patterns and decisions that were not only efficacious but that also involved resources that conveyed power to the leader. Examples of such resources include (a) receiving recognition for such things as being an expert or a first-mover, (b) being able to inflict pleasure (rewards) or pain (punishment) on subordinates, (c) being in the nexus of communication or influence structures; (d) being in control of resources; (e) functioning in hierarchical authority

structures where one has personal responsibility for important decisions, and (f) working in cultures where the accumulation and exercise of power via forming alliances and coalitions is expected, even encouraged. The result of selective attention and learning is that strategies and actions that allow POs to develop a power base become part of their tacit knowledge structure. This tacit knowledge is accessed automatically (without awareness), which makes it appear as experience-based intuition of how to solve strategic problems. NPs may also develop tacit knowledge structures and then rely on experienced-based intuition to solve strategic decisions. However, these knowledge structures are unlikely to involve cognitive associations between effective leadership and resources that enhance the NPs' power.

## **Appendix D: Interview Form for Collecting Critical Incidence**

**A.Yönettiğiniz ya da liderlik ettiğiniz insan topluluğunu tatmin ettiğini düşündüğünüz bir an düşünün.**

**1.Bu olay ne idi ve ne zaman/hangi ortamda gelişti?**

**2.Bu duruma yol açan koşullar nelerdi?**

**3.Takipçileriniz tam olarak ne dedi ve ne yaptı?**

**4.Bu etkileşimi tatmin edici olarak hissetmenize yol açan şey neydi?**

**B.Yönettiğiniz ya da liderlik ettiğiniz insan topluluğunda tatminsizlik yaratan bir an düşünün.**

**1. Bu olay ne idi ve ne zaman/hangi ortamda gelişti?**

**2.Bu duruma yol açan koşullar nelerdi?**

**3.Takipçileriniz tam olarak ne dedi ve ne yaptı?**

**4.Bu etkileşimi tatminsizlik yaratıcı olarak hissetmenize yol açan şey neydi?**

## **Appendix E: Interview Form For Cognitive Lab Studies**

### **Koşullu Muhakeme Testinin Yapısal Geçerliğinin İncelendiği Toplantı Soruları**

Dönüştürücü Liderlik Özellikleri taşıyan ve taşımayan katılımcılar “Dönüştürücü Liderlik Koşullu Muhakeme Testini” tamamladıktan sonra testler katılımcılardan toplanacak ve katılımcılar bir liderlik pozisyonunda olup olmadıklarına göre iki farklı gruba ayrılacaktır. Daha sonra, test soruları sırayla power point ile yansıtılacak ve katılımcılardan sorular için hangi cevap şıkkını seçtiklerini söylemeleri istenecektir. Bu sırada Dönüştürücü Liderlik Güdüsünü içeren cevap seçeneğini seçen ve Dönüştürücü Liderlik Güdüsünü içermeyen cevap seçeneği seçen kişilere neden bu sorular için bu cevap şıkkını seçtiklerine yönelik sorular sorulacaktır. Katılımcılardan gelen cevaplar yine kendi doldurdıkları testin üzerine kısa notlar şeklinde yazılacak ve toplantıdan sonra testin yapısal geçerliliğini artırmak amaçlı test sorularında gerekli değişikliklere gidilecektir.

#### **Katılımcılara sorulacak sorular:**

#### **Dönüştürücü Liderlik Güdüsünü içeren cevap seçeneğini seçen katılımcılara sorulacak sorular:**

-Bu soru için neden bu cevap şıkkını seçtiniz?

#### **Dönüştürücü Liderlik Güdüsünü içermeyen cevap seçeneği seçen katılımcılara sorulacak sorular:**

-X cevap seçeneğini (Dönüştürücü Liderlik Güdüsünü içeren cevap seçeneği) seçmemenizdeki neden nedir?

-Siz bu cevabı seçmiş olmanıza rağmen, sizce neden biri X cevap seçeneğini (Dönüştürücü Liderlik Güdüsünü içeren cevap seçeneği) seçmiş olabilir?

## Appendix F: Cognitive Lab Tapes

### ACTIVITY INHIBITION

#### 1. QUESTION

##### Leader View:

C:Eşgüdümlü bir çaba içerisine girmişler. Yalnızca kişiler başarılı olmaz altındaki grupla ekip olanlar başarabilir. A şıkında bireysel başarıdan bahsediliyor.

C: Angola ortaçağ toplumu ama paragraf ile çelişiyor.

##### Non-leader view:

A:Angola geri kalmış bir ülke olduğu için bireylerin etkisi olduğunu düşündüm.

C: Liderlerle aynı görüşü savunuyor

#### 2. QUESTION

##### Leader View

C: Kurumsal büyümeyi amaçlamaktadır vurgulandığı için birlikte çalışmayı vurgulayan C şikkını işaretledim. Paragraf hedeflemektedir sözü ile bitseydi D şikkını seçerdim ama devam ettiği için C'ye yöneldim.

C: Paragraftan C'yi çıkarsadım.

##### Non-leader view:

C: Son cümleden dolayı C'yi seçtim.

D: Kurumsal büyüme için görevlilerin kendisini geliştirmesi gerekemeyebilir. Ben inovasyondan ekonomik büyümeyi anlıyorum.

#### 3. QUESTION

##### Leader View

A: A ve B şikkı arasında gidip gelerek A hepsini kapsadığı için A yı seçtim. D şikkına yönelmem yorum olurdu paragraftan çıkmıyor. B şikkındaki bırakılmaktadır sözü bırakılmalıdır olarak değişmelidir.

B: B şikkı en uygun şık olduğu için onu seçtim.

##### Non-leader View

A: Paragrafta ana fikir ne diyince A şikkı kendini gösteriyor.

A: A bana mantıklı geldi.

**NOT: D şikkını seçen olmadı.**

#### 4. QUESTION

##### Leader View

D: Canla başla çalıştığı doğru ama bunu departman için mi yapıyor öyle bir bilgi yok. Yönetici olmayı beklerken başına yönetici geliyor. Sonuç olarak bükemediğin bileği öpeceksin.

A: Sorunun yoruma dayandığını düşünüyorum. Bakış açısı etkili oluyor. Ama paragraftan negatif bir yorum çıkmıyor o nedenle D'yi seçtim. Fazla mesai yapmak kendi tercihi öyle bir baskı yok sonuçta.

A: İnsanlar kendileri için çalışırlar şirket aidiyeti yüksek olsa bile şirket için çalıştıklarına inanmıyorum. Yaşanan aksaklıkları fırsat olarak görüyor. Aynı zamanda Defne'nin saf bir kız olduğunu düşünüyorum.

##### Non-leader View

A: Başarısını yöneticiye göstermek istediğine dair bilgi yok. İş için yaptığını düşünüyorum.

#### 5. QUESTION

##### Leader View

C: Tekrar düşününce hepsinin olabileceğini düşünüyorum. A: genelde böyle olur. C, A şıkkı ile ilintili. Herkes sunamayacağına göre kim sunacak. Bir kişi var oda yönetici.

C: Eğer Buğra ve ekibinin çalışmalarından memnundur deseydi A şıkkını seçerdim. Ama sadece Buğra Beyin kendisi başarılı değildir o yüzden A'yı eledim. Buğra Beyin ben dili ile konuştuğun hissettim. Biz deseydi doğru olurdu. Hırslı kelimesi bende bu duyguyu çağrıştırdı.

A: A yı seçtim ve %100 katılıyorum. Buğra Bey hem çalışan hemde yöneticilik yaptığı için ideal bir çalışandır. C şıkkını seçmedim çünkü alttaki kişiler gıybet içindedir yani Buğra Beyi çekememektedirler. Üst yönetim Buğra Beyi bilir. Başarı varken sahiplenilen bir ekibin var olduğunu düşünüyorum eğer ekip başarısız olsaydı o zaman Buğra Bey sunsun derlerdi. Üst yönetim bu projeyi sadece Buğra Beyin tek başına yapmadığının farkındadır. Beni buğra Beyin yanına çeken projenin içinde yer almasıdır her yönetici bunu yapmaz.



Not: (Yonca Hoca)ASLINDA POWER ATTRIBUTİON BİLE VAR. Yineden otoriter lider ile trans. Lider ayırt edilebilir diye düşünüyorum.

**Non-leader View**

C. Buğra Bey üst yönetime gayet durumu anlatabilir ama ekipten de bahsetmeli

**EXHIBITION**

**1. QUESTION**

**Leader View:**

A: Seçim kampanyası daha önce hiç yapılmamış. İlk kez yapılmış, belki diğer adaylar ile aynı bilgileri verdi ama yöntem fark yaratmış.

D: D şıkkında daha genel bir söylem var.

**Non-leader View:**

D: En son paragrafta bilgi vurgusu olduğu için D dedim.

A: İlk kez böyle bir durumla karşılaşan üyeler şaşkınlıklarını birbiri ile paylaşmışlar. Zeynep Hakkında konuşmaya başlamışlar. Ama şimdi fikrimi değiştirdim D diyorum.

**2. QUESTION**

**Leader View**

D: Şans ve başarı arasında ilişki yok. İçinde bulunduğu durumu beceri ve donanımından dolayı kendisi göstermiştir.

D: B şıkkı paragraftan çıkmıyor.

**Non-leader View:**

D: İlk başta B'ye yönelim gösterdim ama D daha mantıklı geldi. Ege o süreçte çalıştığı için başarılı olduğu için bu şansı değerlendirmiştir.

D: Ege'nin şansı kolay öğrenebileceği başarılı olabileceği bir departmana düşmüş olması.

**3. QUESTION**

**Leader View**

C: D ifadesi hissediliyor ama "onu kapatmanın tek yolunun çok çalıştığını geçtiğini" gösteren bir ibare yok. O nedenle C.

C: Kendi kişiliğini güvenmeyi ve varlığını gösterme olarak yorumladım. D şıkkındaki “ancak” kelimesi tek yok ifadesi veriyor. Ancak tek yok değil.

C: C’deki ifade bencilce bir duygudur ve bu iyi bir vasıf mıdır tartışılır. Fiziksel özelliklerini kamufle etmek için kendini ön plana çıkarmaya hakkı vardır sonucunu çıkarmamak gerekir.

#### **Non-leader View**

C: Ama C şıkkı da tam çıkmıyor. D ise fiziksel özelliklerini kapatmaya çalıştığına dair bilgi yok. C’de buna inandıkları için böyle yaptıklarına dair bir bilgi yok.

NOT: 2 lider D şıkkında “ancak” kelimesi olmasaydı bu şıkka gidebileceğini belirtti.

### **4. QUESTION**

#### **Leader View**

B: Paragrafın son cümlesinde tarihe geçme diyor. Belki de vurgulanan bu.

B: Bilime önemli hizmetlerde bulunmak araç değil amaç olmalı. Sonuçta icat yapmak, ön planda olmak önemlidir.

B:Kişinin psikolojisine girersek tarihe geçme arzusu var. Var olduğunu göstermek istiyor.

#### **Non-leader View**

C: İnsanlara hizmet etmenin önemli olduğunu düşünüyorum. İnsanlık için içinde olsun diye C şıkkını işaretledim.

### **5. QUESTION**

#### **Leader View**

A:A şıkkında kişisel başarı çok iyi ifade edilmiş. Diğer şıklar çıkmıyor. C diyen bir kişi diğere kişilerin varlığı neticesinde verildiğini düşünebilir. Takım yöneticisi olmak için altında şu kadar kişi olmalı mantığı olabilir.

A: C gidilebilecek bir ifade sonuçta böyle bir grup olmasaydı yönetici olabilir miydi? Hayır ama neden on kişilik bir ekipten görev Yağmur Hanıma verilmiştir sorusunun cevabı A şıkkıdır.

A: C şıkkını işaretlemedim çünkü Yağmur hanımın talebi doğrultusunda böyle bir birim kurulmuştur. Hak verilmez alınır meselesi.

#### **Non-leader View**

A: Katılıyorum. Yağmur hanımın kendi çabasıdır.

**POWER**  
**AGENTIC BIAS**

**1. QUESTION**

**Leader View:**

C: Her projede başkalarından bilgi almadığına yönelik bir bilgi olsaydı B'ye yönelebilirdim ama projeye kendi imzasını atmak istemiş diye düşünüyorum.

C: C şıkkı insanların karakteri ile ilgili bir şık olduğu için onu seçtim.

**Non-leader View:**

B: B genel bir şık. Başkalarını benimsemeyen bir kişi olarak düşündüm. C yi seçmedim çünkü altında fikir olmadığı sürece projeyi bitiremez diye düşündüm. C de başkalarının fikirlerini önemsemiyor diye düşündüm.

C: B yi seçmedim çünkü genel olarak bu kişinin başkalarını önemsemediğini çıkaramayız. Bu cevap şıkkı bana çok genel geldi.

**2. QUESTION**

**Leader View**

D: Zorlandım ama D dedim, aslında tam olarak D değil ama sanırım cevap bu olmalı dedim.

D: Öyle olması gerektiği için D şıkkını işaretledim ama adil olmak adına B şıkkı daha uygun olmalı

**Non-leader View:**

D:Zor bir soruydu soruda açık açık bizim fikrimiz soruluyordu. Şıkları eleye eleye gittim.

D: Mesai ücreti almaları gerekiyor çünkü personelin az çalışması personelin hatası değil.

**3. QUESTION**

**Leader View**

D: A değil çünkü başarının garantisi yok. C doğru ama paragrafta bahsedilmiyor. D şıkkında ulaşma ihtimali daha yüksektir dense daha iyi olurdu. A şıkkını da da doğru bilmesiyle ilgili değil taraf tutması ile ilgili bir durdum olduğu için A'yı seçtim.

D: Haklı ile haksız ayırt edebilmiş Doğru bildiği kelimesi kafa karıştırıcı

D: D2yi seçtim ama valinin popülist davrandığını düşünüyorum.

#### **Non-leader View**

A: D şikkini seçtim ama şu anada A şikkına daha yakınım. D'de pragmatik bir yaklaşım var.

#### **4. QUESTION**

##### **Leader View**

C: C şikkini seçtin çünkü bir sıkıntı var etkili çözüm arayışına giriyor ve bu yöntem bence etkili bir yöntemdir.

C: Kişinin problem çözme yeteneğini gösterdiği için C şikkini seçtim.

C: Arayı bulmaya çalışmış çıkan sonuç bu değil ama bence yapılması gerekenin bu olduğu düşünüyorum.

##### **Non-leader View**

A: Son paragrafta yöneticinin iyi niyetli olduğunu düşünüyorum ve kabullenmelerini sağlamaya çalışmıştır.. C'de ise alt kesimi kabul ettirmek amacı ile zorlama var gibi geldi, uzlaşmacı değil.

#### **5. QUESTION**

##### **Leader View**

B: A da doğru aslında ama B şikkı insanın kendini geliştirmesi ile alakalı, Güçlü ve başarılı oldukları anlayarak kendilerini geliştirmeyi denemişler.

B: A çıkabilecek sonuç ama ana fikir en temelde B. Paragraftan böyle çıkıyor.

B: Rasyonel olarak bu çıktı. Kısa vadede başarı basmaklarını çıkmak bence başarı değildir. Bu yüzden bana göre C de doğru.

##### **Nonleader View**

A: B şikkı paragraftan çıkmaz. B de yanında yer aldığı kişileri analiz etmesinden bahsediyor.

**POWER**  
**POWER ATTRIBUTION BIAS**

**1. QUESTION**

**Leader View:**

B: Konuşmadaki sözleri inanç ve kararlılık ifade ediyor. Milletın menfaatleri için yapıyor bunu.

B: Çok açık ve net

**Non-leader view:**

B: Çok açık ve net

B: Sorudan bu çıkıyor ama D şıkkının tarih bilgisi ile uyumlu olduğunu biliyorum. D şıkkına gitmemin sebebi bu cevabın bu paragraftan çıkmamasıdır.

No: D şıkkı bilgisi paragraftan çıkmıyor konusunda hem fikirler.

**2. QUESTION**

**Leader View**

C:Paragrafla uyumlu olduğu için C şıkkını seçtim

C: Kurallar net şekilde belli olur ve kurallar adil bir şekilde uygulanırsa çalışanlar saygı duyacaktır.

**Non-leader View**

C: A şıkkındaki “güç uygulandığı sürece” ifadesi bana çok sert geldi ve beni itti. Yukarıdaki paragrafa göre dediği için C şıkkını seçtim. Çokta A şıkkına gitmedim çünkü o şıkla ilgili cümlede veri yok ayrıca ilk cümle ile de çelişiyor. Ama A şıkkı da doğru olabilir, C daha ağır basıyor. A çeldirici olabilir ama paragrafın ana fikri bu değil. Paragrafın 1. Cümlesi ana fikirdir.

A: Yaptırımların uzun vadede sonuç getirmeyeceğini düşündüğüm için A şıkkını seçtim.

**3. QUESTION**

**Leader View**

C: A’yı da düşündüm. Eksik bilgi var gibi geldi. Paragraf biraz daha uzasaydı A şıkkını seçerdim. Zamanı yönetmek önemli olduğu için C şıkkını seçtim. C’deki bilgiyi paragrafın son cümlesinden çıkardım.

C: A ve C arasında gidip geliyorum. Başarmasını yapmak olarak düşündüm.

A: En rahat seçtiğim soru bu oldu. Yönetici bağımsız çalışmayı kısıtlarda ne olur motivasyon düşer. Yaptırım yapmak özerkliği düşürür. Ama ben tersini düşünüyorum, herkes bağımsız çalışırsa olmaz, yönetici varsa kısıtlaması gerekir.

#### **Non-leader view**

A: Yönetici müdahalede bulunursa özerklik ve motivasyonun düşeceğini düşünüyorum.

#### **4. QUESTION**

##### **Leader View**

C: Vermediği yasal hakları değil. İkramiye prim vaat değildir. Hak kelimesinden dolayı D şıkkı elendi. Hah yerine etkili çözüm kelimesi daha uygun olabilir.

C: İkramiyenin ödül olduğu açıkça bellidir ve ödül alıp almamasını belirlemek yöneticinin hakkıdır. D şıkkını seçmedim çünkü insanların başına buyruk davranmasını engellemek gerekir.

C: Başarısızlığın karşısında ikramiye verilmez.

##### **Non-leader View**

C: Yöneticinin başarısız olduğuna dair bir şık konabilir diye düşünüyorum.

#### **5. QUESTION**

##### **Leader View**

D: A şıkkı çeldirici ama çokta çıkartamıyoruz çünkü bu durum bence bilimsel ilerleyişi durdurmadı, başka bir yoldan devam etti, bence bu imaj ile ilgili bir şey o yüzden D şıkkını seçtim.

A: Önce D sonra A ama hala net değil. Korumaktadır kelimesinden ötürü. Korumaya çalışmaktadır deseydi A yerine D şıkkını seçerdim.

D: Uzay çalışmaları tamamen imaj çalışmaları üzerine yapılan bir çalışmadır. İmaj kelimesi beni yönlendirdi.

##### **Nonleader View**

D: Bilimsel ilerleyişi arttırdığı ortada. İmaj konusuna katılıyorum.

## 6. QUESTION

### Leader View:

D: 'Köpek dövdüğü kapıyı sever. Kuralları ne kadar net belirlerseniz insanlar ona uymak konusunda daha net olurlar. Yönetici durumu tespit etmeye çalışmış, duygusal karar vermemiş. Bir tür bilimsel yöntem izlemiş, objektif bir şekilde verimin artmasını beklemiş.

D.: Ahmet Bey kararı uygulamaya geçiyor. Bu her lider için kolay bir şey değildir.

### Non-leader View:

A: Direk işine son vermek çözüm gibi gelmedi hatta fevri bir karar geldi. Böyle bir şeyde işine son veriliyorsa diğer çalışanların da işine son verilebilir. Diğerleri de bundan huzursuzluk yaşayabilir.

A: Soru köküne göre en doğru yargı A. D şikkını destekleyen veri paragrafta yok. Kurumsal genel yöntemleri sadece Ahmet Bey uyguluyor olabilir.

**Not: Üretim mühendisi ve şef arasındaki hiyerarşik yapı çok açık değil. Üretim mühendisi yerine müdürü denebilir.**

## CHANGE

### POSTIVE CONNATATION OF CHANGE

## 1. QUESTION

### Leader View:

A: A şikkı dışında para ile ilgili rahatsızlıkla ilgili bir şey yok. Yeniliklere kapalı olmakla egzotik olmak arasında bağlantı olabilir ama tek belirleyici bu tatil seçeneği değil. D şikkını seçenler egzotikliği yeniliklere açık olmakla eş tutulmuş olabilir. Ama bence tek belirleyici değil.

D: Diğerlerinde özel vurgu yok, o yüzden seçtim.

### Non-leader view:

A: A şikkı bana ilk başta en mantıklısı geldi.

D: Sadece Hüseyin değil taraflardan biri değişikliğe daha açık olsa daha kolay plan yapılabilir. Belki hiç keyif alamayacağı için A'yı seçmedim.

## 2. QUESTION

### Leader View

B: Cevap verirken zorlandım. B ve D şıkkı arasında bayağı gittim geldim. B şıkkı oğlunun düşüncesini açıklıyor, Babayı hesaba katmıyor. D şıkkı da zorlayarak çıkarılabilir. Cevap verirken içim rahat değil.

A: (Irrational Seçti): Temelde aynı şeyleri istedikleri ama farklı yolları tercih ettikleri için bence aynı şeyleri düşünmektedirler.

### Non-leader View:

D: A şıkkın tebessüm ettim, doğru dedim ama paragrafta açıkça bahsetmediği için eledim. B şıkkı sadece oğlunu anlatıyor diye eledim. D ikisinin de kabul edebileceği bir fikir olduğu için seçtim.

D: Sektör değiştirmek ekonomik olarak riskli. Paragrafta yoğun rekabete vurgu yapıyor yani risk vurgulanıyor.

## CHANGE

### EFFICACY AND PERSONAL RESPONSIBILITY BIAS

## 3. QUESTION

### Leader View

A: A şıkkı da tam karşılamıyor çünkü ayırt edilmesini sağlayanlar başarıya yönlendirecek mi bilmiyoruz. B olamaz çünkü Bayan Brodie'nin seçtiği yöntem gelişmelerini engelleyemez.

A: Cevap tam olarak net değil. Kendi yargılarımdan yola çıkarak A cevabını verdim. Böyle bir anlayış başarıyı getirir benim kendi düşüncem.

B: Paragrafın yönlendirmesini hissettim o yüzden B şıkkını seçtim. Şu Şu olmuştur demiyor. Riskten bahsediyor. Dünya çapından iyi bir öğretmendir demiyor. Eğitim gibi bir durumda bu yaklaşım risk doğurabilir. Eğitim daha sistematik olmalıdır. (Change'i ölçüyor olabilir mi?)

### Non-leader View

A: Müfredatı eksik verdiği dair bir bilgi yok. O yüzden başarıya ulaşır diye bir çıkarımda bulundum. Ama kesin değil bu bir çıkarım.



#### 4. QUESTION

##### Leader View

B: C şikkını seçenler şiirin zaman boyunca değişmemiş olmasından dolayı seçmiştir. Ama ifade kendi içinde doğru değil. Asıl vurgulanan şairin farklı yok tercih etmesi.

B: C'de çıkabilir ama asıl vurgu C şikkında.

B: Sanatsal alanda ne kadar özgün iseniz o kadar iyisinizdir. Bütün sorular iş hayatı ile ilgiliyken bu değil gibi geldi.

##### Non-leader View

C: En genel yargı C şikkıdır.

### CHANGE

#### IDENTIFICATION WITH CHANGE INITIATORS

#### 5. QUESTION

##### Leader View

A: b,c, d direk elendiği için A şikkını seçtim. Kendi demotivasyonunu başkalarına yansıtmıştır.

A: A dışındaki şıklarla ilgili bilgi yok. A'da ki katı ifade beni rahatsız etti biraz yumuşatılabilir.

A: Aynı

##### Non-leader View

A: En çıkmayacak sonuç D olduğu için A yı seçtim.

#### 6. QUESTION

##### Leader View

B: Paragraftan bir tek bu çıktı çünkü riski vurguluyor.

B: Tartışmaya gerek yok cevap B.

##### Non-leader View

B: temel sebep C'nin olmaması

B: Tartışmasız B.

### Appendix G: Cognitive Lab Frequencies

		A	B	C	D
<b>ACTIVITY INHIBITION</b>	AIB1	(NL)		(L,L,NL)	
	AIB2			(L,L,NL)	(NL)
	AIB3	(L,NL,NL)	(L)		D
	AIB4	(L,L,NL)			(L)
	AIB5	(L)		(L,L,NL)	

		A	B	C	D
<b>EXHIBITION</b>	EB1	(L,NL)			(L, NL)
	EB2		B		(L,L,NL,NL)
	EB3			(L,L,NL,NL)	D
	EB4		(L,L,L)	(NL)	
	EB5	(L,L,L,NL)		C	

		A	B	C	D
<b>POWER</b>	AB1		(NL)	(L,L,NL)	
	AB2		B		(L,L,NL,NL)
	AB3	(NL)			(L,L,L)
	AB4	(NL)		(L,L,L)	
	AB5	(NL)	(L,L,L)		
	PAB1		(L,L,NL,NL)		D
	PAB2	(NL)		(L,L,NL,)	
	PAB3	(L,NL)		(L,L)	
	PAB4			(L,L,L,NL)	D
	PAB5	(L)			(L,L,NL)
	PAB6	(NL,NL)			(L,L)

		A	B	C	D
<b>CHANGE</b>	PCC B1	(L,NL)			(L, NL)
	PCCB2	(L)	(L)		(NL,NL)
	EPRB3	(L,L,NL)	(L)		
	EPRB4		(L,L,L)	(NL)	
	ICIB6		(L,L,NL,NL)	C	
	ICIB5	(L,L,L,NL)			D

*RED* refers to answer which include bias  
*BLUE* refers to answer which include non-bias

*L*: Transformational Leader

*NL*: Non-Transformational Leader

*AIB*: Activity Inhibitor

*Bias*

*EB*: Exhibiton Bias

*AB*: Agentic Bias

*PAB*: Power Attribution

*Bias*

*PCCB*: Positive Connotation of Change

*EPRB*: Efficacy and Personal Responsibility Inclination Bias

*ICIB*: Identification with Change Initiators

## Appendix H: Demographic Information for Leaders

### BÖLÜM 1

1) Yaş : \_\_\_\_\_

2) Cinsiyet: \_\_\_\_\_

3) Eğitim:

İlkokul \_\_\_\_\_ Ortaokul \_\_\_\_\_ Lise \_\_\_\_\_ 2 yıllık Üniversite \_\_\_\_\_

Üniversite \_\_\_\_\_ Mastır/Doktora \_\_\_\_\_

4) Şu anda çalışmakta olduğunuz firmada kaç senedir yöneticilik yapmaktasınız?

\_\_\_\_\_

5) Çalıştığınız firmanın hangi departmanında yöneticilik yapmaktasınız?

\_\_\_\_\_

6) Yöneticilik yapmakta olduğunuz firmada çalışan sayısı nedir?

1-50 \_\_\_\_\_ 51-250 \_\_\_\_\_ 251-500 \_\_\_\_\_ 501 ve üzeri \_\_\_\_\_

7) Yöneticilik yapmakta olduğunuz firma hangi alanda çalışmaktadır?

\_\_\_\_\_

8) Yöneticilik yapmakta olduğunuz firmada hiyerarşik düzey olarak sizin

pozisyonunuzun altında kaç yönetici pozisyonu daha bulunmaktadır? \_\_\_\_\_

9) Yöneticilik yapmakta olduğunuz firmada hiyerarşik düzey olarak sizin

pozisyonunuzun üzerinde kaç yönetici pozisyonu daha bulunmaktadır? \_\_\_\_\_

10) Toplam kaç sene yöneticilik yaptınız? (Başka kurumlarda da yönetici olarak

çalıştıysanız bunu da göz önünde bulundurunuz) \_\_\_\_\_

11) Yöneticilik yapmakta olduğunuz firmada kaç kişinin yönetiminden

sorumlusunuz?

1-3 \_\_\_\_\_ 4-6 \_\_\_\_\_ 7-9 \_\_\_\_\_ 10 ve üzeri \_\_\_\_\_

**Appendix I: Demographic Information for Subordinates**

**BÖLÜM 1**

1) Yaş : \_\_\_\_\_

2) Cinsiyet: \_\_\_\_\_

3) Eğitim (En son mezun olduğunuz okul):

İlkokul\_\_\_\_ Ortaokul\_\_\_\_ Lise\_\_\_\_ 2 Yıllık Üniversite\_\_\_\_\_

Üniversite\_\_\_\_ Mastır/Doktora\_\_\_\_\_

4) Şu anda çalışmakta olduğunuz firmada, bulunduğunuz pozisyonda kaç yıldır görev almaktasınız? \_\_\_\_\_

5) Hangi departmanda görev almaktasınız?

\_\_\_\_\_

6) Firmanız hangi alanda çalışmaktadır?

\_\_\_\_\_

7) Değerlendirdiğiniz kişiyle ne kadar süreyle beraber çalışmaktasınız? \_\_\_\_\_

8) Değerlendirdiğiniz kişiyle gün içinde ne sıklıkla bir araya gelirsiniz?

Nadiren\_\_\_\_ Ara sıra\_\_\_\_ Sıklıkla\_\_\_\_ Her zaman\_\_\_\_\_

9) Aşağıdakilerden hangisi sizi en iyi tanımlar:

\_\_\_\_ Değerlendirdiğim insandan hiyerarşik olarak daha üstteyim.

\_\_\_\_ Değerlendirdiğim insanla aynı hiyerarşik seviyedeyim.

\_\_\_\_ Değerlendirdiğim insandan hiyerarşik olarak alttayım.

## Appendix J: Sample Questions From Generated CRT Questions

1. Ahmet Bey yönettiği projenin 30. gününde 10. günlük aşamaya geldiğini öğrenmiştir. Durumu kabullenememiş ve zaman yönetimi konusundaki başarısızlıklarını devamlı tekrarlayan ekibine ceza vermeyi uygun görerek normalde o ay içinde almaları gereken primin verilmesini engellemiştir. Paragrafa dayanarak aşağıdaki yargılardan hangisi söylenebilir?

A)	Çocuk ve genç işçi çalıştırma usul ve esaslarının tekrar gözden geçirilmesi gerekmektedir.
B)	Kadın ve erkek çalışan sayısındaki eşitsizlikler bu tarz problemlere yol açmaktadır.
C)	Çalışanlar kendilerinden beklenen işi gerçekleştirmediğinden, Ahmet Bey yöneticilik inisiyatifi kullanmıştır.
D)	Ahmet Bey zaman yönetimindeki aksaklıkların nedenlerini araştırmadan çalışanlarını cezalandırmıştır.

2. Kimisine göre, bir şairin görevi, her şeyden önce şiiri geliştirmek olmalıdır. Halbuki, geçen zaman boyunca şiir, sanatçıların aynı yolu seçmeleri sebebiyle değişmemiş ya da pek az değişmiştir. Bu parçadan çıkarılabilecek en uygun yargı hangisidir?

A)	Tanınmak isteyen şair çok ürün vermelidir.
B)	Şair, kendi yolunda yürümeli, özgün olmaya çalışmalıdır.
C)	Şair olmak o kadar da kolay bir iş değildir.
D)	Şairlerin birbirlerinin tarzlarından etkilenmeleri normaldir.

3. X firmasının terfi prosedürüne göre 5 yılı dolan çalışanlar bir üst pozisyonda açık kadro olması durumunda terfi ettirilmektedir. Ancak bu seneki atamalarda 5 yılını dolduran bazı çalışanlar açık kadrolara terfi ettirilemezken 5 yıldan daha az çalışanlar terfi ettirilmiştir. İş yerinde oluşan olumsuz atmosferin farkında olan birim yöneticisi çalışanlar ile bireysel görüşmeler yapmış, sonra da her biri için ayrı eylem planları gerçekleştirerek bu durumu kabullenmelerini ve huzurlu çalışma ortamının tekrar oluşmasını sağlamıştır.

Yukarıdaki parçada söz edilen yönetici için aşağıdakilerden hangisi söylenebilir?

A)	Çalışanlara değer verildiğini göstererek durumu kabullenmelerini sağlamıştır.
B)	İşe alım politikasında verilen kararlar bugünkü problemlere neden olmuştur.
C)	Yönetimin verdiği kararları çalışanlara kabul ettirebilmek için etkili bir çözüm arayışına geçmiştir.
D)	Ara yönetici kadrosunun az olması yönetici-çalışan bağlarını zayıflatmaktadır.

**Appendix K: Big Five Inventory (BFI) by Schmitt, Allik, McCrae, & Benet-Martinez (2007)**

**BÖLÜM 4**

Aşağıda sizi kısmen tanımlayan (ya da pek tanımlayamayan) bir takım özellikler sunulmaktadır. Örneğin, başkaları ile zaman geçirmekten hoşlanan birisi olduğunuzu düşünüyor musunuz? Lütfen aşağıda verilen özelliklerin sizi ne oranda yansıttığını ya da yansıtmadığını belirtmek için sizi en iyi tanımlayan rakamı her bir özelliğin yanına yazınız.

1 = Hiç katılmıyorum

2 = Pek katılmıyorum

3 = Ne katılıyorum ne de katılmıyorum (kararsızım)

4 = Biraz katılıyorum

5 = Tamamen katılıyorum

Kendimi ..... biri olarak görüyorum

- |  |  |
|--|--|
| <input type="checkbox"/> 1. Konuşkan                             | <input type="checkbox"/> 23. Tembel olma eğiliminde olan                     |
| <input type="checkbox"/> 2. Başkalarında hata arayan             | <input type="checkbox"/> 24. Duygusal olarak dengeli, kolayca keyfi kaçmayan |
| <input type="checkbox"/> 3. İşini tam yapan                      | <input type="checkbox"/> 25. Keşfeden, icat eden                             |
| <input type="checkbox"/> 4. Bunalımlı, melankolik                | <input type="checkbox"/> 26. Atılgan bir kişiliğe sahip                      |
| <input type="checkbox"/> 5. Orijinal, yeni görüşler ortaya koyan | <input type="checkbox"/> 27. Soğuk ve mesafeli olabilen                      |
| <input type="checkbox"/> 6. Ketum/vakur                          | <input type="checkbox"/> 28. Görevi tamamlanıncaya kadar sebat edebilen      |
| <input type="checkbox"/> 7. Yardımsever ve çıkarıcı olmayan      | <input type="checkbox"/> 29. Dakikası dakikasına uymayan                     |
| <input type="checkbox"/> 8. Biraz umursamaz                      | <input type="checkbox"/> 30. Sanata ve estetik değerlere önem veren          |
| <input type="checkbox"/> 9. Rahat, stresle kolay baş eden        | <input type="checkbox"/> 31. Bazen utangaç, çekingen olan                    |
| <input type="checkbox"/> 10. Çok değişik konuları merak eden     | <input type="checkbox"/> 32. Hemen hemen herkese karşı saygılı ve nazik olan |
| <input type="checkbox"/> 11. Enerji dolu                         | <input type="checkbox"/> 33. İşleri verimli yapan                            |
| <input type="checkbox"/> 12. Başkalarıyla sürekli didişen        | <input type="checkbox"/> 34. Gergin ortamlarda sakin kalabilen               |
| <input type="checkbox"/> 13. Güvenilir bir çalışan               | <input type="checkbox"/> 35. Rutin işleri yapmayı tercih eden                |
| <input type="checkbox"/> 14. Gergin olabilen                     | <input type="checkbox"/> 36. Sosyal, girişken                                |
| <input type="checkbox"/> 15. Maharetli, derin düşünen            | <input type="checkbox"/> 37. Bazen başkalarına kaba davranabilen             |
| <input type="checkbox"/> 16. Heyecan yaratabilen                 | <input type="checkbox"/> 38. Planlar yapan ve bunları takip eden             |
| <input type="checkbox"/> 17. Affedici bir yapıya sahip           | <input type="checkbox"/> 39. Kolayca sinirlenen                              |
| <input type="checkbox"/> 18. Dağınık olma eğiliminde             | <input type="checkbox"/> 40. Düşünmeyi seven, fikirler geliştirebilen        |
| <input type="checkbox"/> 19. Çok endişelenen                     | <input type="checkbox"/> 41. Sanata ilgisi çok az olan                       |
| <input type="checkbox"/> 20. Hayal gücü yüksek                   | <input type="checkbox"/> 42. Başkalarıyla işbirliği yapmayı seven            |
| <input type="checkbox"/> 21. Sessiz bir yapıda                   | <input type="checkbox"/> 43. Kolaylıkla dikkati dağılan                      |
| <input type="checkbox"/> 22. Genellikle başkalarına güvenen      | <input type="checkbox"/> 44. Sanat, müzik ve edebiyatta çok bilgili          |

Lütfen kontrol ediniz: Bütün ifadelerin önüne bir rakam yazdınız mı?

## Appendix L: Motivation to Lead (MTL) by Chan and Drasgow (2001)

### BÖLÜM 5

Lütfen, aşağıda verilen 27 maddeye ne derece katıldığınızı 1 ve 5 arasındaki ölçeği kullanarak belirtin.

1 = Hiç katılmıyorum

2 = Pek katılmıyorum

3 = Ne katılıyorum ne de katılmıyorum (kararsızım)

4 = Biraz katılıyorum

5 = Tamamen katılıyorum

	Hiç katılmıyorum	Pek katılmıyorum	Ne katılıyorum ne de katılmıyorum	Biraz katılıyorum	Tamamen katılıyorum
1. Eğer liderlik rolünden faydalanabileceğimi bilirsem o grubun lideri olmayı kabul ederim.	1	2	3	4	5
2. Genellikle içinde çalıştığım grupların lideri olmak isterim.	1	2	3	4	5
3. Liderlik etme teklifi almak bir onur ve ayrıcalıktır.	1	2	3	4	5
4. Bir gruba liderlik etmeyi kabul etmem durumunda bana daha fazla ayrıcalık getirmesini asla beklemem.	1	2	3	4	5
5. Grup üyeleri tarafından ne zaman liderlik etmem teklif edilirse ya da aday gösterilirse liderliği kabul ederim.	1	2	3	4	5
6. Benim doğamda liderlik kesinlikle yok.	1	2	3	4	5
7. Bir grubun lideri olmak konusunda çekinceli durduğum nadirdir.	1	2	3	4	5
8. Eğer liderlik rolünü üstlenmek bana yarar sağlamayacaksa lider olmayı asla kabul etmem.	1	2	3	4	5
9. Liderlik rolünü geri çevirmek doğru değildir.	1	2	3	4	5
10. Başkalarına liderlik etmek onurlu bir iş olmaktan ziyade aslında pis bir iştir.	1	2	3	4	5
11. Eğer bir gruba liderlik etmeyi kabul edersen, bunun bana ne yarar sağlayacağını bilmek isterim.	1	2	3	4	5
12. Bir lideri aktif olarak savunan ama lider olarak atanmak istemeyen biriyim.	1	2	3	4	5
13. Eğer yapabiliyor isem başkalarına liderlik etmeye gönüllü olmam öğretildi.	1	2	3	4	5
14. İçinde çalıştığım grup veya takımların birçoğunda sorumluluk alma eğilimim vardır.	1	2	3	4	5

	Hiç katılmıyorum	Pek katılmıyorum	Ne katılmıyorum ne de katılmıyorum (Kararsızım)	Biraz katılıyorum	Tamamen katılıyorum
15. Sırf başkaları bana oy verdi diye, asla liderlik rolüne razı olmam.	1	2	3	4	5
16. Sadece benim için bariz avantajları olduğu durumda bir gruba liderlik etmek ilgimi çeker.	1	2	3	4	5
17. Bir grubun lideri olmak yerine grubun üyesi olduğum zaman o gruba daha çok katkı sağlayacağımı düşünürüm.	1	2	3	4	5
18. Herhangi bir ödül veya fayda sağlamasa bile başkalarına liderlik etmeyi kabul ederim.	1	2	3	4	5
19. Eğer benden başkalarına liderlik etmem istenirse bunun görevim olduğunu hissederim.	1	2	3	4	5
20. İnsanlara liderlik teklif edildiğinde, doğru olan bu teklifi kabul etmeleridir.	1	2	3	4	5
21. Bir gruptaki diğer insanların problemleriyle ilgilenmeden önce endişelenmem gereken kendime ait çok daha fazla problemim	1	2	3	4	5
22. Bir grup içerisinde çalışırken çoğu zaman grubun üyesi olmak yerine lideri olmayı tercih ederim.	1	2	3	4	5
23. Bana başkalarına liderlik etmenin değerli bir şey olduğu öğretildi.	1	2	3	4	5
24. Bir gruba liderlik etmeyi kabul etmem durumunda bana daha fazla bir avantaj ya da özel bir fayda sağlamasını asla	1	2	3	4	5
25. Ben başkalarından sorumlu olmayı seven biriyim.	1	2	3	4	5
26. Ben başkalarına liderlik etmeye ilgi duymayan tipte biriyim.	1	2	3	4	5
27. İnsanların, başkaları tarafından aday gösterilmeyi ya da kendilerine sorulmasını beklemeden liderlik etmeye gönüllü olması gerekmektedir.	1	2	3	4	5



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<p><b>Multifactor Leadership Questionnaire</b> Instrument (Leader and Rater Form) and Scoring Guide (Form 5X-Short)</p>
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by Bruce Avolio and Bernard Bass

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## Appendix N. Turkish Summary

### TÜRKÇE ÖZET

#### GİRİŞ

##### 1.1 Liderlik

Günümüz rekabetçi iş dünyasında modern organizasyonların başarılı olabilmesi için yüksek düzeyde performans ve çaba göstermeleri gerekmektedir ve bunu başarmak içinde geleneksel yönetim anlayışının başarılı olamayacağı ön görülmektedir. Çünkü geleneksel iş anlayışı ile sağlanan ürün ve bu ürünün sunum hızı bekleneni karşılamamaktadır. Bu yüzden günümüzde şirketler servis ve ürün kalitelerini artırmak için organizasyon yapılarını ve çalışma kültürlerini modern çalışma koşullarına göre yenilemektedirler (Cartwright, 2003). Bu değişimi sağlamanın en başarılı yolu olarak da bu değişimleri gerçekleştirebilecek liderlerin yetiştirilmesi olarak görülmektedir (Training, 2005; Vicere, & Fulmer, 1998). Bu sebeple şirketler ayrıca seçme yerleştirme prosedürlerine etkili lider seçme araçları ekleyerek şirketlerin verimini artırmayı hedeflemektedir (Northouse, 2010).

##### 1.2 Lider Seçme Yöntemleri

Şirketlerde çalışan liderler üst yönetim tarafından atanma, rotasyon, demokratik seçimler, lidersiz grup tartışması, bilişsel yetenek testleri ve kişilik testleri, yapılandırılmış mülakatlar ve değerlendirme merkezlerinde kullanılan simülasyonlar gibi seçme yöntemleri ile tayin edilmektedir (Pandey, 1976, Howard, 1997, Hogan, Curphy, & Hogan, 1994). Şirketler genel olarak bilimsel seçme yöntemleri yerine geleneksel şirket içi atama yöntemlerini tercih etseler de, psikoloji çalışma bulgularına göre bilişsel yetenek testleri ve kişilik testleri etkili lider seçimlerinde başarılı olmaktadır. (Bartone, Snook, & Tremble, 2002, Bass, 1990; Judge, Bono, Ilies, & Gerhardt, 2002; Stogdill, 1948). Yapılan ilk çalışmalar etkili liderlik ve kişilik arasında az bir ilişki olduğunu belirtse de, güncel çalışma sonuçlarına göre kişilik özellikleri etkili liderlikte önemli bir varyansı açıklamaktadır (Bass, 1990, Stogdill, 1948, Ensari et al., 2011; Judge et al., 2002)

### **1.3 Liderliğin Kavramsallaştırılması**

Liderlik kavramı literatürde birçok farklı şekilde açıklanmıştır. Örneğin Northouse (2010) liderliği bir grup insanı belli bir hedef çerçevesinde bir araya getiren ve hedefe ulaştıran kişi olarak tanımlarken, Hogan ve arkadaşları (1994) liderliği, liderin kendi çıkarlarını bir yana koyarak bir grup insanı bir araya getiren ve belli bir amaca inandıran ve başarılı bir şekilde sonuca ulaştıran kişi olarak tanımlamaktadır.

Liderlikle ilgili çalışmalar incelendiğinde, dönüştürücü liderliğin diğer liderlik teorilerine göre daha etkili sonuçlar ortaya koymasından ötürü daha fazla ilgi çektiği görülmektedir (Bass, 1985; Barling, Slater, & Kelloway, 2000). Dönüştürücü liderlik literatürde ilk olarak Downton (1973) tarafından incelenmiş daha sonra da Burns (1978) tarafından geliştirilmiştir. Burns kitabında politik liderleri dönüştürücü ve etkileşimci olmak üzere iki farklı kategoriye ayırmıştır. Dönüştürücü liderliği takipçilerin isteklerine uymaktan daha çok onların ihtiyaçlarını, değerlerini ve inançlarını anlayarak hareket eden kişi olarak tanımlamıştır. Etkileşimci liderleri ise sadece sonucu iyi olduğu sürece takipçileri ile iletişime geçmeyi tercih eden liderlik tipi olarak açıklar. Bass (1985) Burns'ün liderlik tiplerini şirket yönetimi literatürü çerçevesinde incelemiş ve dönüştürücü liderliği ilham verici motivasyon, düşünsel uyarım, bireyselleştirici önem ve babacanlık olmak üzere dört farklı boyut çerçevesinde değerlendirmiştir.

### **1.4 Liderlik ve İlişkili Kişilik Özellikleri**

Judge ve arkadaşları (2002) yürüttükleri meta analiz çalışmasında beş büyük faktör ve liderlik arasındaki ilişkiyi incelemiştir. Liderlikle en çok ilişkili kişilik faktörünün dışa dönüklük ( $\rho = .31$ ) olduğu tespit edilmiş olup bunu sırasıyla sorumluluk, nevrotiklik, yeniliğe açıklık ve uyumluluk takip etmiştir. Nevrotiklik ( $\rho = -.24$ ) negatif yönde liderlik ile ilişkili bulunmuştur.

Literatürde kişilik farklılıkları ve dönüştürücü liderlik arasındaki ilişki sıkça araştırılmıştır. Örneğin Bono ve Judge'ın (2004) yürüttüğü meta analiz çalışmasında dışa dönüklük ( $\rho = .22$ ) ve nevrotiklik ( $\rho = -.17$ ) dönüştürücü liderlik ile ilişkili

bulunmuştur. Ayrıca uyumluluk, yeniliğe açıklıkta dönüştürücü liderlik ile ilişki bulundu ancak bu değişkenlerin güvenilirlik değerlerinin sıfır olduğu tespit edilmiştir.

### **1.5 Dönüştürücü Liderlik ve İlişkili İhtiyaç ve GÜdü Değişkenleri**

McClelland kişilik özelliklerini ve ihtiyaçlarını birlikte değerlendirerek Liderlik GÜdü Desenini açıklamış ve bu çerçevede üst düzey yönetimde yer alan etkili liderlerin davranışlarını incelemiştir. McClelland ve Burnham's (1976) yöneticilere Tematik Değerlendirme Testini uygulamış (TAT) ve sonuçlarına göre başarılı bir yöneticinin ne tür güdülere sahip olduğunu tespit etmiştir. Geliştirdikleri desene göre etkili yöneticilerin güç ihtiyacının yüksek, bağlanma ihtiyacının düşük, başarıma ihtiyacının orta derece ve etkinlik engelleme ihtiyacının yüksek olduğu tespit edilmiştir. Benzer bir şekilde House, Spangler ve Woycke (1991) 31 Amerika başkanı ile yaptığı çalışma sonucunda incelenen başkanların güç ihtiyaçlarının ve etkinliği engelleme ihtiyacının yüksek bağlanma ihtiyacının düşük olduğunu tespit etmiştir. Ayrıca başarıma ihtiyacı ile etkili liderlik arasında anlamlı bir ilişki tespit etmemişlerdir.

Sonuç olarak; dışadönüklük ve yeniliklere açıklık etkili liderlik ile ilişkili olup bu kişilik özellikleri de Murray'nin açıkladığı güç, hakimiyet, kendini gösterme, sergileme ve değişim yaratma ihtiyaçları ile ilişkili olduğu düşünülmüştür. Ayrıca bu kişilik özellikleri ve güdüler beraber incelendiğinde McClelland'ın açıkladığı desenlerin de dönüştürücü liderlik ile ilişkili olduğu değerlendirilmiştir. Mevcut çalışmada, dönüştürücü liderliğin doğrulama mekanizmaları olarak; güç güdüsü ve bu güdünün doğrulama mekanizmalarından temsil güdüsü ve güce atıfta bulunma güdüsü; etkinliği engelleme güdüsü; değişim güdüsü ve bu güdünün doğrulama mekanizmalarından fayda sağlama ve kişisel sorumluluk alma güdüsü; değişime pozitif yaklaşma güdüsü ve değişimi başlatan kişilerle bağlantı kurma güdüsü ve son olarak kendini gösterme güdüsü tespit edilmiştir.

### **1.6 Kişinin Kendi Beyanına Dayalı Ölçme Yöntemlerindeki Problemler**

Tepki yanlılığı yaklaşık 100 yıldır psikoloji literatüründe tartışılan bir konu olup kişinin kendi beyanına dayalı değerlendirmelerin de kasıtlı olarak ya da

olmayarak tepki yanlılığına açık olduğu çeşitli çalışmalarda ortaya konulmuştur. Katılımcılar özel olarak kişilik envanterlerinde genel olarak kişinin kendi beyanına dayalı ölçeklerde katılımcılar belli bir izlenim yaratmak amacıyla kasıtlı olarak sorulara yanlış cevaplar vermektedirler. Ones ve Viswesveran'ın (1998) yürüttüğü meta-analiz çalışmasında katılımcılardan kişilik envanterlerine yanlış cevap vermeleri istendiğinde genel test skorlarını .50 standart sapma oranında artırabildiklerini tespit etmiştir. Sonuç olarak kişinin kendi beyanına dayalı değerlendirme yöntemleri bazı geçerlilik ve güvenilirlik problemleri barındırmaktadır. Bu problemin üzerinden gelebilmek içinde kişisel farklılıkları ölçmek adına Tematik Değerlendirme Testi ve Koşullu Muhakeme Testi (KMT) gibi çeşitli gizil ölçüm araçları geliştirilmiştir.

### **1.7 Koşullu Muhakeme Testi**

Yeni bir gizil değerlendirme aracı olan Koşullu Muhakeme Testi, bireylerin kişiliklerinin altında yatan güdülerini inceleyerek kendilerini doğrulama mekanizmalarını (bilişsel yanlılık gibi) ölçmektedir (James, 1998). Kişiler kendi davranışlarının nedenlerini akla uygun bir şekilde açıklama güdüsü içindedirler çünkü davranışlarının onaylandığını, davranışlarının mantıksız ve akılsız nedenlere dayanmadığını, her davranışının makul ve akla uygun olduğunu bilmek isterler (James, & Mazerolle, 2002; Kunda, 1990). Bu amaçla, kişiler muhakeme yöntemlerine dayanarak kendi davranış seçimlerini doğrulama eğilimindedirler ve bu muhakeme yöntemine Doğrulama Mekanizması adı verilir. Farklı kişilik özelliklerine sahip bireylerin farklı Doğrulama Mekanizmaları vardır.

#### **1.7.1 Testin Formatı**

Testin formatı James (1998) tarafından geliştirilmiştir. Testteki genel amaç tümevarım muhakeme soruları ile ölçülmek istenen güdünün doğrulama mekanizmasını yakalamaktır. Genel olarak koşullu muhakeme test soruları muhakeme yöntemi ile cevaplandırılacak bir paragraf sorusu ve dört alternatif cevap şikkından oluşmaktadır. Cevap şıklarından bir tanesi ölçülmek istenen kuram ile ilişkili doğrulama mekanizmasını içerirken (örneğin; başarıma motivasyonu) bir diğer cevap şikkı bu doğrulama mekanizmasının bir diğer ucunu (örneğin;

başarısızlıktan korkma) ölçmektedir ya da hiçbir doğrulama mekanizmasını içermemektedir. Geriye kalan iki cevap şıkkı ise paragraf ile ilişkisi olamayacak cevaplar içermektedir. Katılımcılar doğrulama mekanizmasını içeren cevap şıkkını seçerlerse +1, doğrulama mekanizmasını içermeyen şıkkı seçerlerse -1 ve mantıksız cevap şıklarından birini seçerlerse 0 puan almaktadırlar.

KMT'nin ilk uygulandığı yapı başarıma motivasyonudur ve Amerika Üniversite Giriş Sınavları ile ilişkisi incelendiğinde bu iki testin yüksek korelasyon ( $r = .49$ ) gösterdiği tespit edilmiştir (James, 1998). Benzer bir şekilde, koşullu muhakeme testinin akademik başarıyı yordamada bilişsel yetenek testinin üzerinde bir yordama etkisine sahip olduğu bulunmuştur. Ayrıca koşullu muhakeme testinin öz-beyan karşılığı olan iş ve aile uyum sağlama testi ve test kaygısı testi ile anlamsız ilişki göstermektedir. Gizil ve öz-beyana dayalı anketlerin aynı yapının farklı kısımlarını ölçmelerinden dolayı düşük korelasyon göstermelerine ayrılma teorisi denilmektedir. (James, & Mazerolle, 2002).

Buna ek olarak; Bergman, McIntyre ve James (2004) insanların işyerinde gösterdikleri saldırgan davranışları KMT ile ölçmüştür. Bu test ilk olarak James ve McIntyre (2000) tarafından oluşturulmuştur, test 22 adet muhakeme sorusu içermekte olup bu testin NEO-PI-R testinin öfke-düşmanlık alt boyutu ile karşılaştırılmış ve anlamsız bir ilişki ( $r = .05$ ) bulunmuştur (Bing, Stewart, Davison, Green, McIntyre ve James, 2007). Ayrıca devriye memurlarında yapılan çalışmada KMT'den yüksek skor alan kişilerin performanslarının düşük olduğu ve güvenilmez oldukları saptanmıştır.

Son olarak, liderliği ölçmek adına bir koşullu muhakeme testi geliştirilmiştir. Bu test kapsamında saldırganlık ve güç güdüleri ve doğrulama mekanizmaları başarılı liderliğin yordayıcıları olarak kabul edilmiştir. Liderliği ölçen koşullu muhakeme tesit 25 adet muhakeme sorusu içermektedir. Büyük bir perakende satış şirketinde yapılan çalışmada KMT-Liderlik ölçeği aylık mağaza satış oranı ( $r = .44$ ) ve aylık mağaza karlılığı ( $r = .46$ ) arasında anlamlı bir ilişki bulunmuştur (James, & LeBreton, 2011). Fakat, Wright'ın (2011) öğrenci örnekleminde yürüttüğü çalışma benzer sonuçlar doğurmamıştır. Bu çalışmada öğrencilerden sınıf arkadaşlarından

bazılarını lider olarak atamaları istenmiş ve bu kişilerin Koşullu muhakeme liderlik testi sonuçlarına bakılmıştır. Sonuçlara göre psikoloji ve işletme öğrencilerinin liderlik örnekleme ile koşullu muhakeme liderlik testi anlamsız sonuçlar ortaya çıkmıştır.

### **1.7.2 Dönüştürücü Liderlik için Koşullu Muhakeme Testi Geliştirme**

Literatür taramaları ve metot kısmında anlatılan kritik olay sonuçlarına göre ilk olarak Mclelland ve Burnham (1976) tarafından ifade edilen güç güdüsü mevcut çalışmada da ilgili güdü olarak seçilmiştir. Ayrıca güç güdüsü ve James ve LeBreton'ın (2011) geliştirdiği koşullu muhakeme testinde de kullanılmıştır ve onlara göre, etkili liderlerin güç sergileyerek takipçilerini etki altına alma gibi güdüleridir. Bu güdünün dönüştürücü liderlik ile ilgili olduğu düşünülen doğru mekanizmaları olarak güce atıfta bulunma güdüsü ve temsil güdüsü seçilmiştir. Dönüştürücü liderlikle ilişki ikinci güdü olarak ise etkinliği engelleme güdüsü belirlenmiştir. Bu güdüye göre, lider konumunda olan kişiler kendi çıkarlarını bir kenara bırakarak grubun çıkarlarını ön plana koymaya çalışırlar. Üçüncü güdü olarak ise değişim yaratma güdüsü belirlenmiş olup bu güdü çerçevesinde dönüştürücü liderlerin mevcut sistemi olduğu gibi kabul etmek yerine grubun çıkarlarını korumak adına ve arttırmak için devamlı bir değişim ve iyileşme peşinde oldukları düşünülmüştür. Bu güdünün doğrulama mekanizmaları olarak ise fayda sağlama ve kişisel sorumluluk alma güdüsü; değişime pozitif yaklaşma güdüsü ve değişimi başlatan kişilerle bağlantı kurma güdüsü tespit edilmiştir. Son olarak kendini gösterme güdüsünün dönüştürücü liderlik ile ilişkili olduğu düşünülmüştür. Bu güdüye göre, dönüştürücü liderlerin grup tarafından fark edilip değer verilmesi ve grubu etkileyebilmesi için kendini grup içinden sıyrarak göstermesi gerekmektedir.

Sonuç olarak; mevcut çalışmanın genel amacı dönüştürücü liderlik ile ilgili yeni bir koşullu muhakeme testi geliştirip aşağıdaki sorulara cevap bulmaya çalışmaktır.

**Araştırma sorusu (1)** Geliştirilen koşullu muhakeme testi lider pozisyonunda olan ve olmayan kişileri ayırt edebiliyor mudur?

**Araştırma sorusu (2)** Geliştirilen koşullu muhakeme testi takipçilerin

liderleri hakkındaki deęerlendirmelerini yordayabiliyor mudur?

**Arařtırma sorusu (3)** Kriter baęlantılı ölçek oluřturulduktan sonra bu testler dönüřtürücü liderlięi ölçmek için kullanılan dięer ölçeklerle birlikte nasıl sonuçlar ortaya koymaktadır.

## **METOT**

### **2.1 Muhakame Test Sorularının Geliřtirilmesi**

Muhakame sorularının geliřtirilmesi için internet ve wikipeda arařtırmaları yapılarak ilgili olabileceęi düşünölen örnek olaylar tespit edilmiřtir. Ayrıca, daha önceki senelerde ÖSYM tarafından sorulan Türkçe paragraf soruları, üniversite sınavlarına hazırlık amacıyla geliřtirilen Türkçe paragraf soruları incelenmiř kullanılabilecek paragraf soruları da belirlenmiřtir.

### **2.2 Ön çalıřma (1) Örnek Olay Toplama**

Örnek olay toplama mevcut çalıřmanın ilk basamaęı olup 15 lider ile yürütölmüř olup başarılı oldukları ve olmadıkları liderlik davranıřları ile ilgili örnek olayları anlatmaları istenmiřtir. Toplanan 30 örnek olay teker teker incelenmiř ve KMT’de kullanılabilecek olay örutüleri tespit edilmiřtir. Daha sonra bu olaylardaki kiři yer ve zaman bilgileri deęiřtirilerek KMT soruları ve cevap řıkları geliřtirilmiřtir.

Sonuç olarak 27 adet soru oluřturulmuř olup bunlardan beř tanesi arařtırmacıların tecrübelerinden, 10 tanesi örnek olaylardan ve 12 tanesi ise internet sitelerinden ve Türkçe paragraf sorularından geliřtirilmiřtir.

### **2.3 Ön çalıřma (2): Kořullu Muhakame Testinin Yapı Geçerlilięi**

Soru setleri oluřturulduktan sonra, ikinci ařama olarak oluřturulan soruların geçerlilięi biliřsel laboratuvar çalıřmasıyla inceleniřtir. Biliřsel laboratuvar çalıřması bir çeřit sözel analiz yöntemi olup oluřturulan soruların gerçekte ölçölmek istenen řeyi ölçüp ölçmedięi ile ilgili katılımcıların fikirlerini beyan ettięi bir çalıřmadır. Bu çalıřmada farklı sosyal çevrelerde yetiřmiř kiřiler bir araya gelir ve ölçeęin her maddesi için fikirlerini teker teker beyan ederler. Çalıřmayı yürüten kiřilerde bu beyanları not alarak ölçekte çeřitli düzenlemeler yaparlar. Dört farklı biliřsel laboratuvar toplantısı yapılmıř olup, ilk çalıřama beř liderin ve üç çalıřanın, ikinci



laboratuvar çalışması ise altı yüksek lisans öğrencisi ve beş araştırma görevlisinin katılımlarıyla gerçekleştirilmiştir. Yirmi yedi adet soru iki parçaya bölünmüş ve her çalışma için iki farklı oturum gerçekleştirilmiş olup ikiye bölünen testler ayrı ayrı incelenmiştir. Her bilişsel laboratuvar çalışması ortalama olarak iki saat sürmüş olup araştırmacılar katılımcıların bütün yorumlarını not almıştır. Alınan bu notlar sonrasında ise araştırmacılar bir araya gelmiş ve sorularda gerekli düzeltmeleri yapmışlar ve bir soruyu çıkarmışlardır. Son olarak, düzenlenen 26 adet koşullu muhakeme test soruları bir kez de Endüstri Ve Örgüt Psikolojisi alanında akademik çalışmalar yürüten 3 psikolog tarafından incelenmiştir. Sorulara ilişkin son düzenlemeler bu üç psikoloğun geri bildirimleri doğrultusunda yapılmıştır.

## **2.4 Ana Çalışma**

Anketler Ankara ve İstanbul'da özel firmalarda çalışan 81 yönetici ve 153 çalışana dağıtılmıştır. Katılımcıların kimlik bilgilerini saklamak için bütün anketler kapalı zarflarda dağıtılmıştır. Lider çalışan eşleşmesi ise zarfların üzerinde yazan kodlar aracılığıyla yapılmıştır. Örneğin lidere verilen zarfın üzerine L1 kodu yazarken bu lidere bağlı çalışan kişilere L1-1, L1-1 ve L1-3 yazan zarflar dağıtılmıştır.

### **2.4.1 Ölçekler**

#### **2.4.1.1 Koşullu Muhakeme Testi**

Geliştirilen KMT dönüştürücü liderliği ölçmek için kullanılmıştır. Test 26 sorudan oluşmaktadır. Altı soru temsil güdüsünü, beş soru güce atıfta bulunma güdüsünü, üç soru etkinliği engelleme güdüsünü, iki soru değişimden fayda sağlama ve kişisel sorumluluk alma güdüsünü, iki soru değişime pozitif yaklaşma güdüsünü, iki soru değişimi başlatan kişilerle bağlantı kurma güdüsünü ve son olarak altı soru kendini gösterme güdüsünü ölçmektedir. Ölçülmek istenen güdüyü seçenler +1, ölçülmek istenen güdüyü içermeyen şıkkı seçenler -1, alakasız cevap şıkkını seçenler 0 puan almaktadır.

#### **2.4.1.2 Çok Faktörlü Liderlik Ölçeği (Avolio, & Bass, 1995)**

Çok faktörlü liderlik ölçeği dönüştürücü liderliği ölçen kişinin kendi beyanına dayalı bir testtir. Testin telif haklarını elinde tutan Mindgarden'dan testin Türkçe

versiyonu kullanılmak için satın alınmıştır. Testin psikometri özellikleri pozitif sonuçlar doğurmaktadır, örneğin Avolio, Bass ve Jung (1995) testin bütün alt boyutlarının iç tutarlılığını .70 ve üzerinde sonuçlar ortaya koyduğunu bulmuştur. Aynı zamanda testin Cronbach alfa değeri .86 olarak rapor edilmiştir (Muenjohn, & Armstrong, 2008).

#### **2.4.1.3 Yönetme Motivasyonu Ölçeği (Chan, & Drasgow, 2001).**

Liderlik davranışları ve kişi farklılıklarını anlamak için kişinin kendi beyanına dayalı Yönetme Motivasyonu testi kullanılmıştır. Test 27 soru içermekte olup literatürde içtutarlık değeri .65 ve .91 aralığında rapor edilmiştir (Chan, & Drasgow, 2001).

#### **2.4.1.4 Beşli Kişilik Envanteri (Benet-Martinez, & John, 1998)**

Beşli kişilik envanteri yeniliğe açıklık, sorumluluk, dışadönüklük, uyumluluk ve nevrotilik boyutları çerçevesinde kişiliği ölçmektedir. Kültürler arası iç tutarlılık değeri .70 ve .79 aralığında sonuçlar vermektedir. Mevcut çalışmada, Sümer ve Sümer (2002) tarafından yapılan Türkçe çevirisi kullanılmıştır.

### **SONUÇLAR**

Analize başlamadan önce veri seti doğru data girişleri, eksik data ve tek değişkenli ve çok değişkenlik aykırı değerler incelenmiştir. Eksik datalar ortalama hesaplama ve yerleştirme yöntemi aracılığıyla doldurulmuştur. Koşullu Muhakeme test sorularına eksik veri yerleştirme tekniği uygulanmamış bunu yerine bu sorulara 0 değeri verilmiştir. Bir adet çok değişkenli aykırı değerli katılımcı ve 4 adet tek değişkenli aykırı değerli katılımcı tespit edilmiş ve bu kişiler silinmiştir.

#### **3.1 Ölçeklerin Faktör Analizi, Tanımlayıcı İstatistik Değerleri ve Korelasyonlar**

Bütün ölçekler literatürde belirtilen faktör sayılarına göre faktör analizine tabi tutulmuştur. Beşli kişilik envanterinden altı sorunun ve yönetme motivasyonu ölçeğinden üç sorunun farklı dağılım desenleri göstermesinden ve ayrıca iç tutarlılık değerlerini düşürmesinden dolayı silinmiştir. KMT soruları faktör analizine tabi tutulmamıştır.

Bütün KMT soruları lider pozisyonunda bulunan ve bulunmayan kişilerle korelasyon analizine tabi tutulmuş ve .07 ve üzeri korelasyon gösteren 17 soru KMT-

Yönetme (KMT-Y) testini oluşturması için seçilmiştir. Ayrıca bütün sorular çalışanların liderlerini değerlendirdikleri test soruları ile korelasyon analizine sokulmuş ve .09 üzerinde korelasyon gösteren 11 soru KMT-Dönüştürücü Liderlik ölçeğini (KMT-DL) oluşturmak için seçilmiştir.

Liderlerin doldurdukları ölçekler incelendiğinde, KMT ölçeklerinden hiçbirinin liderlerin demografik bilgileri ile anlamlı korelasyonlar göstermediğine rastlanmaktadır. Ayrıca çalışanların liderlerinin dönüştürücü liderlik davranışlarını değerlendirmek için doldurdukları ölçeğin, yönetme motivasyonu ölçeğinin alt boyutu olan sosyal-kuralcı faktörü ile ve KMT-Y ve KMT-DL ile .24 ve .26 korelasyon aralığında anlamlı ilişki göstermektedir. Ancak çalışanların lider değerlendirmeleri ile 26 KMT sorusu arasında anlamlı ilişki bulunmamıştır.

### **3.2 Ölçüt Bağlantılı olarak KMT'nin geçerliliği**

17 soru içeren KMT-L testinin katılımcıların doğru bir şekilde liderlik pozisyonunu atayıp atayamadığını analiz etmek için ikili lojistik regresyon analizi yürütülmüştür. Sonuçlara göre ilk -2 olabilirlik oranı 301.88'den 264.71'e düşmüştür. KMT-Y'nin modele eklenmesinden sonra modelin insanları lider pozisyonu ve çalışan pozisyonuna anlamlı bir şekilde atadığı bulunmuştur ( $\chi^2 (1, 234) = 37.16, p < .001$ ). Hosmer-Lemeshow testi anlamsız çıkararak verinin modele uyduğunu göstermiştir. ( $\chi^2 (8, 234) = 13.12, ad$ ). Lider pozisyonuna ve çalışan pozisyonuna yapılan atamanın %20'sinin KMT-L testi tarafından açıklandığı bulunmuştur. Model %74.8 oranında doğru bir sınıflandırma yapmıştır ki bu oran şansla açıklanabilecek oran olan % 68.5'ten daha yüksektir. Ayrıca KMT-Y için Wald değeri anlamlı çıkmıştır (Wald = 29,81, (Exp)B = 1.24,  $p < .001$ ). KMT-Y testindeki her birim artış, lider pozisyonunda olma ihtimalini .24 arttırmaktadır.

Ayrıca, KMT-Y testinin, kişinin kendi beyanına dayalı testlere (yönetme motivasyonu ölçeğinden duygusal kimlik faktörü ve beşli kişilik envanterinden dışadönüklük, sorumluluk, yeniliğe açıklık ve nevroitiklik faktörleri) oranla liderlik pozisyonuna ilişkin nasıl bir sınıflandırma yapabildiği hiyerarşik ikili lojistik analizi ile incelenmiştir. Sonuçlara KMT-Y'nin modele eklenmesi ile ilk -2 olabilirlik oranı 263.61'den 234.77'ye düşmüştür. Duygusal kimlik, dışadönüklük, sorumluluk,

yeniliğe açıklık ve nevroitiklik içeren model anlamlı sonuç ortaya çıkarmıştır ( $\chi^2 (5, 213) = 16.23, p = .006$ ). Hosmer-Lemeshow testi anlamsız çıkarak verinin modele uyduğunu göstermiştir ( $\chi^2 (8, 213) = 9.06, ad$ ). Lider pozisyonuna ve çalışan pozisyonuna yapılan atamanın %10'nun duygusal kimlik, dışadönüklük, sorumluluk, yeniliğe açıklık ve nevroitiklik testi tarafından açıklandığı bulunmuştur. Model % 65.3 oranında doğru bir sınıflandırma yapmıştır ki bu oran şansla açıklanabilecek oran olan % 66.9'dan daha düşüktür. Bütün değişkenler için Wald değeri anlamlı çıkmamıştır.

KMT-Y'nin modele eklenmesinden sonra modelin insanları lider pozisyonu ve çalışan pozisyonuna anlamlı bir şekilde atadığı bulunmuştur ( $\chi^2 (1, 213) = 28.85, p < .001$ ). Hosmer-Lemeshow testi anlamsız çıkarak verinin modele uyduğunu göstermiştir ( $\chi^2 (8, 213) = 8.62, ad$ ). Blok 1 ve Blok 2'nin ki kare farkları anlamlı bulunmuştur ( $\chi^2 (1, 213) = 28,85, p < .001$ ). Lider pozisyonuna ve çalışan pozisyonuna yapılan atamanın %16'sının KMT-L testi tarafından açıklandığı bulunmuştur. Model %73.7.8 oranında doğru bir sınıflandırma yapmıştır ki bu oran şansla açıklanabilecek oran olan % 66.9'dan daha yüksektir. Ayrıca KMT-Y için Wald değeri anlamlı çıkmıştır (Wald = 23.63, (Exp)B = 1.23,  $p < .001$ ). KMT-Y testindeki her birim artış, lider pozisyonunda olma ihtimalini. 23 arttırmaktadır.

### **3.3 KMT-DL'nin yapı Geçerliliği**

Connelly ve Ones'e (2010) göre başka kişilerin değerlendirmesi akademik ve iş performansı yordamada kişinin kendini değerlendirdiği testlerden daha başarılı olmaktadır. Bu sebeple, KMT-DL'nin yapı geçerliliği çalışanların liderleri hakkında yaptıkları değerlendirmelere dayanarak yapılmıştır. Çalışanların değerlendirmelerinde kendi içinde tutarlı olup olmadığını incelemek için sınıf içi korelasyon değeri hesaplanmış ve. 29 bulunmuştur. Genel kurala göre bir veri setinin başarılı bir şekilde kümeleştiğini söyleyebilmek için sınıf içi korelasyon değerinin. 12'den büyük olması gerekmektedir. Mevcut çalışma da bu kriteri sağlamaktadır.

KMT-DL'nin yapı geçerliliği incelemesinde, KMT-DL'nin kişinin kendi beyanına dayalı testlere (yönetme motivasyonu ölçeğinden duygusal kimlik faktörü ve beşli kişilik envanterinden dışadönüklük ve nevroitiklik faktörleri ve liderlerin

doldurduğu çok yönlü liderlik ölçeği) oranla çalışanların liderleri hakkındaki algısını nasıl yordadığı incelenmiştir. Analizlerde 61 lider incelendiği için istatistiksel güç hesaba katıldığında iki farklı analiz yürütülmesi uygun görülmüştür. İlk analizde KMT-DL, yönetme motivasyonu, dışadönüklük ve nevroitiklik çalışan algısını yordayıp yordamadığına; ikinci analizde ise KMT-DL ve liderlerin doldurduğu çok yönlü liderlik ölçeği çalışan algısını yordayıp yordamadığına bakılmıştır. İlk çalışmada ilk model anlamlı çıkmamıştır yani yönetme motivasyonu, dışadönüklük ve nevroitiklik çalışan algısını anlamlı bir şekilde yordamamıştır. KMT-DL'nin modele eklenmesi ile birlikte model anlamlı olmuştur ( $F_{\text{Fark}}(1,56) = 8.78, p = .04; \beta = .37, t(56) = 2.96, p = .04$ ). Çalışan algısını yordamada KMT-DL yönetme motivasyonu, dışadönüklük ve nevroitiklik üzerine %13 lük bir varyans açıklamıştır. İkinci analizde ilk model anlamlı çıkmamıştır yani liderlerin doldurduğu çok yönlü liderlik ölçeği çalışan algısını anlamlı bir şekilde yordamamıştır. KMT-DL'nin modele eklenmesi ile birlikte model anlamlı olmuştur ( $F_{\text{Fark}}(1,58) = 8.9, p = .04; \beta = .39, t(58) = 2.98, p = .04$ ). Çalışan algısını yordamada KMT-DL liderlerin doldurduğu çok yönlü liderlik ölçeğinin üzerine %13 lük bir varyans açıklamıştır.

#### **3.4 Önemli Korelasyon Bulguları**

KMT-L ve KMT-DL liderlerin doldurduğu çok faktörlü liderlik ölçeği ile orta derece anlamlı korelasyon gösterirken yönetme motivasyonu ve kişilik envanteri ile anlamlı sonuçlar ortaya çıkarmamıştır. Bu durum farklılık hipotezini desteklemektedir. Ayrıca, liderlerin doldurduğu çok faktörlü liderlik ölçeği ile çalışanların doldurduğu çok faktörlü liderlik ölçeği birbirleri ile anlamlı ilişki göstermezken liderlerin doldurduğu KMT ile orta derecede korelasyon içerdiği bulunmuştur. Son olarak, çalışanların ve liderlerin doldurdukları KMT soruları birlikte incelendiğinde iki güce atıfta bulunma sorusunda farklı uçlarda sonuçlar ortaya çıkmıştır. Diğer bir deyişle, lider pozisyonunda olan kişiler güç göstermenin onları başarılı bir lider yapacağına inanırken çalışan pozisyonunda olan kişiler tam tersi şekilde algılamaktadır.

## TARTIŞMA

### 4.1 Çalışmanın Genel Bulgularının Tartışması

KMT soruların oluşturulması için çok uzun zaman ve emek harcanmıştır. Literatür taranmış dönüştürücü liderlikle ilgili güdüler ve bunların doğrulama mekanizmaları tespit edilmiştir. Kritik olayalar ve internet aracılığıyla sorular oluşturulmuş ve bilişsel laboratuvar çalışmalarında geçerliliği incelenmiştir.

Liderliğin KMT ile ölçümü ile ilgili literatür çalışmalarına bakıldığında ilk olarak James ve LeBreton (2011) çalışmasına rastlanmaktadır. Bu çalışmada KMT'nin geçerliliği gerçek iş hayatı çıktıları ile ilişkilendirilirken, mevcut çalışmada liderliği yordamada çalışan algısı kullanılmıştır. Ayrıca oluşturulan KMT-DL testinin literatürde dönüştürücü liderliği yordamada kullanılan testlerden daha iyi tahmin ettiği bulgusuna ulaşılmıştır.

Ayrıca, Wright (2011) liderliği öğrenci örnekleminde KMT ile incelemiş ve başarısız sonuçlar elde etmiştir, fakat mevcut çalışmada KMT soruları gerçek lider ve çalışan insanlarla test edilmiş olup bu durum çalışmanın bulgularını güçlendirmiştir.

Literatürde, gizil ve öz-beyana dayalı ölçeklerin aynı yapı ölçerken, ilgili yapının farklı boyutlarını ölçtüklerini bu yüzden bu iki testin birbiri ile ilişkisiz olması gerektiğini söylemektedir (McClelland ve ark., 1989). Literatür incelendiğinde gizil ve kişinin kendi beyanına dayalı ölçeklerin birbirleri ile düşük veya ilişkisiz sonuçlar ortaya koyduğu birçok çalışmaya rastlanmaktadır (Bornstein, 2002; James, 1998; Winter, John, Stewart, Klohnen ve Duncan,199; Bing, LeBreton, Davison, Migetz ve James, 2007). Mevcut çalışmada da gizil ve kişinin kendi beyanına dayalı ölçekler düşük korelasyon ilişkisi göstermiştir.

Gizil ölçüm literatürü incelendiğinde; gizil ölçümlerin başarısı hakkında değerlendirme yapılırken genelde başka insanların değerlendirmeleri ile kıyaslama yapıldığına rastlanmaktadır. Örneğin Lindzey ve Tejessy (1956) iddiasına göre insanların sergiledikleri davranışlar daha çok başkaları tarafından iyi bir şekilde değerlendirilebilir, bu sebeple insanların dışarıya karşı göstermiş olduğu davranışlar başkalarının değerlendirmeleriyle ölçülmelidir. Benzer bir şekilde Davids'te (1973)

erkek çocukların saldırganlık davranışlarını TAT ile incelemiş ve psikolog ölçümleri ile kıyaslamıştır. Mevcut çalışmada da liderlerin doldurduğu gizil liderlik ölçeği KMT, çalışanların liderleri hakkındaki değerlendirmeleri ile ilişkilendirilmiştir.

Ayrıca, insanların gerçek davranışlarının gizil ölçüm araçları tarafından daha doğru bir şekilde ölçüldüğü çünkü kişinin öz-beyanına dayalı testlerin insanların olmak istedikleri kişiyi yansıttıkları McClelland ve arkadaşları (1989) tarafından söylenmiştir. Mevcut çalışmadaki amaç, kişiyi gerçek davranışlara otomatik olarak yönlendirecek olan bilişsel mekanizmaları gizil ölçüm aracı olan KMT ile ölçmektir.

Ayrıca, liderliği çalışan değerlendirmeleri aracılığıyla ölçmek literatüre önemli bir katkı sağlamıştır. Dönüştürücü liderliğin tanımından anlaşılacağı gibi bu liderlik tipi daha çok çalışan algısı ile şekillenmektedir (Bass, 1985). Ayrıca literatürde başarılı dönüştürücü liderlerin çalışanlarının daha çok iş doyumuna sahip olduğuna ilişkin bir çok çalışma vardır (Bono, & Judge, 2003, Dwyer, Bono, Snyder, Nov, & Berson, 2013, Judge, & Bono 2000). Mevcut çalışmada etkili dönüştürücü liderliği çalışan algısı aracılığıyla ölçmüştür.

Sonuç olarak, liderliği ölçmek için geliştirilen KM testi hem istatistiksel hem de pratik sonuçlar ortaya çıkarmıştır. KMT-Y liderliği yordamada, KMT-DL çalışanların liderlik algısını yordama başarılı olmuştur.

#### **4.2 Çalışmanın Güçlü Yönleri**

Mevcut çalışma liderliği ölçmek için geliştirilen KMT-L testini geliştirerek KMT-Y ve KMT-DL testlerini geliştirmiştir. Test sorularını oluşturmak için çok zaman ve çaba harcanmış olup bu durum test sorularının geçerliliğini arttırmıştır. KM testi, çok faktörlü liderlik ölçeğinden ve yönetme motivasyonu ölçeğinden daha iyi sonuçlar ortaya çıkarmıştır. KMT testi insanların farkına varamayacağı bir biçimde onların kişiliğini ölçmektedir. Bu nedenle kişiler soruları cevaplarken sosyal olarak kabul görebilecekleri şekilde soruları cevaplayamamaktadırlar.

Veriler Ankara ve İstanbul'da ki farklı ölçekteki ve alanlardaki firmalardan toplanmıştır. Bu durum veri çeşitliliğinin artmasını sağlayarak çalışmanın genellenebilirliğini sağlamıştır. Son olarak, katılımcılardan hiçbir kimlik ve kurum bilgisi istenmemiş olup bu durum katılımcı sayısını arttırmıştır.

### 4.3 Çalışmanın Sınırlılıkları ve Gelecek Araştırma Önerileri

Bu çalışmada çeşitli sınırlılıklar vardır ve sonuçların yorumlamasında bunlara dikkat edilmelidir. Mevcut çalışmada ampirik skorlama yöntemi kullanılmıştır. Ampirik skorlama yöntemi dış bağlantılı kriterle ölçek arasındaki ilişkiyi inceleyerek ölçek oluşturmada kullanılır. Ölçekle kriter arasındaki ilişkiyi maksimize ederken, iç tutarlılığı düşürmesinden dolayı eleştirilir (Guion, 1965; Jones, 1977). Yalnız oluşturulan ankette içtutarlılık yüksektir çünkü test soruları birçok yapıyı ölçen soruların bulunduğu soru havuzdan seçilmek yerine çok dikkatli bir şekilde teorik ve mantık ilkeleri çerçevesinde oluşturulmuştur. Bu sebeple, ampirik skorlama yöntemi ölçeklerin yordayıcı gücünü yükseltmiş olabilir. Jones'un (1977) çalışmasında da ampirik yöntem ve rasyonel yöntemle oluşturulan ölçekler arasında geçerlilikleri arasında anlamlı bir fark ortaya çıkmamıştır. Bu sebeple ampirik skorlama yöntemi bu çalışma içinde problem oluşturmayabilir. Yalnız, soruların sirkülatör bir yapıya dayandırılması ve aynı kriteri ölçerek geçerliliğinin sağlanması sebebiyle, başka çalışmalar tarafından yeni örneklerde çalışılması gerekmektedir.

Sadece 153 çalışan lideri değerlendirmiştir ve bazı liderler sadece iki çalışan tarafından değerlendirilmiştir. Gelecek çalışmalar daha büyük örneklemelere ulaşabilir. Kültür spesifiklik bir diğer sınırlılık olabilir. KMT sorularının geliştirilmesi ve değerlendirilmesi Türkiye'de yapılmıştır. Gelecek çalışmalarda sorular başka kültürlerde test edilebilir. Ayrıca KMT-Y ve KMT-DL'nin istatistiksel ve nesnel sonuçları başka çalışmalar tarafından farklı çalışma alanlarında incelenebilir.



## Appendix O. Tez Fotokopisi İzin Formu

### ENSTİTÜ

Fen Bilimleri Enstitüsü

Sosyal Bilimler Enstitüsü

Uygulamalı Matematik Enstitüsü

Enformatik Enstitüsü

Deniz Bilimleri Enstitüsü

### YAZARIN

Soyadı : Demiran

Adı : Ayça

Bölümü : Psikoloji

TEZİN ADI (İngilizce) : Measurement Of Transformational Leadership Through A Conditional Reasoning Test

TEZİN TÜRÜ : Yüksek Lisans  Doktora

1. Tezimin tamamından kaynak gösterilmek şartıyla fotokopi alınabilir.
2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir.
3. Tezimden bir bir (1) yıl süreyle fotokopi alınamaz.

TEZİN KÜTÜPHANEYE TESLİM TARİHİ: