A TERROR MANAGEMENT PERSPECTIVE TO SYSTEM JUSTIFICATION IN DISASTER CONTEXT: THE CASE OF EARTHQUAKES IN TURKEY

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ABSTRACT

A TERROR MANAGEMENT PERSPECTIVE TO SYSTEM JUSTIFICATION IN DISASTER CONTEXT: THE CASE OF EARTHQUAKES IN TURKEY

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There is a growing body of research that attests to study system justification theory from an applied perspective to understand how system justification processes operate in various social issues including disasters. This thesis aims to contribute to this line of research by addressing system justification in disaster context from a terror management perspective in the case of earthquakes in Turkey. The aim was to explore the social cognitive processes underlying perceptions of and reactions to earthquakes with focus on fatalism and system justification as indirect and direct forms of bolstering the perceived legitimacy of the system, respectively, and also earthquake preparedness. To this end, an experimental study was conducted to investigate, after controlling for earthquake exposure (EQEXPO), how mortality salience (MS) and system threat (ST) influence fatalism, system justification, and earthquake preparedness, and whether and how this influence differs with respect to general and specific (i.e., disaster-related) levels of MS and ST. In an online study, 308 participants were randomly assigned to one of 9 conditions of a 3 (MS: *death* vs. *earthquake* vs. *control*) X 3 (ST: *general* vs. *disaster-related* vs. *control*) between-subjects design with EQEXPO as the covariate. The results revealed a main effect of MS only for earthquake fatalism. The main effect of ST and the MS X ST interaction effect were not observed in any of the dependent variables. The findings were discussed along with its contributions, implications, limitations, and directions for future research.

Keywords: Earthquakes, System Justification, Terror Managment, Fatalism, Preparedness

ÖZ

DEHŞET YÖNETİMİ BAKIŞ AÇISIYLA
AFET BAĞLAMINDA SİSTEMİ MEŞRULAŞTIRMA:
TÜRKİYE'DE DEPREMLER ÖRNEĞİ

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Sistemi meşrulaştırma kuramı, afetlerin de dahil olduğu çeşitli sosyal konu ve sorunlarda sistemi meşrulaştırma süreçlerinin rolüne dair uygulamalı bir bakış açısıyla gitgide artan bir ilgiyle çalışılmaktadır. Bu tezin amacı, sistemi meşrulaştırma süreçlerini Türkiye'de depremler özelinde ve dehşet yönetimi çerçevesinde ele alarak ilgili yazına katkıda bulunmaktır. Tezde, depremlere dair algı ve tepkilerin altında yatan sosyal bilişsel süreçleri anlamak amacıyla sistemin algılanan haklılığını güçlendirmenin dolaylı ve dolaylı olmayan yolları olarak kadercilik ve sistemi meşrulaştırma ve de depremlere hazırlık üzerine odaklanılmıştır. Bu amaçla, ölümlülük uyarımının (ÖU) ve sistem tehdidinin (ST) deprem maruziyeti kontrol edildikten sonra kadercilik, sistemi meşrulaştırma ve deprem hazırlığını nasıl etkilediği ve de bu etkinin genel ve spesifik (afetle ilgili) seviyelerde nasıl farklılaştığı deneysel bir çalışmayla araştırılmıştır. Online olarak yürütülen çalışmada, 308 katılımcı 3 (ÖU: *ölüm* veya *deprem* veya *kontrol*) X 3 (ST: *genel* veya *afetle ilgili* veya *kontrol*) denekler arası desenin 9 deneysel koşulundan birine seçkisiz olarak atanmıştır. Bulgulara göre, ÖU'nun ana etkisi sadece deprem kaderciliği için gözlemlenirken, ST ana etkisi ile ÖU ve ST etkileşimi bağımlı değişkenlerin hiçbirinde gözlemlenmemiştir. Çalışma bulguları, ilgili mevcut yazın ışığında sağladığı pratik çıkarımlar, sınırlılıkları ve gelecek çalışmalara dair önerileriyle beraber tartışılmıştır.

Anahtar Kelimeler: Depremler, Sistemi Meşrulaştırma, Dehşet Yönetimi, Kadercilik, Hazırlıklı Olma

To all lives touched by earthquakes

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ANOVA	Univariate Analysis of Variance
ANCOVA	Univariate Analysis of Covariance
CRED	Centre for Research on the Epidemiology of Disasters
DFAT	Disaster-related Fatalism
DRM	Disaster Risk Management
DSJ	Disaster-related System Justification
DTA	Death-thought Accessibility
EDU	Education
ERO	Extrinsic Religious Orientation
EQEXPE	Earthquake Experience
EQEXPO	Earthquake Exposure
FRO	Fundamentalist Religious Orientation
GBJW	General Belief in a Just World
GEN	Gender
GFAT	General Fatalism
GSJ	General System Justification
IRM	Intrinsic Religious Motivation
IRO	Intrinsic Religious Orientation
LOC	Locus of Control
MROS	Muslim Religious Orientation Scale
MS	Mortality Salience
MANCOVA	Multivariate Analysis of Covariance
POL	Political Orientation
PSES	Perceived Socio-economic Status
QRO	Quest Religious Orientation
REL	Religiousness

SES	Socio-economic Status
SJT	System Justification Theory
ST	System Threat
TMT	Terror Management Theory
UN	United Nations
UNISDR	United Nations International Strategy for Disaster Risk Reduction

CHAPTER 1

INTRODUCTION

The last decade has witnessed an increasing interest in research addressing system justification from an applied perspective. Several theoretical and empirical attempts have been made to understand the social psychological mechanisms pertaining to the role that the system justification motive plays in various societal issues and social problems including disasters. The present research aims to contribute to this line of research by addressing system justification processes in disaster context from a terror management perspective in the case of earthquakes in Turkey. Based upon this theoretical perspective, this research can be considered as an attempt to explore the social cognitive processes underlying perceptions of and reactions to earthquakes with focus on fatalism and system justification as indirect and direct forms of bolstering the perceived legitimacy of the system, respectively, and also earthquake preparedness.

To this end, an experimental study was conducted to investigate, after controlling for earthquake exposure (EQEXPO), (*i*) how mortality salience (MS) and system threat (ST) influence fatalism, system justification, and earthquake preparedness and (*ii*) whether and how this influence differs with respect to general and specific (i.e., disaster-related) levels of MS and ST. Furthermore, within the scope of this thesis, a qualitative (the first study) and a quantitative study (the second study) were conducted preceding the experimental study, which are presented in Chapters 2 and 3, respectively. The first study qualitatively explored general perceptions of fatalism and aimed to lay out the qualitative foundation for the second study, which involved the development of a new scale to be used in the experimental study (i.e., the third study; Chapter 4) for assessing individual differences in dispositional fatalistic beliefs. The first study also aimed to understand public perceptions of *the system* within the context of disaster risk management (DRM) in Turkey, which would be used in the experimental study for informing content of system justification measures (for both manipulation and dependent variable).

In this first chapter, an introduction to the theoretical background of the study is provided. For this purpose, initially, an overview of disasters is given with focus on terminology used, prevalence and impact of disasters, and policies within the international community. It is followed by a review of the social psychological literature on disasters. As the main theoretical focus of the study, the introduction proceeds with an overview of system justification theory (SJT; Jost & Banaji, 1994; Jost & van der Toorn, 2012) and terror management theory (TMT; Greenberg, Pyszczynski, & Solomon, 1986; for a review, see Burke, Martens, & Faucher, 2010). Then, system justification in disaster context is elaborated with respect to current literature, theoretical rationale, and fatalism, which is followed by the case for preparedness. In the next section, information about earthquakes in Turkey is given in order to better convey the disaster context in which the study was conducted. Finally, the rationale for the study is explained with an overview of aims and hypotheses.

1.1 Disasters: Terminology, Impact, and Policies

A widely recognized agenda of the world today is disasters, which is defined as the "serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources" (The United Nations International Strategy for Disaster Reduction [UNISDR], 2009, p. 9). The distinction between the terms *disaster* and *hazard* is noteworthy as they are both commonly used in the literature, but refer to different phenomena (Alexander, 1993). The term *hazard* is defined as "a dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage" (UNISDR, 2009, p. 17). On the other hand, disasters are typically characterized by hazard exposure, conditions of existing vulnerability, and insufficient capacity (or measures) for reducing or coping with potential adverse consequences of the hazard (UNISDR, 2009). Another related term used in the literature is *natural hazard*. As a subset of all hazards, it refers to a natural process or phenomenon that may cause the negative consequences of hazards (UNISDR, 2009).

The Centre for Research on the Epidemiology of Disasters (CRED; 2016a) distinguishes two generic categories for disasters, natural and technological, with natural disasters consisting of five subgroups, namely, geophysical (e.g., earthquake, tsunami, etc.), meteorological (e.g., hurricane, tornado, etc.), hydrological (e.g., flood, landslide, etc.), climatological (e.g., heatwave, drought, etc.), and biological (e.g., epidemic, insect infestation, etc.) disasters. Among the technological disasters are industrial accidents (e.g., chemical spill, radiation, etc.), miscellaneous accidents (e.g., collapse, explosion, etc.), and transport accidents (e.g., road, air, etc.).

Throughout the history, many disasters have occurred and societies have become more vulnerable to the effects of disasters as the world's population continues to grow. According to the Emergency Events Database (EM-DAT; the International Disaster Database) of CRED (2015), 6,873 natural disasters were recorded worldwide between the years 1994 and 2013, which claimed 1.35 million lives in total, corresponding to an average of 68,000 lives per year. In 2013, 330 natural disasters were reported worldwide, affecting 96.5 million people, causing the death of more than 21,610 people, and costing 118.6 billion US dollars (CRED, 2014). During the 20-year period between 1994 and 2013, earthquakes ranked third in the share of occurrence of natural disasters with 8% after floods (43%) and storms (28%). Although earthquakes (including tsunamis) occurred less frequently than floods and storms, they caused more casualties than other types of disaster put together, accounting for 55% of disaster deaths in 1994-2013 and claiming nearly 750,000 lives (CRED, 2015).

Given the increasing frequency of disasters coupled with increasing severity of impact, disasters pose important challenges to societies at both macro and micro levels. These challenges have led to the tackling of disasters with policies to be implemented at local, national, regional, and global levels involving state, civil society, and community-based actors. Acknowledging that the adverse consequences of disasters can be reduced with effective disaster preparedness, the need for greater emphasis on preparedness to reduce loss of lives along with social, economic, and environmental impacts has been highlighted in these policy platforms. In this respect, an international milestone policy agreement was the ten-year Hyogo Framework for Action (HFA) which was developed by UNISDR and adopted by 168 states at the United Nations (UN) World Conference on Disaster Reduction held in Kobe, Hyogo, Japan in 2005. HFA outlines five priorities for action to substantially reduce disaster losses by building the resilience of nations and communities to disasters (UNISDR, 2007). One priority action identified in this framework concerns preparedness, namely, *strengthening disaster preparedness for effective response at all levels*. HFA acknowledges that “at times of disasters, impacts and losses can be substantially reduced if authorities, individuals and communities in hazard-prone areas are well prepared and ready to act and are equipped with the knowledge and capacities for effective disaster management” (UNISDR, 2007, p. 12). Recently, as a successor to HFA along with a shift of focus from disaster management to DRM for both natural and man-made hazards, the Sendai Framework (UNISDR, 2015) has also acknowledged disaster preparedness as a priority action. This global policy agreement was adopted by the UN member states at the Third World Conference on Disaster Risk Reduction held in Sendai City, Miyagi Prefecture, Japan on 18 March 2015. As in HFA, it points out the need to take focused action at all levels as well as within and across sectors to enhance disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation, and reconstruction (UNISDR, 2015).

Within this policy context of disasters, an important stakeholder in both the national and international arena is academia and the scientific community. Their role in the process of facilitating reduction and management of disasters by providing scientific and research-based evidence is highly recognized (e.g., UNISDR, 2007; 2015). Social psychology is one of the scientific disciplines that contribute to disaster research. Having introduced the topic of disasters in terms of terminology, impact, and policies, now, the scientific study of disasters in social psychology with particular focus on preparedness is elaborated.

1.2 Disasters and Social Psychology

In this era of more global attention given to DRM with increased focus on disaster preparedness, disasters are an increasingly important area of scientific study in psychology. As have been noted by Kwan and White (2014), much of research on the psychology of disasters has focused on mental health, particularly on how people respond to disasters as well as how they cope with the psychological effects of disasters. Although the social psychological aspects of disasters are not as commonly studied as the mental health aspects, various topics have been studied in relation to disasters within the social psychological literature. Preparedness has been extensively studied since 1990s in an effort to understand the psychological factors underlying preparedness behaviors (e.g., Becker, Paton, Johnston, & Ronan, 2012; Dooley, Catalano, Mishra, & Serxner, 1992; Heller, Alexander, Gatz, Knight, & Rose, 2005; Karanci & Aksit, 1999; Karanci, Aksit, & Dirik, 2005; Lindell, 2012; Lindell & Prater, 2002; Miceli, Sotgiu, & Settanni, 2008; Norris, Smith, & Kaniasty, 1999; Rüstemli & Karanci, 1999). Among other topics that have been studied in relation to the social psychological aspects of disasters are risk perception (e.g., Crozier, McClure, Vercoe, & Wilson, 2006; Eiser et al., 2012; Västfjäll, Peters, & Slovic, 2008) and social representation of risks (e.g., Joffe, Rossetto, Solberg, & O'Connor, 2013), risk communication (e.g., Doyle, McClure, Paton, & Johnston, 2014; McClure, Allen, & Walkey, 2001; Paton, 2008a), psychological disaster myths (Drury, Novelli, & Stott, 2013), helping (e.g., Marjanovic, Struthers, & Greenglass, 2012), schadenfreude (Gao et al., 2014), religious meaning-making (Stephens, Fryberg, Markus, & Hamedani, 2013), agency (Stephens, Hamedani, Markus, Bergsieker, & Eloul, 2009), fatalism (e.g., McClure et al., 2001; Solberg, Rossetto, & Joffe, 2010), and resilience (e.g., Cox & Perry, 2011; Doğulu, Karanci,

& Ikizer, 2016; Drury, 2012; Kimhi, 2014; Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008).

Given the range of topics being studied and their time frame, these studies suggest that the social psychological aspects of disasters have received considerable research attention over the last decade. Only recently has there been an attempt to highlight the importance of studying the social cognitive processes underlying perceptions of and reactions to disasters. In their editorial for the special issue of *Social Cognition* on the social cognition of modern disasters, Kwan and White (2014) have noted that investigating perceptions of and reactions to disasters from different theoretical perspectives is essential for a deeper understanding of modern disasters and disaster preparedness. The articles in this special issue address how disaster-related perceptions and reactions are influenced by contextual information, framing of disasters, means of disaster communication, personal experiences with disasters, individual differences, and anthropomorphism (Kwan & White, 2014). For instance, the study by White, Johnson, and Kwan (2014) provides evidence for the effect of psychological proximity with disease threat manipulated via contextual information on spatial, temporal, social, and probability distances on the social cognitive processes involved in threat perceptions.

In an effort to contribute to this line of research on the social psychological aspects of disasters, the present research investigated, through the lens of SJT and TMT, the social cognitive processes underlying perceptions of and reactions to earthquakes. The focus was on fatalism and system justification as indirect and direct forms of bolstering the perceived legitimacy of the system, respectively as well as on earthquake preparedness. Before proceeding to elaborate on system justification in disaster context, SJT and TMT are explained with an overview of their postulates.

1.3 System Justification Theory (SJT)

The past two decades have witnessed a surge of interest in SJT which has generated a substantial line of research in social psychology (for reviews, see Jost, Banaji, & Nosek, 2004; Jost & Hunyady, 2002). The goal of SJT research has been to understand the motivational underpinnings of and social cognitive processes involved in system justification as well as to investigate the antecedents and consequences of viewing the existing system as fair and legitimate (Jost & Hunyady, 2005; Liviatan & Jost, 2011). According to the theory, people are, in general, motivated to defend, justify, and rationalize the status quo, often at the unconscious level and even at the expense of individual and group interests (Jost & Banaji, 1994; Jost & van der Toorn, 2012).

Within SJT, the term "system" is used to refer to any existing social, economic or political institutions and arrangements that individuals and/or groups are a part of. These systems can range in scale from nuclear family to nation state (van der Toorn & Jost, 2014). Research has shown that system justification as a cognitive-emotional process is observed mostly among members of advantaged and disadvantaged groups bearing on economic (rich and poor), gender (men and women; heterosexuals and homosexuals), and age (old and young) relations as well as on relations pertaining to diverse national, ethnic, and racial backgrounds (van der Toorn & Jost, 2014). There are various means of engaging in system justification, including stereotyping, ideological endorsement of political and religious systems, legitimation of institutions and authorities, denial and minimization of system problems or shortcomings, and rationalization of inequality (Jost & van der Toorn, 2012; van der Toorn & Jost, 2014).

SJT has introduced the concept of system justification as a distinct motive from ego and group justification motives (Jost & Banaji, 1994). The theory posits that system justification is compatible with the motives of ego and group justification for members of advantaged groups (i.e., people who are favored by the status quo). By contrast, for members of disadvantaged groups (i.e., people who are disfavored by the status quo), system justification conflicts with ego and group justification motives (Jost et al., 2004; Jost & Burgess, 2000; Jost & Thompson, 2000). Accordingly, for members of advantaged groups, system justification is positively associated with self-esteem, ingroup favoritism, and psychological well-being whereas for members of disadvantaged groups, system justification is negatively associated with self-esteem, ingroup favoritism, and long-term psychological well-being (Jost & van der Toorn, 2012). The palliative function of system justification is experienced by members of both advantaged and disadvantaged groups (Jost & Hunyady, 2002; 2005; Wakslak, Jost, Tyler, & Cohen, 2007). Particularly, research has revealed that endorsement of system-justifying beliefs alleviates emotional distress and enhances well-being. Further, system justification is, in the short term, associated with increased positive affect, decreased negative affect, and satisfaction with the status quo (Jost & van der Toorn, 2012; van der Toorn & Jost, 2014).

The motive of system justification satisfies various psychological needs to reduce uncertainty (epistemic needs), to manage threat (existential needs), and to affiliate with others (relational needs) (Jost & Hunyady, 2005; Jost & van der Toorn, 2012). Hence, situational (i.e., contextual) and dispositional (i.e., individual difference) variability in epistemic, existential, and relational needs will affect the strength with which one is motivated to justify the system (Jost & van der Toorn, 2012). Research on SJT has revealed that uncertainty avoidance, intolerance of ambiguity, needs for order, structure and closure, perceptions of a dangerous world, and death anxiety are positively associated with system justification whereas cognitive complexity and openness to new experiences are negatively associated with system justification (Jost & Hunyady, 2005; Jost & van der Toorn, 2012). Regarding the contextual nature of system justification, this motive has been found to increase under conditions of system threat, system dependence, system inescapability, and low personal control (Kay & Friesen, 2011).

Although the theory was developed to account for stereotyping and intergroup relations, it has been studied with regard to a range of topics in self and identity, social justice, and political psychology (van der Toorn & Jost, 2014). SJT has also been studied from an applied perspective in that there have been both theoretical and empirical efforts at delineating how system justification processes operate in various social issues and problems including environmental issues (e.g., Feygina, Jost, & Goldsmith, 2010), sexism (e.g., Napier, Thorisdottir, & Jost, 2010), collective protest (e.g., Jost et al., 2012), and disasters (e.g., Napier, Mandisodza, Andersen, & Jost, 2006). The present research seeks to address the motive of system justification in disaster context (in particular, the case of earthquakes in Turkey) from a terror management perspective in an effort to delineate the social cognitive processes underlying perceptions of and reactions to disasters as they relate to fatalism, system justification, and preparedness.

1.4 Terror Management Theory (TMT)

As a motivational theory, TMT (Greenberg et al., 1986) provides explanations about the reasons for individuals' behaviors, their attachment to value systems, and their need for self-esteem, and behavior (Greenberg, Solomon, & Arndt, 2008; Pyszczynski, Solomon, & Greenberg, 2003; Solomon, Greenberg, & Pyszczynski, 2004). Over the 30 years that the theory was first introduced (Greenberg et al., 1986), TMT has generated an important body of research in an effort to investigate, both theoretically and empirically, the motivational basis of human behavior pertaining primarily to intergroup relations (including stereotypes, prejudice, and discrimination) and also close relationships, health, and religion among many others (for a review, see Greenberg, Solomon, & Arndt, 2008).

The theoretical background of TMT is primarily built upon the work of the cultural anthropologist Ernest Becker (Greenberg et al., 1986; Solomon et al., 2004). The theory considers awareness of death as an important source of motivation for why humans behave the way they do. In doing so, the theory mainly focuses on culture and self-esteem, particularly, their psychological functions (Greenberg et al., 1986; Solomon et al., 2004). The theory posits that humans' unique awareness of the inevitability of death conflicts with the desire for continued survival and that this conflict leads to an existential terror (Greenberg et al., 1986; Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004). According to TMT, this cultural anxiety due to awareness of death is controlled by maintaining cultural worldviews and attaining self-esteem by living up to the standards of value prescribed by those worldviews. Hence, cultural worldview defense and self-esteem striving are the two means through which individuals manage death anxiety (Greenberg et al., 1986; Pyszczynski et al., 2004). This dual process of terror management comprises the main premise of the theory and involves three main hypotheses for which a large number of studies providing empirical support exists (for a review, see Burke et al., 2010; Pyszczynski et al., 2004; Vail et al., 2012). These are the MS hypothesis, anxiety-buffer hypothesis, and death-thought accessibility (DTA) hypothesis.

According to the MS hypothesis, reminding people of death (i.e., making mortality salient) increases self-esteem striving and faith in one's cultural worldview because self-esteem and cultural worldviews buffer death anxiety (Burke et al., 2010). According to the anxiety-buffer hypothesis, the anxiety-buffering function of a particular psychological construct is evident in the extent to which its presence determines how defensive the reactions to reminders of death are. For example, as for self-esteem, research has revealed that people with low self-esteem display stronger MS effects than people with high self-esteem (Pyszczynski et al., 2004). According to the DTA hypothesis, the anxiety-buffering function of a particular psychological construct is evident in the extent to which it leads to an increase in DTA when that construct is undermined. Support for this hypothesis comes from research showing that threats to cultural worldviews increase the accessibility of death-related thoughts (Schimel, Hayes, Williams, & Jahrig, 2007).

Having explained SJT and TMT with an overview of their postulates, now, insights from SJT for disaster research are introduced with respect to current literature, theoretical rationale, and fatalism.

1.5 System Justification and Disasters

1.5.1 Current Literature

The current literature on system justification processes in disaster context is quite recent. The first attempt to address relevance of system justification to disasters has been made by Napier and her colleagues (2006). In their review article, Napier et al. (2006) point out that the aftermath of hurricane Katrina was an indirect threat to the system because governmental shortcomings were revealed by the inadequate disaster relief efforts. They further discuss various forms of system justification that took place in the aftermath of hurricane Katrina; namely, direct defense of the status quo (i.e., denying the existence of the racial inequality problem that was exposed in the aftermath of the disaster), victim blaming (i.e., blaming disaster victims for their suffering as they preferred to live in a city below sea level and stay in the disaster site although evacuation was mandatory), complementary stereotyping (i.e., stereotyping disaster site residents as immoral and aggressive but also fun-loving), and internalization of inequality (i.e., evacuees' reports of rumors of violence and murder in the disaster site as legitimizing the chaos in rescue efforts). According to Napier and her colleagues (2006), these forms of system justification served to bolster the perceived legitimacy of the system which was undermined by the government's inadequate disaster response in the aftermath of hurricane Katrina.

Further attempts to address system justification processes pertaining to disasters include three empirical studies. In one study, Kaiser, Eccleston, and Hagiwara (2008) provided support for the system-justifying function of racial attitudes in the aftermath of hurricane Katrina when the system was directly threatened by racialized explanations for ineffective disaster response. Another study by Hart (2014) demonstrated that the salience of hurricane Candy (based on self-reports of exposure to positive news coverage of Obama as managing the disaster aftermath) was associated with more positive attitudes toward and higher levels of voting intentions for Obama for the 2012 US presidential election. Shepherd and Kay (2014) further presented findings on how government confidence as indicated by increased perceptions of government competency and agency undermines people's engagement with environmental disasters.

The most recent study addressing system justification in disaster context focused on perceptions of racism in the aftermath of hurricane Katrina (Blodorn, O'Brien, Cheryan, & Vick, 2016). Its aim was to delineate the roles of group and system justification motives (group identity and meritocracy beliefs, respectively) among a community sample from New Orleans. Providing support for Napier et al.'s (2006) point that denying the existence of the racial inequality problem in the aftermath of the disaster was a direct defense of the status quo, Blodorn et al. (2016) found that perceptions of racism in Katrina-related events were much lower among European Americans as compared to African Americans. Their findings showed that there was a negative relation between racism perceptions and meritocracy beliefs among both African and European Americans. On the other hand, the relation of racism perceptions with group identity (particularly, private regard) was positive for African Americans and negative for European Americans. Overall, Blodorn et al.'s (2016) study showed that perceptions of racism in an important disaster event can be independently predicted by motives of system and group justification, which appear to be conflicting with each other for African Americans, but compatible for European Americans.

Overall, the literature on system justification and disasters seems to focus on intergroup phenomena such as racial attitudes, stereotyping, and voting. Hence, the primary focus of the existing research is not on topics that are directly relevant to disasters. In this regard, the present research aimed to provide a novel perspective to the study of system justification in disaster context. Specifically, it investigated the social cognitive processes underlying how people perceive and react to disasters with focus on topics directly relevant to disaster research, namely, fatalism and preparedness.

1.5.2 Theoretical Rationale

The theoretical rationale for addressing system justification processes in disaster context is threefold. The first one concerns qualification of DRM as a system with its potential social, economic, and/or political institutions and arrangements that individuals potentially belong to in case of disasters. The second one concerns the contextual nature of system justification. In particular, disasters characterized as embodying ST and low personal control can be suggested to increase system justification tendencies. The third one pertains to terror management in that disasters as natural reminders of death (i.e., MS) might activate the motive to justify the system as a cultural worldview defense. These three theoretical rationales are elaborated in the following sections.

1.5.2.1 Disaster Risk Management (DRM) as a System

Qualification of DRM as a system within the framework of SJT is one basis for studying system justification processes in disaster context. Disaster professionals define DRM as encompassing "the systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster" (p. 10, UNISDR, 2009). Accordingly, DRM involves all the actions and measures taken for prevention, mitigation, and preparedness of disasters (UNISDR, 2009). Acknowledging what Bertalanffy (1968) emphasized with his general theory of systems, adopting a systems approach to different fields can safeguard from vague analogies that have often disrupted their progress. Within the scope of this thesis, consideration of DRM as a system is viewed fundamental to delineate the interplay between components of DRM as well as their interaction with communities and individuals. In the context of disasters, individuals are embedded in a network of actors and actions pertaining to management of disasters and disaster risk at local, national, and international levels and this network potentially bears upon them in social, economic, and/or political aspects. From the perspective of SJT, DRM can be considered to constitute a whole of social, economic or political institutions and arrangements that individuals and/or groups are a part of (van der Toorn & Jost, 2014). Hence, it seems worthwhile to investigate the psychological reflection of DRM as a system on individuals, particularly, their perceptions of and reactions to disasters.

The focus of the present research was on public (not institutional/organizational) perceptions of the system investigated with respect to nation and DRM, corresponding to the general and specific (i.e., disaster-related) levels, respectively. The *general* level system concerns the social, economic, and political conditions in Turkey (Kay, Jost, & Young, 2005) whereas the *specific (disaster-related)* level system, i.e., the DRM system, pertains to actions and measures taken for prevention, mitigation, and preparedness of disasters (UNISDR, 2009). Accordingly, in the present research, justification of the general and disaster-related system was investigated as a direct form of bolstering the legitimacy of the respective system.

1.5.2.2 Contextual Nature of System Justification

The relevance of SJT to disasters is also based on the contextual nature of system justification. Kay and Friesen (2011) point out that people are more likely to perceive the system as fair and legitimate under certain conditions. Specifically, ST, system dependence, system inescapability, and low personal control have been identified as factors that increase people's tendency to engage in system-justifying processes. As relevant to disaster context, responses to natural disasters that reveal the system's shortcomings and failures qualify as a ST for they embody the potential to jeopardize the legitimacy of the system (Kay & Friesen, 2011; Napier et al., 2006). Hence, it can be argued that system justification motive becomes more salient when the system is threatened indirectly by the government's inefficient disaster response. Furthermore, people might compensate the lack of or low levels of personal control they feel for disasters by defending existing social systems as a source of external control (e.g., Shepherd & Kay, 2014). According to Compensatory Control Theory, achieving such balance in perceptions of personal control and institutional or external control would function to maintain the belief that they are living in a controlled, non-random world (Kay & Friesen, 2011; Kay, Whitson, Gaucher, & Galinsky, 2009).

Within the scope of this thesis, the contextual nature of system justification pertaining to disasters was explored in two respects. Firstly, it was investigated whether disaster-related ST has the same function of increasing the need to justify the system as general ST does. Secondly, it was investigated how ST (induced with general and disaster-related ST) influence fatalism, system justification, and earthquake preparedness. Based on theoretical reasoning, it was hypothesized that ST would lead to increased levels of fatalism and system justification (as indirect and direct forms of bolstering the perceived legitimacy of the system, respectively) and decreased levels of preparedness.

1.5.2.3 Terror Management Function of System Justification

TMT (Burke et al., 2010; Greenberg et al., 1986) provides a further ground for studying system justification processes in disaster context. As mentioned earlier, MS activates the need to manage death-related anxiety via cultural worldview defense and self-esteem striving (Greenberg et al., 1986; Pyszczynski et al., 2004). The TMT rationale for addressing system justification processes in disaster context is based on the view that providing ideological support for the system could be a way of defending one's cultural worldview (Anson, Pyszczynski, Solomon, & Greenberg, 2009; Landau et al., 2004). In particular, system justification might increase in response to MS to the extent that it serves a cultural anxiety buffering function (Arndt, Greenberg, Schimel, Pyszczynski, & Solomon, 2002) by addressing existential motives, i.e., by serving the psychological need to manage threat, insecurity, and distress (Jost & van der Toorn, 2012; Jost, Gaucher, & Stern, 2015; e.g., Ullrich & Cohrs, 2007). After all, it is the social, economic, and political ideologies that define the content of cultural worldviews (Anson et al., 2009). As relevant to disaster context, disaster threat might activate the same defense mechanisms with MS (e.g., Kastenmüller, Greitemeyer, Hindocha, Tattersall, & Fischer, 2013). Accordingly, viewing disasters as evoking natural MS, individuals might be motivated to bolster particular aspects of the existing social, economic or political system in case of disasters.

Within the scope of this thesis, the terror management function of system justification pertaining to disasters was explored in two respects. Firstly, the MS role of earthquakes was investigated to understand whether reminding people their own experience of a possible earthquake qualify as MS as reminding people their own death does. Secondly, it was investigated how MS (induced with reminders of death and experience of an earthquake) influence fatalism, system justification, and earthquake preparedness. Based on theoretical reasoning, it was hypothesized that MS would lead to increased levels of fatalism and system justification (as indirect and direct forms of bolstering the perceived legitimacy of the system, respectively) and decreased levels of preparedness.

1.5.3 Fatalism as System Justification

Now that the theoretical rationale for addressing system justification processes in disaster context is explained, in this section, fatalism as a means of justifying the system is elaborated. In his review of the concept of false consciousness which has paved the way for SJT, Jost (1995) has proposed fatalism as one of the six basic means of having a consciousness that is “false”. According to Jost (1995), false consciousness is defined as “the holding of false or inaccurate beliefs that are contrary to one’s own social interest and which thereby contribute to the maintenance of the disadvantaged position of the self or the group” (p. 400). In his review, Jost (1995) discusses that fatalism as a means of false consciousness involves the thinking that protest is futile, embarrassing, and exhausting. This in turn contributes to the sustaining of one’s disadvantage since political fatalism fosters the belief that protesting for change is not an option. Based on the relevance of fatalistic thinking for false consciousness within the framework of SJT, in the current research, system justification is addressed in relation to fatalistic beliefs both in general and pertaining to disasters. As for fatalism in general, it is considered to be directly related to system justification tendencies as holding fatalistic views in general might be a sustaining factor for one’s need to justify the system.

As for fatalism as system justification in disaster context, a person who is fatalistic about disasters tends to think that one has limited or no capacities to avoid him/herself from risk and that one lacks control over life events because they are controlled by external factors such as fate and luck (McClure, Walkey, & Allen, 1999). In particular, fatalism reflects the belief that it is inevitable to prevent the destructive effects of a hazard as indicated by judgments of damage preventability and damage attributions (McClure et al., 2001; Paton, McClure, & Bürgelt, 2006; Solberg et al., 2010). In the case of earthquakes, fatalism entails the view that people cannot do anything to influence the outcomes they will experience following an earthquake (McClure & Vellupillai, 2013). People who have fatalistic views about earthquakes think that the damage caused by earthquakes cannot be prevented and also tend to attribute damage to an earthquake’s magnitude and/or to act of God rather than to building design (McClure et al., 2001).

Accordingly, holding fatalistic beliefs towards disasters, particularly earthquakes, can serve a system-justifying function in that viewing earthquake damage as inevitable might bolster the perceived legitimacy of the DRM system threatened by its shortcomings and failures. That is, instead of holding the DRM system responsible for the adverse consequences of an earthquake, thereby, accepting the system's shortcomings and failures in managing the earthquake risk encompassing pre-, during, and post-quake phases, viewing the damage as unpreventable and attributing damage to act of God might serve to enhance the perceived legitimacy of the existing system. Further, the strength of system justification motive might vary according to different damage attributions. Specifically, system justification might be expected to be higher among people who attribute disaster damage to God as compared to people who attribute disaster damage to nature (i.e., earthquake magnitude). Such reasoning is based on the view that seeing God as the cause of disaster damage deflects blame from humans. For instance, for earthquake damage, if one thinks that buildings collapsed because the earthquake was a punishment from God where the actual reason is that they are not earthquake-resistant, the individual might be more motivated to justify the system because thinking so helps to bolster the legitimacy of the system.

In view of this reasoning, in the current research, fatalism was investigated as an indirect form of system justification at both general and specific levels, corresponding to fatalistic beliefs in general and fatalism about earthquakes (i.e., earthquake and damage attributions). Specifically, it was hypothesized that MS and ST would lead to increased levels of fatalism. Having explained insights from SJT for disaster research with respect to current literature, theoretical rationale, and fatalism, now, disaster preparedness is elaborated with an overview of the social psychological study of the topic and a system justification approach to preparedness.

1.6 The Case for Preparedness

One of the key features of DRM is facilitating preparedness at societal, community, and individual levels to be able to effectively anticipate, respond to, and recover from the impact of possible hazards (UNISDR, 2009). The psychological study of preparedness (referred to as preparedness, protective or hazard adjustment measures, actions or behaviors) tends to focus on individual household preparedness for earthquakes (e.g., Lindell & Perry, 2000; Solberg et al., 2010). These preparedness behaviors aim to reduce risk of earthquake damage (e.g., retrofitting buildings, securing household objects, etc.) and facilitate post-impact preparations (e.g., ensuring essential supplies of food, water and medicine, having a meeting plan for household members for reuniting after an earthquake, having insurance, etc.) (Solberg et al., 2010).

1.6.1 Social Psychology of Disaster Preparedness

In their review of the international literature on the social psychological aspects of seismic hazard adjustment, Solberg and his colleagues (2010) identify five main factors that influence seismic adjustment, namely, risk perception, norms and social identities, trust, responsibility, and beliefs about control, efficacy, and fatalism. There are also a number of factors that shape risk perception, which are earthquake experience (EQEXPE), optimism, demographic factors (age, gender, socioeconomic status, majority/minority group status), and actual seismic risk. These researchers also point out that more emphasis should be given to wider contextual factors that influence seismic adjustment including cultural and normative influences (Solberg et al., 2010).

A number of psychosocial theories and/or models have been used to understand these factors that influence disaster preparedness including Theory of Planned Behavior (Ajzen, 1985; Fishbein & Ajzen, 1975; McIvor & Paton, 2007), Person Relative to Event Model (Duval & Mulilis, 1999; Mulilis & Duval, 1995; 1997), the Protection Motivation Theory (Mulilis & Lippa, 1990; Rogers, 1983; Rüstemli & Karancı, 1999), the Protective Action Decision Model (Lindell & Perry, 2011; Terpstra & Lindell, 2012), the Disaster Preparedness Model (DPM; Paton, 2003; Paton, Smith, & Johnston, 2005), and the Community Engagement Theory (CET; Paton, 2006; 2008b). All these theories and/or models attempt to understand factors facilitating preparedness behaviors for different natural disasters including earthquakes, floods, and tsunamis (see Karanci, 2009; 2013). The psychological factors elaborated in these theories and/or models include hazard awareness, risk perception, perceived responsibility, self-efficacy, collective efficacy, response efficacy, outcome expectancy, problem-focused coping, sense of community, trust, empowerment, and community participation.

Among the above listed models, DPM and CET are prominently studied for understanding psychological factors underlying preparedness behaviors. Developed by Paton and his colleagues (Paton, 2003; Paton et al., 2005), DPM stands out for addressing how individual and social factors interact to predict the extent to which people adopt preparedness behaviors. This model views preparedness as the outcome of a social cognitive process and proposes three phases of disaster preparedness, namely, motivation to prepare, formation of intentions to prepare, and conversion of intentions into actual preparation (Paton, 2003; Paton et al., 2005).

In the first phase, critical awareness (the extent to which people think and talk about hazards), risk perception (the extent to which the person anticipates hazard-related damage), and hazard anxiety (the extent to which a person feels anxious about a specific hazard) are suggested to motivate preparedness behavior (Paton, 2003; Paton et al., 2005). Presence of these three motivator factors at appropriate levels progresses the preparedness process to the second phase in which outcome expectancy (the extent to which the person believes that his/her actions can effectively mitigate hazard effects), self-efficacy (the extent to which the person thinks of him/herself as having the capacity to act, i.e., that he/she can actually engage in preparedness behaviors), and action coping (the number and quality of action plans, behavioral investment in terms of effort and perseverance to reduce risk) form intentions. Here, action coping is characterized by problem-focused coping (the tendency to choose action to change a situation) and response efficacy (the perception that a particular action aimed at mitigating hazard effects would be effective when adopted, based on availability of resources and benefits involved). Concerning the third phase, DPM suggests that various variables can potentially moderate the link between intentions (to prepare and to seek information) and preparedness behaviors. These moderator variables include perceived responsibility, timing of hazard activity, response efficacy, sense of community, and normative factors (trust and empowerment) (Paton, 2003; Paton et al., 2005).

In a questionnaire study conducted in New Zealand with homeowners, Paton and his colleagues (2005) showed that the process of preparedness to earthquakes consists of three interdependent phases – namely, motivation to prepare, formation of intentions to prepare, and conversion of intentions into actual preparation. Their findings largely supported the relationships between the variables as delineated in DPM. However, an unanticipated finding was that there was a distinction between intention to seek information and intention to prepare, with only the latter predicting adoption of earthquake preparedness behaviors. The relationship between intention to seek information and actual preparedness was moderated by timing of hazard activity whereas the relationship between intention to prepare and actual preparedness was moderated by trust. The findings showed that expecting a damaging earthquake in the near future and having trust in information sources increased the likelihood of engaging in preparedness behaviors (Paton et al., 2005).

Recent studies on preparedness using CET developed by Paton (2006; 2008b) have addressed the importance of social context for conversion of intensions into actual preparedness behaviors. This theory extends DPM by taking into account the role of community factors on preparedness. It focuses on how person-, community- and societal-level factors interact to predict levels of hazard preparedness. CET proposes that the interaction of interpretive processes at the individual level, namely, personal beliefs, with social context processes including community and institutional factors is important in prediction of preparedness. In CET, outcome expectancy is used to refer to interpretive processes. The social context processes, on the other hand, concerns community and institutional factors. Community factors refer to the relationship between community members (i.e., social influences) as indicated by community participation and collective efficacy. Institutional factors refer to the relationship between community members and civic agencies of hazard information as indicated by empowerment and trust (Paton, 2006; 2008b).

Several cross-cultural studies have provided empirical support for the propositions of CET (Paton, Bajek, Okada, & McIvor, 2010; Paton, Okada, & Sagala, 2013). For instance, the study by Paton and his colleagues (2013) empirically supported the cross-cultural applicability of CET for preparedness to earthquakes and volcanoes using data from New Zealand, Japan, Indonesia, and Taiwan. In their study, they found that irrespective of culture and hazard, the relationship between hazard beliefs (outcome expectancy) and preparedness intention was mediated by community (community participation and collective efficacy) and institutional (empowerment and trust) factors. Accordingly, citizens' ability to collectively formulate their risk management needs and strategies and citizens' perception that their needs have been met through their relationship between civic agencies foster citizens' trust in them and the information they provide as well as increase the likelihood that citizens use that information to base their decision on adopting hazard preparedness measures (Paton et al., 2013).

Having outlined the social psychological research on natural hazard preparedness with particular focus on earthquakes, in the following section, a system justification approach to preparedness is discussed.

1.6.2 Preparedness and System Justification

System justification in disaster context might also bear on individual-level responses to disasters in that it can be a hindering factor for individual household preparedness. Specifically, system justification might function as a motivational factor that negatively influences the degree to which people adopt earthquake preparedness behaviors. Building upon Paton and his colleagues' emphasis on social and community factors in understanding preparedness, the present research aimed to address the wider socio-political context that one is situated in, particularly pertaining to the DRM system.

When addressing preparedness in relation to system justification in disaster context, a focus on government response to disasters appears relevant. In particular, people can justify the system with respect to failures and shortcomings of DRM activities. People might think that the government has effectively managed the risk of disasters in general and in particular the aftermath of a disaster and that it is not responsible for the negative impact of the disaster. As mentioned earlier, system justification is suggested to increase in the case of disasters because these major events might embody a threat to the system and to one's sense of control as well as qualify as natural reminders of death. However, such increase in system justification processes might decrease individuals' adoption of preparedness behaviors. Having a perception of the government as competent in DRM might foster the belief that system-level solutions are enough for managing large-scale issues such as disasters and that public engagement – in case of disasters, individual-level preparedness – is not necessary (in case of disasters, important or effective) to resolve these issues (Shepherd & Kay, 2014). Accordingly, it can be argued that system justification in disaster context might be negatively associated with earthquake preparedness at the individual level. Thus, in the current research, it was hypothesized that MS and ST would interact to yield the lowest levels of preparedness-related variables including general preparedness, intention, self-efficacy, and outcome expectancy.

1.7 Context: Earthquakes in Turkey

In the global picture of the occurrence and mortality of earthquakes, Turkey is among the first five countries with a high frequency of earthquakes (CRED, 2016b). It is located in a seismically high-risk region of the world and earthquakes are by far the most commonly experienced type of disaster in the country, also leading to significant economic consequences along with casualties and injuries. According to the seismic zone map of Turkey, 96% of its total area lies in earthquake zones and the 98% of its total population lives in these earthquake-prone regions (Özmen, Nurlu, & Güler, 1997). A look at the seismic history of the country reveals that an average earthquake in Turkey claims 1,159 lives and affects around 90,000 people (CRED, 2016c).

Cities have become more vulnerable to natural, technological, environmental, and human-induced hazards especially during the post-1950s period, with earthquakes being the most important risk (Global Facility for Disaster Reduction and Recovery [GFDRR], 2012). It was urban settlements receiving domestic migration at a massive and rapid rate and poor supervision of urban development along with industrialization process taking place at an equally rapid rate that have led to this increased vulnerability (GFDRR, 2012). A milestone for DRM in Turkey has been the 1999 Marmara earthquakes (Kocaeli and Düzce) prior to which disaster management activities focused mostly on response and recovery phases (Balamir, 2002). Following these devastating quakes with a severe economic cost of approximately US$16-20 billion (corresponding to 5-7% of that year's GDP; Bibbee, Gönenç, Jacobs, Konvitz, & Price, 2000), a shift of focus in governmental policies occurred with risk mitigation taking prominence over response and recovery. Since then, a series of regulatory, constitutional, and financial actions have been undertaken for management and mitigation of disaster risk (GFDRR, 2012).

As have been outlined by GFDRR (2012), the major legal actions taken for DRM included Decree on Building Construction Supervision, Decree Law on Turkish Catastrophe Insurance Pool (DASK; in Turkish, *Doğal Afet Sigortaları Kurumu*) and compulsory earthquake insurance, and regulatory framework for construction within earthquake zones. Among the institutional actions were the establishment of Disaster and Emergency Management Presidency (AFAD; in Turkish, *Afet ve Acil Durum Yönetimi Başkanlığı*) as a more centralized authority for coordinating all institutions responsible for DRM activities and the adoption of Housing Development Administration in Turkey (TOKI; in Turkish, *Toplu Konut İdaresi Başkanlığı*) as a new government support mechanism for urban transformation and strengthening of existing building stock, which also included disaster housing projects. Strategic action plans were further adopted for increasing earthquake preparedness, which included National Earthquake Strategy and Action Plan, Integrated Urban Development Strategy and Action Plan, and Istanbul Seismic Risk Mitigation and Emergency Preparedness Project (ISMEP) (GFDRR, 2012).

The recent destructive earthquake in Turkey was the 2011 Van earthquakes. Two consecutive earthquakes hit the province of Van in eastern Turkey on October 23 and November 9, 2011. The first earthquake ranked fifth (with 604 deaths) in the top ten natural disasters by number of deaths in 2011 (Guha-Sapir, Vos, Below, & Ponserre, 2012). It had a magnitude of 7.2 with Tabanlı Village (located in the north of the city center) as the epicenter. The second earthquake, which occurred two weeks after the first earthquake, had a magnitude of 5.6 and its epicenter was

Edremit, a subprovince of Van located in the south of the city center. In total, 644 people were killed and 1,966 people were injured (Republic of Turkey Prime Ministry Disaster and Emergency Management Presidency [AFAD], 2014). The earthquakes further led to disruptions in telecommunications, electricity, natural gas system, and water services along with collapse and cracking in some roads (Daniell et al., 2011). The earthquakes caused an estimated economic damage of around 1.8 million US$ (CRED, 2016b). According to damage assessment conducted in Van after the earthquakes, 39% of its building stock was slightly damaged, 12% was moderately damaged, and 26% was heavily damaged or destroyed (AFAD, 2014). As the majority of the damaged building stock comprised of houses (AFAD, 2014), more than 250,000 people were displaced (The Internal Displacement Monitoring Centre, 2012). Furthermore, the 2011 earthquakes revealed that disaster management activities were not conducted efficiently in Van due to deficits in mitigation (Basbug-Erkan et al., 2015).

Given the country's susceptibility to experience earthquakes with devastating consequences, earthquakes pose a significant risk for Turkey. This risk renders it necessary to strengthen and facilitate resilience and preparedness of individuals and communities to disasters as have been acknowledged in international disaster policy platforms (e.g., UNISDR, 2007; 2015). In this respect, it is essential to understand individuals' perceptions of and reactions to disasters with insights from social psychological research.

1.8 The Overview of the Present Research

The present research aims to contribute to social psychological research on disasters by addressing system justification in disaster context from a terror management perspective in the case of earthquakes in Turkey and by addressing topics that are directly relevant to disaster research. Particularly, the focus was on fatalism and system justification as indirect and direct forms of bolstering the perceived legitimacy of the system, respectively, and also individual earthquake preparedness. Considering the relevance of system justification processes to disasters, it seems worthwhile to investigate the social cognitive processes underlying perceptions of and reactions to disasters through the lenses of SJT and TMT. Notably, this thesis aims to extend previous work on this topic by employing an experimental method informed by SJT and TMT in the context of earthquakes in Turkey, thereby, providing an empirical outlook on the theoretical link between the field of disasters and mainstream social psychology.

To this end, an experimental study was conducted to investigate, after controlling for EQEXPO, (*i*) how MS and ST influence fatalism, system justification, and earthquake preparedness and (*ii*) whether and how this influence differs with respect to general and specific (i.e., disaster-related) levels of MS and ST. Thus, in the present study, the independent variables were MS and ST and the dependent variables were fatalism, system justification (as indirect and direct forms of bolstering the perceived legitimacy of the system, respectively), and earthquake preparedness. The levels of MS and ST (the independent variables) as well as the levels of the dependent variables fatalism and system justification were assessed at both general and disaster-related levels. The aim of employing such experimental design was to investigate whether the effects of MS and ST differed depending on whether they are induced with general or specific (i.e., disaster-related) content. A further aim was to investigate whether these effects were similar for general and disaster-related measures of fatalism and system justification.

The variables used for fatalism included general fatalism (GFAT; consisting of the subscales destiny, functionality, helplessness, submission, valuation, uncontrollability, and luck) and disaster-related fatalism (DFAT; consisting of the variables earthquake fatalism, earthquake blame, damage blame, and damage preventability). System justification variables included general system justification (GSJ) and disaster-related system justification (DSJ). The variables used for earthquake preparedness were general preparedness, intention, self-efficacy, and outcome expectancy. As for EQEXPO, the reason for inclusion of this variable as a covariate in the study design was that it would enable examination of research questions independent of one's previous experience of earthquake and his/her exposure to the adverse consequences of the quake.

Based on the above mentioned research aims and focus, the present study seeks to address three research questions with respect to MS, ST, and the interplay between them. Specifically, the research questions of the experimental study can be summarized as follows:

1. Research questions on MS (MS main effect)

   1.1. Does reminding people of a possible EQEXPE qualify as MS as reminding people of their death does?

   1.2. How do levels of MS (death vs. earthquake vs. control) influence fatalism, system justification, and preparedness?

2. Research questions on ST (ST main effect)

   2.1. Does disaster-related ST have the same function as general ST, i.e., to increase the need to justify the system?

   2.2. How do levels of ST (general vs. disaster-related vs. control) influence fatalism, system justification, and preparedness?

3. Research question on the interplay between MS and ST (interaction effect)

   3.1. How do the levels of MS and ST interact to influence fatalism, system justification, and preparedness?

In view of these research questions and based on the relevant literature, it was hypothesized that MS and ST would lead to higher levels of fatalism and system justification, and lower levels of preparedness. Moreover, it was hypothesized that MS and ST would interact to yield the highest levels of fatalism and system justification as well as the lowest levels of preparedness.

In addition to the primary aim of this thesis as part of which an experimental study (Study3, see Chapter 4) was conducted to explore research questions delineated above, a secondary aim was to develop a self-report Likert scale to be used in the experimental study for assessing general fatalism (GFAT) that would reveal individual differences in dispositional fatalistic beliefs. For this purpose, a qualitative study (Study 1, see Chapter 2) involving semi-structured interviews with 20 participants was conducted to understand perceptions of fatalism in general, which would guide the item generation process. A follow-up study (Study 2, see

Chapter 3) was further conducted to establish the reliability and validity of the newly developed GFAT scale. In this regard, the present thesis further contributes to social psychological research in Turkey by introducing a reliable and valid measure of general fatalistic beliefs.

CHAPTER 2

THE FIRST STUDY:
UNDERSTANDING FATALISM

This chapter is devoted to the first study which was conducted to lay out the qualitative foundation for the development of a new scale for assessing fatalism in general (see Study 2; Chapter 3) to be used in the main study (i.e., hypothesis testing with experimental design, see Study 3; Chapter 4). Accordingly, the main purpose of this study was to explore general perceptions of fatalism that would reveal individual differences in dispositional fatalistic beliefs. The qualitative findings, in particular, themes reflecting how people perceive fatalism in general were used to inform item generation process. This study also aimed to understand public perceptions of *the system* within the context of DRM in Turkey. This information was used in the experimental study for (*i*) writing up the passage for the disaster-related ST and (*ii*) operationalizing the *system* pertaining to DRM in Turkey to be given in the respective system justification scale. Hence, the first study was conducted as a qualitative study with focus on GFAT and DRM in Turkey.

2.1 Method

2.1.1 Participants

Semi-structured interviews were conducted with 20 participants recruited through convenience sampling in Ankara and Düzce. In order to ensure the heterogeneity of the sample, participants were selected based on EQEXPE (the 1999 earthquakes), age, gender, education, socio-economic status (SES), and occupation (see Table 2.1 for the sociodemographic characteristics of the sample).

Table 2.1 *Sociodemographic Characteristics of the Sample (Study 1)*

No.	EQEXPE	Age	Gender	Education	SES	Occupation
P1	No	34	Male	High school	Medium	Employee
P2	No	32	Female	High school	Medium	Catering worker
P3	No	36	Female	High school	Medium	Project assistant
P4	No	48	Female	University	Medium	Landscape architect
P5	No	34	Male	University	Medium	Teacher
P6	No	41	Female	Primary school	Medium	Housewife
P7	No	60	Female	Vocational school	Medium	Teacher
P8	No	32	Male	High school	Medium	Electrician
P9	No	46	Male	University	Medium	White-collar worker
P10	No	32	Male	Secondary school	Low	Technician
P11	Yes	27	Female	University	Medium	Lawyer
P12	Yes	30	Male	Graduate school	High	Engineer
P13	Yes	57	Male	High school	Medium	Self-employed
P14	Yes	47	Female	Primary school	Medium	Trader
P15	Yes	39	Female	High school	Medium	Housewife
P16	Yes	43	Male	High school	High	Sales marketing supervisor
P17	Yes	60	Male	Vocational school	High	Teacher
P18	Yes	54	Female	Primary school	Medium	Tailor
P19	Yes	40	Male	University	High	Imam
P20	Yes	42	Female	University	High	Teacher

2.1.2 Interview Schedule

An interview schedule consisting of 15 questions designed according to the specified research purposes was employed. The interview topics included fatalism in general, fatalism in relation to earthquakes, and DRM in Turkey. In line with the topics covered, the interview schedule was structured around three parts enquiring about perceptions of fatalism in general (7 questions), perceptions of fatalism in relation to earthquakes (4 questions - these allowed transition from fatalism to disasters), and perceptions of DRM in Turkey (4 questions) (see Appendix A for the interview guide). During the interviews, participants were probed to further explain their responses when deemed necessary by the researcher.

2.1.3 Procedure

Ethical approval for the conducting study was granted from Middle East Technical University (METU) Human Subjects Ethics Committee (see Appendix F, Study 1). Data collection took place during November – December 2015. The interviews, scheduled at a time and place that was convenient for each participant, were conducted face-to-face by the researcher. Written informed consent was obtained from the participants prior to the interviews. At the end of the interviews, they were debriefed and thanked for their participation. The interviews were audio-recorded for transcription purposes and lasted approximately 10 to 60 minutes. Verbatim transcriptions were made by two undergraduate students and did not include names of the participants. Numbers were allocated to participants to ensure their anonymity. These numbers were used to refer to participants throughout the transcripts.

2.1.4 Analysis

Thematic analysis (Braun & Clarke, 2006; Joffe, 2012) was used to conduct a preliminary analysis of the interview data on the topics of GFAT and DRM in Turkey. Themes were coded deductively based on the theoretical framework of the research and in accord with the research aims. Themes on the perceptions of fatalism in general were used for the development of a GFAT scale. Themes on the perceptions of DRM in Turkey were used to inform operationalization of the DRM system in Turkey to be used for the passage for the disaster-related ST and for the system explanation to be given in the DSJ scale. For reliability purposes, a qualitative data analysis software, namely, MAXQDA plus12 (MAXQDA, 2016) was used as it enables systematic storage and retrieval of coded segments.

2.2 Results

The results for the first study are presented in two parts, namely, development of items for the GFAT scale and operationalization of DRM for the experimental study. Thematic analysis findings pertaining to perceptions of fatalism in general and DRM in Turkey are explained respectively for item development and DRM operationalization.

2.2.1 Item Development

Item generation for the development of a new scale assessing individual differences in dispositional fatalistic beliefs was based on two resources. The first one was the interview findings in that themes on the perceptions of fatalism in general guided the item generation process. The second one was the review of existing scales that contained useful material related to fatalistic beliefs. Drawing on these two sources for item generation, an initial version of item pool with a total of 54 items was developed to assess dispositional fatalism (see Appendix B).

2.2.1.1 Interview Findings

Participants' accounts that captured the essence and nature of fatalism in general were used to generate specific items. The preliminary qualitative analysis of the interviews revealed eight themes, namely, *functionality, submission, helplessness, personal control, predetermination, divine control, centrality in life*, and *luck*. These themes were only used to guide the item generation process. In order to give an overview of the findings, each theme is elaborated in the following paragraphs with quotations from the participants.

The first theme, named functionality, reflected views on the functionality of fatalism, particularly how being fatalistic makes life easy and/or difficult. There were two opposing views in that some of the participants perceived fatalism to be functional as a coping skill whereas some perceived it to be dysfunctional. This seemed to be independent from whether one believes in fatalism and/or from how strongly one endorses fatalistic beliefs. Some participants, on the other hand, were ambivalent as they perceived it to be functional in some respects but not in others, suggesting that being fatalistic at an optimal level was the healthiest. Among the participants who viewed fatalism as functional, for instance, one male participant aged 34 (P5) mentioned fatalism as the easiest way of accepting what one cannot change, giving an example about close relationships. He said:

> *(in English)*
>
> *Because it's the easiest way of accepting something that one cannot change. Or, if cannot change or cannot cope with it, this is the easiest way of accepting it. ... It maybe eases, to some extent, acceptance when it's not possible for the individual to accept. For example, for both parties, one might have fallen in love with the person due to his/her attraction to the opposite sex, but couldn't get the same reaction somehow. So, that person has to accept him/herself in this context. How will s/he say it? Fate. That is, s/he will say that it won't happen anymore, in this way s/he will try to comfort him/herself, or, if s/he has lost his/her coping strength, s/he will say that it's destiny so as not to find his/her inner strength for coping. S/he will say "since it is destiny, I will resume on" or s/he can continue his/her struggle saying that "the road doesn't end here and maybe my destiny is written differently". In my opinion, s/he might increase his/her coping strength by saying that "maybe I have lost but I am going after winning", instead of thinking that "I have lost".*
>
> *(in Turkish)*
>
> *Değiştiremeyeceği bir şeyi kabul etmenin en kolay yolu çünkü. Ya da değiştiremiyorsa eğer, mücadele de edemiyorsa, kabul etmesinin en kolay yolu bu. ... İnsan kabullenemeyeceği bir şeyi kabullenmesini belki bir miktar kolaylaştırıyor. Örneğin, iki taraf için de konuşuyorum yani karşı cinse olan ilgisinden dolayı çok aşık olmuş olabilir ama bir türlü aynı reaksiyonu alamamıştır. Kendini artık bu bağlamda kabul etmek zorunda. Nasıl diyecek? Kader. Yani olmuyor artık diyecek, bu şekilde kendini rahatlatmaya çalışacak veya mücadele gücünü kaybettiyse içinde o mücadele gücünü bulmak için gene kader diyecek. "Madem kader bu, kaldığım yerden devam edeceğim ya da bu yol burada bitmiyor, belki kaderim farklı yazılmıştır" deyip de mücadelesine devam edebilir. Yani kaybettim değil de diyecek belki kaybettim ama kazanmanın yolunda gidiyorum da deyip mücadele gücünü de artırabilir bence.*

The second theme was coded submission and pertained to fatalistic beliefs that one cannot change his/her destiny, casting a passive role to the individual. Some of the participants believed that in some cases nothing one does can change what destiny has for the person and that there is no option other than resigning to fate. However, there were also participants who did not perceive fate as unchangeable and thought that it was in one's hands to create his/her destiny. For example, as a participant who associated being completely fatalistic with unhappiness, a 60-year old female teacher (P7) explained fatalism as diminishing one's coping capacity. In her words:

> *(in English)*
>
> *Being totally fatalistic is not a good thing, the individual becomes unhappy. If I resign to my faith that much [bowing to the inevitable], I cannot do anything in my life, I can't live. I struggle when something such happens. One should struggle thinking "This happened to me but what can I do to overcome it?". You live monotonously when you believe in fate. Because you think that it is your destiny and you don't struggle yourself, in that way you don't give your fight for life. Waiting for fate, everything, waiting for everything saying this will happen to me won't give a good result.*
>
> *(in Turkish)*
>
> *Tamamen kaderci olmak iyi bir şey değil, mutsuz olur insan. Ben o kadar da yani kaderime eğer boyun eğersem hiç hayatımda hiçbir şey yapamam yaşayamam. Ben kendim de öyle başıma bir şey geldiğinde mücadele ederim yani. "Bu başıma geldi ama bunu yenmem için neler yapabilirim" diye mücadele etmesi lazım. Monoton yaşarsın kadere inanırsan. Çünkü bu kaderim dersin hiç kendini mücadele etmezsin, yaşam için mücadele vermemiş olursun. Kaderi, her şeyi, beklemek, bu başıma gelecek diye her şeyi beklemek iyi bir sonuç vermez.*

According to the third theme, namely, helplessness, fatalism accounts for things that individuals feel helpless and powerless about. In particular, fatalism was perceived to involve helplessness for things that one cannot explain or are incapable of doing. As the 32-year old male participant (P10) said, for instance, "Belief in fate is stronger when your strength is not enough and you are not able to do anything, when you're desperate. If you have an opportunity, you certainly first use that opportunity but if there is no opportunity you believe in fate" (*in English*), "Senin gücünün yetmediği, elinden gelen bir şey olmadığı zaman, çaresiz kaldığın zamanlarda daha çok kadere inanılır yani. Elinde bir imkan varsa mutlaka önce imkanını kullanırsın ama imkan yoksa kadere inanırsın" (*in Turkish*). Another participant (female, 54, P18) viewed fatalism as the best way out when one feels helpless:

> *(in English)*
>
> *Especially about topics you cannot succeed, like when you fight but you cannot win through, you cannot get out of it, you just let things drift saying this is my destiny. You leave events to fate when there is nothing to do. The individual does not have any way out. The best way out is resorting to fate.*

Isn't it? That is, resorting to faith in cases when one cannot achieve, cannot do.

(in Turkish)

Hani özellikle başaramayacağımız konularda, hani bir kavga edersiniz de sonucuna ulaşamazsınız, artık çıkamazsınız o şeyden, ya bu benim kaderimmiş deyip oluruna bırakırsınız. Bir şey yok noktasında kadere bırakırsınız olayları. Yani başka da çıkış yolu yoktur insanın. En güzel çıkış yolu kadere sığınmaktır. Değil mi? Yani ulaşamayacağı, yapamayacağı yerlerde kadere sığınmak.

The fourth theme was named personal control and involved fatalistic beliefs in relation to internality and externality. Particularly, some participants stated that one cannot control everything and that there might be things which cannot be prevented, thus reflecting an externalist view of control. On the other hand, some participants attributed internality to fatalism, thinking that it was up to the individual to determine how his/her life would be. For instance, the 32-year old male participant (P10) explained fatalism in relation to externality, giving an example of dismissal:

(in English)

They [people who believe in fate] are faithful and sometimes people who are lazy in general also [say] "there was not nothing I could do, it's destiny, it came from God". However, before fate, there must have been certainly something to do. But in those cases that one did not do, I think that it is something that people use as an excuse. Lazy people [say] there was nothing I could do, it's fate, it was meant to be so.

(in Turkish)

[Kadere inanan insanlar] Dine bağlıdır ama bazen de işte genelde tembel insanlar da çalışıp gayret göstermedikleri zaman da işte "benim yapabileceğim bir şey yoktu, kader, Allah'tan geldi" [der], ama halbuki kaderden önce kendisinin yapabileceği mutlaka bir şeyler vardır. Ama o işte yapmadığı zamanlarda da insanların bahane olarak kullandığı bir şey olarak da görüyorum. Tembel insanlar benim yapabileceğim bir şey yoktu, kader yani o öyle olması gerekiyormuş oldu [der].

The fifth theme was coded as predetermination pertained to the fatalistic belief that some things in life such as birth and death are predetermined. According to the 60-year old male participant (P17), "What I believe in is that if this is meant to be, if we have faith in God, what we call destiny, that it is written when one is born, even when both it is determined when one will die. This is what I consider as fate is this" (*in English*), "Bu bir yaşanılacaksa, Allah'a inancımız varsa, hani alın yazısı dediğimiz, insan doğarken alnına yazılır şudur budur deniyor ya, doğduğu zaman bile ne zaman öleceği bellidir, gibi bu şeye inanıyorum ve kader olarak düşünüyorum bunu" (*in Turkish*). Some participants also viewed fatalism as predetermination of everything in life. One participant (male, 34, P5) cited a saying of his religion teacher in high school to express his view of fatalism. He said:

> *(in English)*
>
> *Back in high school, our religion teacher told us: Kids, think that on the top of a hill two trains are moving towards each other. He said that foreknowing of this, seeing this in advance, from the top of the hill, knowing that it will happen, this is what fate is like. I think the same way more or less.*
>
> *(in Turkish)*
>
> *Bize lisede din öğretmenimiz şöyle anlatmıştı. Bir tepenin başında iki tane trenin birbirine doğru hareket ettiğini düşünün çocuklar. İşte bunun önceden bilinmesi, bunu önceden görmek, tepenin başından görmek, olacağını bilmek, kader böyle bir şey demişti. Ben de yaklaşık böyle düşünüyorum.*

The sixth theme, named divine control, reflected the belief that one's life is determined by an entity that is superior to humans. Such view of fatalism was mostly associated with religion, with God as executing limitless divine control over human life. The 30-year old male participant (P12) explained this as follows:

> *(in English)*
>
> *If you are a faithful person.. Ultimately, you believe in the existence of a will that is higher than yours, though this differs according to particular faith.. If you are a Muslim, you think about the will of Allah [God] which is greater than your will and which is infinite. Yours is limited, in fact, belief in fatalism is something in parallel with that.*
>
> *(in Turkish)*
>
> *Hani inançlı biriysen.. Sonuçta hani, senin idarenin üzerinde bir iradenin varlığına inanıyorsun. Yani tabi bu inanca göre değişir de.. Müslümansan falan, hani orada senden daha büyük bir Allah iradesini, yani onun idaresinin sonsuz olduğunu düşünüyorsun. Seninki sınırlı, orada aslında kader inancı da belki o paralelde olan bir şey yani.*

Another participant (female, 42, P20) expressed her belief in fatalism as rooted in fatalism, she said:

(in English)

Speaking for myself, not for people, but I think that belief in faith is a requirement since it is in our religion. I believe that it is so when also I evaluate events, that it is in our destiny. But, as I said, this destiny might be created by God, it is our fate but we choose that fate by ourselves and because Allah [God] knows us, because Cenab-ı Allah [supreme God] knows that we will go that direction, he guides us to that direction.

(in Turkish)

Ben kendi adıma söyleyeyim, insanlar olarak demiyorum ama mesela ben dinimizde bu var, o yüzden kadere inanmak gerektiğini düşünüyorum. Olayları da değerlendirdiğimde de öyle olduğuna inanıyorum zaten kaderimizde olduğuna. Ama dediğim gibi bu kader Allah tarafından yaratılmış olabilir kaderimiz bizim ama o kaderi biz kendimiz seçiyoruz ve Cenab-ı Allah da bizi bildiği için, bizim zaten o tarafa gideceğimizi bildiği için bizi o tarafa yönlendiriyor.

The seventh theme was centrality in life which was coded based on the life domains that participants mentioned as being relevant to belief in fatalism. Viewing fatalism as a safeguard for psychological problems, the 40-year old imam (P19) stated that fatalistic thinking was prevalent in life. He mentioned several life events for which people tended to rely on fatalistic beliefs:

(in English)

For instance, for birth they believe [in faith]. For marriage thet believe though they actually have the option to choose. For raising children they believe. Especially for major events there is a concept that they resort to, what they call as will of God [takdir-i ilahi]. And this in fact comforts people psychologically at some point. It can even prevent them from losing one's senses, experiencing psychological problems. This we encounter a lot in death.

(in Turkish)

Mesela doğumda inanırlar [kadere]. İşte evlilikte aslında seçme ihtimalleri olmasına rağmen evlilikte inanırlar. Çocuklarını yetiştirmede inanırlar. Özellikle böyle büyük olaylarda takdir-i ilahi dedikleri ve buna sığındıkları bir kavram vardır. Ve bu da aslında aynı zamanda hani aslında psikolojik olarak da insanları bir noktada rahatlatır. Aslında belki çıldırmaları, işte böyle daha psikolojik sorunlara girmelerine engel olabilir. Mesela ölümde buna çok şahit oluruz.

The eighth and last theme was luck, which emerged, though rarely, as an opposing view of fatalism. Particularly, low or lack of belief in fatalism was associated with belief in luck, pointing out that it is the individual him/herself, not fatalism, that determine one’s destiny, however, this also requires luck. According to the 46-year old male participant (P9), his belief in luck parallels his disbelief in fatalism. In his own words:

> *(in English)*
>
> *In my opinion, believing that some things come from above is fatalism. This is related to resignation, I don’t believe in it. I believe that the individual shapes his/her own [fate]. But that does not mean that everything is completely in the hands of the person, there should also be a luck factor to a degree. That is, I should say, you should be lucky. You might be in your good day, or it coincides. It might also be related to destiny to some degree but not in a religious sense, they are intertwined. But I do not lean to fatalism but believe in the luck factor.*
>
> *(in Turkish)*
>
> *Yani şimdi bir şeylerin direk ben yukarıdan geldiğine inanmak bence kadercilik. Ya bu kabullenmişlikle alakalı, ben buna inanmıyorum. İnsan kendi şeyini [kaderini] kendisinin yaptığına inanıyorum. Ama bu tamamen de her şeyin insanın elinde olduğu anlamına gelmiyor, biraz da şans faktörünün olması gerekiyor. Şansınız da yaver gidecek, öyle söyleyeyim yani. İyi gününde olursun, ne bileyim ondan sonra denk gelir. Bir nebze dini anlamda değil ama kısmetle de alakalı olabilir yani. Bunun tarifi çok zordur, birbirine iç içe geçmiştir. Ama ben kaderciliğe çok sıcak bakmıyorum ama şans faktörüne inanıyorum.*

2.2.1.2 Review of Existing Scales

A second source of item generation for scale development was the review of existing scales that contained useful material related to fatalistic beliefs. Among these were the Multidimensional Fatalism Measure in English and Spanish (Esparza, Wiebe, & Quiñones, 2015), Free Will and Determinism Scale (FAD-plus; Paulhus & Carey, 2011), Ways of Coping Inventory (Folkman & Lazarus, 1980; Kesimci, 2003; Siva, 1991), Internal-External Locus of Control Scale (Rotter, 1966; Dağ, 1991; 2002), Belief in Good Luck Scale (Darke & Freedman, 1997; Öner-Özkan, 2003), and scales assessing cancer fatalism (Powe, 1995), Traffic Locus of Control Scale (TLOC; Özkan & Lajunen, 2005; Warner, Özkan, & Lajunen, 2010), and health fatalism (Shen, Condit, & Wright, 2009).

2.2.2 Operationalization of DRM

The interview findings on DRM in Turkey helped to understand how it was perceived as a system. This information was, in turn, used to operationalize what the DRM system entails and what constitutes a threat to it. Thematic analyses of the interview data revealed that perceptions of DRM in the case of earthquakes in Turkey involved four main themes that reflected the topics covered in the interview, thus were organized and named accordingly. With a seemingly major focus on post-quake period, these themes included actors responsible for DRM, aid and services, role of aid and services in this period, and effectiveness of DRM in general. In order to give an overview of the findings, each theme is elaborated in the following paragraphs with quotations from the participants.

The first theme, namely, actors responsible for DRM, included the institutions and/or individuals that the participants expected to provide support in the post-quake period. According to the interview findings, DRM in Turkey involved several actors ranging from administrative bodies to community stakeholders. Specifically, state (including both local and central government, corresponding to municipality and governorate), Disaster and Emergency Management Presidency (AFAD), other responsible ministries (e.g., Ministry of Health), security forces (police force and the army), Turkish Red Crescent (KIZILAY) and Search and Rescue Association (AKUT) along with other non-governmental organizations (NGOs), volunteers, public, and family were the actors which were held responsible for providing support in the post-quake period. For instance, one participant (P3, female, 36), while stating that she personally did not expect any support from anyone, listed the institutions and/or individuals that she thought were responsible for providing aid as follows:

> *(in English)*
>
> *As for aid, Turkish Red Crescent, AFAD, what else? Various aid institutions maybe, and also wealthy people living in that region or factories or people with employment institutions, I think that these people, with good organization, can uplift those affected in the region sooner*

(in Turkish)

Yardım olarak Kızılay, AFAD, başka ne var? Çeşitli yardım kuruluşları olabilir, bir de o bölgede yaşayan gelir düzeyi çok yüksek ya da fabrikalar ya da işte iş kurumları olan insanlar iyi bir organize olarak oralardaki [etkilenen] insanları daha çabuk kalkındırabilir diye düşünüyorum.

The second theme, namely, aid and services, reflected views on aid and services that the participants expected to be provided in the post-quake period. Examples given by the participants pertained to both the immediate and the long-term aftermath. These included search and rescue, burial procedures, debris removal, temporary accommodation (suited to local climate conditions) as well as permanent housing (e.g., TOKI), food, health, personal hygiene, security, communication, psychological support, resumption of children's schooling, transfer of patients, children, and elderly to places where the conditions for their vulnerability are improved, and also rebuilding of city infrastructure. For instance, the 60-year old male participant who survived the 1999 Düzce earthquake (P17) specified the arrangement of aid and services that he thought should be provided in the post-quake period as follows:

(in English)

I think that health is very important. First health. Then, at the first stage certainly no food or any other thing. One cannot think about it because his/her arm or leg is ripped off, is injured or else. After health, food for maintaining health of the healthy. Food and clothing. It is so in the immediate aftermath, that is, first health, hospital, medical attention. Then comes food, and then comes sheltering, and others.

(in Turkish)

Tabii şey çok önemli önce bence sağlık. Önce sağlık. Ondan sonra tabii o ilk etapta ne yemek ne bilmem ne, hiçbir şey. Adamın aklına gelmiyor çünkü kolu bacağı bilmem nesi kopmuş, yaralı şudur budur. Sağlık ardından sağlıklıların sağlıksızlaşmaması için yiyecek. Yiyecek ve giyecek. İlk etapta böyle, ilk önce bana göre sağlık, hastane, tıbbi müdahaleler. Sonra gıda, ondan sonra zaten barınma, şudur budur diye öyle gidiyor.

The third theme, referred to as the role of aid and services in the post-quake period, emphasized the view that aid and services were facilitative for resumption of daily functioning as well as post-quake coping and adaptation. It was expressed by many participants that provision of the above mentioned aid and services by responsible actors was of vital importance. As the 43-year old male participant (P16) said:

> *(in English)*
>
> *In the first stage, as I said, people are in need of everything. You live on with that aid coming. There was no bread here back then. As you know nothing works. People are hungry and thirsty. Staple food, thanks to Ankara they took the initiative, these things are important in my opinion.*
>
> *(in Turkish)*
>
> *Yani ilk etapta, diyorum ya insanın her şeye ihtiyacı var. O gelen ihtiyaçlarla sen hayatını idame ettiriyorsun. Burada ekmek yoktu ya. Biliyorsunuz hiçbir şey çalışmıyor. İnsan aç susuz. Temel gıdaları, sağ olsun Ankara bu işte ön ayak oldu, bu gibi şeyler önemli bence.*

Another participant (P12, male, 30) explained how critical it was for the survivors to re-establish their routines so that the impact of the earthquake on daily life could be lessened:

> *(in English)*
>
> *I think it is important because at one point reverse destruction happens, some things happen and you have to reconstruct things from scratch. In order to do those, the more there are people helping, if we are to make an analogy to "if everyone sweeps their own front door", the more people get involved in the work and start doing something to get back to normal life as soon as possible, the more you overcome the effects of the event, in both material and moral sense. … For instance, you are a tradesman, if you are able to continue doing your job, if you have a new house to live in and set it in order, and the more people you have contributed to their setting their order, the more you counteract the disaster impact.*
>
> *(in Turkish)*
>
> *Bence, önemli çünkü bir noktada geri yıkım oluyor, bir şeyler oluyor, hani bir şeyleri sıfırdan yeniden inşa etmek durumunda kalıyorsun. Onları yapabilmek için de orada ne kadar işin ucundan tutan olursa, yani "herkes önünü süpürse" benzetmesi yaparsak, herkes orada ne kadar işin dahil olur bir an önce normal hayata dönmek için bir şeyler yapmaya başlarsa, o kadar aslında olayın etkilerini de atlatmış oluyorsun, maddi manevi anlamda. … Mesela esnafsın, artık işini yapmaya devam edebiliyorsan, yaşayacağın yeni bir evin olduysa, düzenini kurduysan, ne kadar çok insanın düzenini kurmasını başarabildiysen, o kadar afetin etkilerini gidermiş oluyorsun.*

The fourth and final theme, named as effectiveness of DRM, reflected participants' views on, in all phases, what makes DRM effective. The findings revealed that effective DRM involved various aspects pertaining to pre- (preparedness, mitigation), during (response), and post-quake (recovery, reconstruction) phases. These included preparedness at all levels at all times, long-term planning based on lessons learned from previous disaster experiences and local risk-needs assessment, earthquake awareness and education (what to do before, during, and after an earthquake), earthquake-resistant buildings and supervisions according to related legal frameworks, social solidarity and cooperation, psychological support, not being fatalistic (i.e., not being dependent on the government, instead taking individual responsibility), effective response (e.g., financial and psychological support and aid, adequate and fair aid, organization, transportation, infrastructure, healthy communication and accurate debriefing, financial resources, qualified personnel, technological equipment, etc.), cooperation and coordination between stakeholders with properly identified responsibilities (between the institutions as well as between the institutions and the community), and a moral, honest, and transparent profile of institutional directors (absence of nepotism, political interests, etc.). For instance, a 48-year old female participant (P4) mentioned the importance of earthquake education as follows:

> *(in English)*
>
> *We talk about raising awareness, at schools or maybe via television, radio, every means of outreach, for example, directors of corporations, volunteers. That is, people should comprehend what will actually happen in the case of an earthquake, in what kind of despair they might experience, first telling this, they should understand what earthquake is like. After that, as I just said, an earthquake happens in Japan and people line up, without panicking, staying calm and respecting each other – which I think that is impossible in Turkey – we should be able to teach this. I believe that this should start from elementary school, pre-school.*
>
> *(in Turkish)*
>
> *İşte hani bilinçlendirme diyoruz ya yani okullarda işte ne bileyim belki televizyondan, ondan sonra radyolardan ne bileyim her türlü ulaşılabilecek şey mesela şirket yöneticileri ya da ne bileyim belki bazı hani gönüllüler falan. Yani insanların deprem olduğu zaman gerçekte ne yaşayacağını, nasıl bir çaresizlik içinde olabileceklerini, önce bunu anlatıp, depremin nasıl bir şey olduğunu idrak ettirmek lazım. Sonrasında da işte az önce söyledim, Japonya'da deprem oluyor ve insanlar kuyruğa girip hiçbir şekilde panik olmadan sakin sakin, birbirlerine saygı göstererek - ki bu zannediyorum ki*

Türkiye'de imkansız - hani bunu öğretebilmek lazım. Bu da zannediyorum yani ilkokuldan anaokulundan falan başlayacak bu iş.

2.3 Discussion and Conclusion

The qualitative findings on perceptions of fatalism in general pointed out that it was viewed by Turkish participants as reflecting aspects that were in parallel with typical characterization of fatalism in the literature including external locus of control, belief in predetermination, acceptance of reality, or a coping skill (Esparza et al., 2015). With its positive connotation regarding adaptation and coping, the findings showed that GFAT can also be a healthy belief unlike its association in the literature with lack of personal control or passivity and the emphasis on its adverse consequences (Norenzayan & Lee, 2010). Overall, the findings indicate that fatalism is a psychological construct that bears on multiple dimensions which are not necessarily mutually exclusive. In this respect, studying the roles of fatalism dimensions and their interplay with various attitudes and behaviors as well as whether there are cultural variations in fate attributions has the potential to constitute a main research agenda in psychology (e.g., Norenzayan & Lee, 2010).

The qualitative findings on perceptions of DRM in Turkey revealed how it was perceived as a system encompassing pre-, during, and post-quake phases and involving administrative-institutional and community stakeholders along with aid and services. These findings are largely consistent with UNISDR's (2009) definition of DRM which encompasses all actions and measures taken for prevention, mitigation, and preparedness of disasters with the aim of lessening the devastation of hazards and preventing them from turning into disasters. The above outlined aspects of effective DRM in Turkey with focus on earthquakes particularly serve this aim; thus, they might well be considered as comprising the DRM system. Any shortcomings and/or problems related to these aspects would then function as a disaster-related ST. In view of this reasoning, effectiveness aspects of this particular system were taken into consideration when writing up the passage for disaster-related ST and operationalization of the system for DSJ.

CHAPTER 3

THE SECOND STUDY:
DEVELOPMENT OF THE GENERAL FATALISM (GFAT) SCALE

In this chapter, the second study devoted to development of a GFAT scale is presented. This study was conducted to test the reliability and validity of a newly developed scale (to be used for the main study, i.e., the experimental study) for assessing individual differences in dispositional fatalistic beliefs.

3.1 Introduction

In the last two decades, there has been a growing body of research on fatalism, especially in personality and health psychology to better understand its role in risk-taking and protective behaviors (see Esparza et al., 2015). Various conceptualizations of fatalism have been made in the psychological literature, with fatalism typically characterized as external locus of control, belief in predetermination, acceptance of reality, or a coping skill (Esparza et al., 2015; e.g., Acevedo, 2005; Futa, Hsu, & Hansen, 2001; Parker & Kleiner, 1966; Ross, Mirowsky, & Cockerham, 1983; Scheier & Bridges, 1995; Wheaton, 1983). Different conceptualizations of fatalism have been accompanied by a variety of scales aimed at measuring fatalism (Esparza et al., 2015). Most of these scales were developed and used in health research tapping domains such as cancer fatalism (Powe, 1995), diabetes fatalism (Egede & Ellis, 2010), and health beliefs (Shen et al., 2009). Furthermore, fatalism has been measured mostly with Rotter's Internal-External Locus of Control Scale (Rotter, 1966) and also with scales of different constructs (e.g., coping skill, learned helplessness, pessimism, etc.) (for a review, see Esparza, 2005).

In general, assessment of fatalism seems to be characterized by diversity of fatalism constructs, lack of established and reliable scales, and limited evidence for the validity of existing scales, especially in health research (Abraido-Lanza et al., 2007). Hence, there is a need to resolve issues of construct unity and psychometric quality concerning assessment of fatalism. A multidimensional fatalism measure in English and Spanish has been developed in a recent research based on the analysis of different fatalism scales by Esparza (2005) (Esparza et al., 2015). This measure consisted of five dimensions, namely, fatalism, helplessness, internality, luck, and divine control. The present study further aimed to develop a reliable scale for measuring fatalism in Turkish capturing general fatalistic beliefs in a sample embedded within a predominantly Muslim and collectivistic culture. For this purpose, the item development process was informed by qualitative interviews as well as review of existing measures of fatalism and related constructs (see Study 1). This study also aimed to investigate the relation of GFAT with previously validated measures of potentially relevant constructs including control orientation, just world belief, and religious orientation. Thus, the current study attempted to establish the factor structure of the newly developed GFAT scale as well as assess its convergent and discriminant validity.

3.2 Method

3.2.1 Participants

A total of 361 participants were recruited through convenience sampling. The sample consisted of 241 women (66.8%), 117 men (32.4%), and three (.8%) who did not indicate their gender. The mean age for the participants was 32.49 (*SD* = 12.97) ranging from 18 to 72. The majority of the sample was university graduates, single, and Muslim and reported having spent most of their lives in a metropolis city. Among participants who indicated themselves as belonging to a religion (*n* = 251; Muslim, Christian, Jewish, and also other), the mean reported level of religiousness was 2.40 (*SD* = .96). The mean reported levels of belief in fatalism was 2.75 (*SD* = 1.20). The sociodemographic characteristics of the sample are listed in Table 3.1.

Table 3.1 *Sociodemographic Characteristics of the Sample (N = 361, Study 2)*

Variables	Frequency	Percentage	M	SD	Range
Age			32.49	12.97	18-72
Gender					
Female	241	66.8			
Male	117	32.4			
Not indicated	3	.8			
Education					
Secondary school	5	1.4			
High school	96	26.6			
Vocational school	21	5.8			
University degree (undergraduate)	154	42.7			
University degree (postgraduate)	85	23.5			
Perceived SES			6.30	1.57	1-10
Marital status					
Single	219	60.7			
Married	117	32.4			
Divorced	19	5.3			
Widowed	6	1.7			
Place mostly lived in					
Town	3	.8			
Village	6	1.7			
Province	36	10.0			
City	90	24.9			
Metropolis city	226	62.6			
Political orientation			3.89	2.04	1-10
Religion					
Muslim	231	64.0			
Not belonging to any religion	110	30.5			
Other	20	5.5			
Religiousness (*N = 251*)			2.40	.96	1-5
Belief in fatalism			2.75	1.20	1-5

3.2.2 Measures

The survey included measures of sociodemographic information, GFAT, locus of control (LOC), belief in a just world (BJW), and religious orientation. All the measures can be seen in Appendix C.

3.2.2.1 Sociodemographic Measures

Participants reported their gender, age, marital status, place they lived in most of their life, education, perceived SES (based on participants' reports of their standing in their community relative to other people in the community, on a ladder with ten steps from *1* referring to people at the bottom, having the lowest standing to *10* referring to people at the top, having the highest standing), political orientation (based on participants' reports on a continuum ranging from 1 *left* to 10 *right*), religion, religiousness (based on a 5-point Likert scale from 1 *not at all* to 5 *very much*), and belief in fatalism (based on a 5-point Likert scale from 1 *not at all* to 5 *very much*).

3.2.2.2 General Fatalism (GFAT)

The item generation process was completed in two stages. In the first stage, an initial version of the item pool was developed based on the findings of the interviews conducted as part of the first study and the review of existing scales that contained useful material related to fatalistic beliefs (see Study 1). This evidenced the content validity of the measure. The initial version of the scale consisted of 54 items, 20 of which were reverse (see Appendix B). In the second stage, this item pool was revised by the researcher based on the feedback obtained from three social psychologists (the researcher's advisor and two members of the thesis committee) and four voluntary people (two psychology research assistants and two community members). The feedback focused on the evaluation of the wording and content of the items for redundancy, quality, ease of understanding, and relevance to the construct of interest (i.e., fatalism). In the revised version of the item pool, eight new items were added and some others were removed and wording of some of the items were improved for content validation purposes. Accordingly, the final version of the item pool to be used in the experimental study consisted 62 items, 22 of which were reverse (see Appendix C).

The 62-item GFAT scale was used for data collection and analysis. All items were scaled according to a 6-point Likert format in which participants were asked to indicate their degree of agreement (1 *strongly disagree,* 6 *strongly agree*). The neutral option *neither agree nor disagree* was not used for the sake of research purposes. Responses were coded such that higher scores indicate higher levels of beliefs of GFAT.

3.2.2.3 Locus of Control (LOC)

Control beliefs were measured with Rotter's Internal-External Locus of Control Scale (Rotter, 1966). This is a 29-item measure, with each item having two forced-choice options. For each of the 29 pair of statements, participants were asked to choose the one that they think is more representative of themselves. Six items function as buffer items, thus are not included in scoring. For the remaining 23 items, options corresponding to external LOC are scored one point (thus, options corresponding to internal LOC are scored zero point). The possible scores ranged from 0 to 23, with higher scores reflecting external LOC and lower scores reflecting internal LOC. Rotter's LOC scale was found to be a reliable measure as the Cronbach's alpha coefficients ranged between .65 and .79 for internal consistency reliability and .49 and .83 for test-retest reliability (Rotter, 1966). The scale was adapted to Turkish by Dağ (1991) and found the Cronbach alpha coefficient as .71 with a test-retest reliability of .83. The adapted version of the scale was also found to have construct and criterion validity (see Dağ, 1991). In the current study, Rotter's internal-external LOC scale was found to have an internal consistency reliability of .79 (n = 324).

3.2.2.4 Belief in a Just World

Just world beliefs were measured with the General Belief in a Just World (GBJW) Scale (Dalbert, 1999; Dalbert, Montada, & Schmitt, 1987). The scale consists of six items (e.g., "*Adaletin her zaman adaletsizliği yendiğine güvenim tamdır*") rated on a 6-point Likert type scale (1 = *strongly disagree*, 6 = *strongly agree*), with higher scores indicating higher levels of belief in a just world. It was found to be a reliable measure with the Cronbach's alpha coefficients of .82 and .81 for the German and English versions, respectively (as cited in Furnham, 2003). The scale was translated to Turkish by Yalçın (2006). A mean score of the responses given to the six items was used as an overall index for GBJW. In the current study, the Cronbach's alpha coefficient for the translated version of the GBJW scale was .78 (n = 332).

3.2.2.5 Religiosity Measures

Participants' religious tendencies were assessed with the revised version of the Muslim Religious Orientation Scale (MROS) and Intrinsic Religious Motivation (IRM) Scale. MROS was answered by the participants who reported their religion as Muslim and IRM scale was answered by the participants who reported themselves as belonging to a religion (i.e., Muslim, Christian, Jewish, and other).

MROS was originally developed by Harlak, Eskin, and Demirkıran (2008) and revised initially by Ercan (2009) and then by Ceylan (2016). In the current study, the recent modified version of MROS with 22 items (Ceylan, 2016) was used. This version of the scale consists of four subscales, namely, intrinsic religious orientation (IRO; 6 items; e.g., "*Allah'ın varlığını hissettiğim zamanlarda şükrederim*"), extrinsic religious orientation (ERO; 6 items; e.g., "*Toplumda iyi bir yer edinmek için dinime bağlı kalmaya çalışırım"*), quest religious orientation (QRO; 5 items; e.g., "*Ben değiştikçe dini inançlarım da benimle birlikte değişip gelişir*"), and fundamentalist religious orientation (FRO; 5 items; e.g., "*İnançlı bir kişi olarak dini kuralların yarım yamalak uygulanmasına karşıyım*"). Participants were asked to rate their agreement with each item on a 6-point Likert type scale (1 = *strongly disagree*, 6 = *strongly agree*) with higher scores indicating higher levels of religious orientation. A mean score of the responses given to each subscale was used as an overall index for IRO, ERO, QRO, and FRO. Ceylan (2016) has established the internal consistency reliability of the scale for a shorter version with 16 items based on the exploratory factor analysis findings for the 4-factor solution. The Cronbach's alpha coefficient for the scale was .84 with the subscales IRO (4 items; α = .74), ERO (4 items; α = .63), QRO (4 items; α = .79), and FRO (4 items; α = .84) showing sufficient internal consistency. In the current study, the Cronbach's alpha coefficient for the scale was .76 (n = 208) with the subscales IRO (6 items; α = .82), ERO (6 items; α = .76), QRO (5 items; α = .79), and FRO (5 items; α = .82) showing good internal consistency.

The IRM scale was developed by Hoge (1972) to assess religious devotion to God. It consists of ten items (e.g., "*Dinimi hayatımdaki tüm diğer işlere katmak için büyük çaba sarf ederim*") rated on a 4-point Likert type scale (1 = *strongly* *disagree*, 4 = *strongly agree*), with higher scores indicating higher levels of intrinsic religious motivation, i.e., higher levels of devotion to God. In the current study, the translated version of the scale (Yilmaz & Bahçekapili, 2015; α = .84) was used with ratings on a 6-point scale (1 = *strongly disagree*, 6 = *strongly agree*) (n = 226; α = .92). A mean score of the responses given to the ten items was used as an overall index for IRM.

3.2.3 Procedure

Ethical approval for conducting the study was granted from METU Human Subjects Ethics Committee (see Appendix F, Study 2). Data was collected online using a survey link generated by online survey software (Qualtrics, LLC). The study was announced via a social media outlet, namely, Facebook during February - April 2016. In the study announcement, participants were asked to complete an online survey on fatalism estimated to last approximately 20 minutes in average and the survey link was provided. There were no specific criteria required for participation other than age. Adults aged 18 and older were invited to participate in the study. In the beginning of the survey, participants were informed about the study and assured of confidentiality. Those who agreed with the consent form were able to proceed with the survey. In the survey, participants were first asked to indicate their demographic information (including gender, age, marital status, place they lived in most of their life, education, SES, political orientation, religion, religiousness, and belief in fatalism) and then to complete the GFAT measure. This was followed by measures of LOC, GBJW, and religious orientation (MROS and IRM). The order of these last three measures was counterbalanced across participants. Three fatalism items related to religion and the religious orientation measures were presented to participants who indicated that they belonged to a religion (Muslim, Christian, Jewish or other). At the end of the survey, participants were asked to indicate their impression about the study and share any comments they have. Upon completion of the survey, participants were debriefed and thanked for their collaboration.

3.3 Results

All data analyses were performed using IBM SPSS v.20. There was no need to evaluate the data for the amount and distribution of missing values as the survey was set up on the online survey software (Qualtrics, LLC) to record only the responses of participants who completed all the fatalism items. Data was screened for univariate outliers on the fatalism items. Thirty two cases with *z* scores outside the range of -3.29 and 3.29 were excluded, leaving 361 participants. For the factor analyses, listwise deletion was used for managing missing values on the three fatalism items related to religion. The reason for having these missing values was that participants who described their religion as *not belonging to any religion* (n = 110) were not presented with these items.

3.3.1 Factor Structure

An exploratory factor analysis with varimax rotation was conducted on the 62 items of the GFAT scale. Examination of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity revealed that data was suitable for factor analysis (KMO = .92; $\chi^2(1891) = 9399.17$, $p < .001$) (see Tabachnick & Fidell, 2007). Principal components was used as the extraction method for examining the factor structure of the 62 fatalism items. The maximum number of iterations was set at 99 and .40 was used as the cut-off point for factor loadings.

The Kaiser criterion of eigenvalues over 1.0, the Cattell scree plot test, parallel analysis, and the interpretability of factors were the four criteria used for determining the number of factors. In the initial analysis, 12 factors had eigenvalues over 1.0, explaining 65.22% of the total variance. However, the scree plot and parallel analysis supported a seven-factor structure. Thus, exploratory factor analysis with varimax rotation limited to seven factors was conducted on the 62 fatalism items and revealed seven interpretable factors. Four items, whose communality scores were lower than 3.5, did not load on any of the factors ("*İnsan kaderine boyun eğmemelidir*", "*Hayatı olduğu gibi kabullenmemek lazım*", "*İnsanın neyi nasıl yaşayacağı önceden bilinemez*", "*Hayatta mucizeler olur*"). The seven-factor solution with a total of 58 items (whose communality scores were higher than

3.5) accounted for 55.97% of the variance. When examined based on their item content, the factors were named as *destiny* (factor 1), *functionality* (factor 2), *helplessness* (factor 3), *submission* (factor 4), *valuation* (factor 5), *uncontrollability* (factor 6), and *luck* (factor 7). The factor structure of the scale with items, factor loadings, item-total correlations, eigenvalues, proportions of explained variance, and reliability values are summarized in Table 3.2.

The first factor *destiny* explained 15.38% of the total variance and consisted of 17 items reflecting destiny beliefs (e.g., "*Human life is predetermined by a power/entity superior than humans themselves*"). The second factor *functionality* explained 10.76% of the total variance and included 11 items tapping functions of fatalism (e.g., "*Faith in fatalism relieves people psychologically*"). The third factor *helplessness* explained 6.72% of the total variance and included 7 items representing fatalism as helplessness (e.g., "*There are some things in life that a person's power is not sufficient*"). The fourth factor *submission* explained 6.59% of the total variance and consisted of 8 items pertaining to submission to fate, in other words, ineluctability of fatalism (e.g., "*No matter how much one tries, it's not possible to change one's fate*"). The fifth factor *valuation* explained 5.85% of the total variance and included 6 items reflecting fatalism as of having high value (e.g., "*Resorting to fatalism passivates the person*" – reverse item). The sixth factor *uncontrollability* explained 5.61% of the total variance and consisted of 5 items pertaining to uncontrollability of fate (e.g., "*With reason and logic one can direct his/her own fate*" – reverse item). The seventh factor *luck* explained 5.07% of the total variance and consisted of 4 items representing fatalism in relation to belief in luck (e.g., "*Being lucky is not important in life*" – reverse item).

Table 3.2 *Factor Structure of the GFAT Scale*

Factors (n = 7) and Items (N = 58)	Item-Total Correlations	Factor Loadings						
		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
Factor 1: Destiny *(17 items)*								
1. Doğum, ölüm gibi şeyler önceden belirlenmiştir. (43)	.81	.82						
2. Başımıza ne geleceğini bir Allah/Tanrı bilir. (50)	.80	.81						
3. İnsanın hayatı, kendinden daha üstün bir güç/varlık tarafından belirlenmiştir. (47)	.75	.77						
4. Allah'ın/Tanrı'nın herkes için bir planı vardır. (49)	.78	.74						
5. Bizim için neyin iyi ya da kötü olduğunu Allah/Tanrı bilir. (48)	.74	.72						
6. Kader, batıl inançtan başka bir şey değildir.* (19)	.76	.72						
7. İnsanın başına gelecekler ezelden bellidir. (44)	.76	**.69**			.44			
8. Kader, insanın hayatında önemli bir yere sahiptir. (57)	.77	.64						
9. İnsanın hayatını belirleyen kendinden daha üstün bir irade yoktur.* (51)	.65	.64						
10. Hayatta hiçbir şey önceden belirlenmiş değildir.* (45)	.66	.62						
11. Her işte bir hayır vardır. (20)	.70	.62						
12. Elinden geleni yaptıktan sonra gerisi kaderdir.* (35)	.71	.61						
13. Kader, hayatın birçok alanını ilgilendirir. (59)	.75	.59						
14. İnsan, kaderinde ne varsa onu yaşar. (22)	.71	**.52**			.48			
15. Kader, insanın hayatına denge getirir. (7)	.67	**.51**	.43					
16. Kader, insan hayatı için belirleyici bir şey değildir.* (61)	.55	.44						
17. Bir şeyin olacağı varsa olur. (21)	.58	.42						

Table 3.2 *(continued)*

Factor 2: Functionality *(11 items)*				
18. Kader inancı insanı psikolojik olarak rahatlatır. (2)	.74		.84	
19. Kadere inanmak insanı teselli eder. (1)	.68		.79	
20. Kader, insanın başına gelenleri kabullenmesini kolaylaştırır. (10)	.68		.77	
21. Bir çıkış yolu bulamadığında olayları kadere bağlamak insanı rahatlatır. (4)	.62		.74	
22. Kadere inanan insan daha sabırlı olur. (8)	.66		.73	
23. Kadere inanmak, hayata tutunmayı kolaylaştırır. (9)	.72		.69	
24. Olumsuz olaylar/yaşantılar sonrasında kadere sığınmak insana güç verir. (5)	.70		.68	
25. Kader inancı, insana zorluklara rağmen hayata devam etme gücü verir. (13)	.68	.46	**.60**	
26. İnsan kadere inanarak yaşadıklarına anlam yükler. (6)	.57		.58	
27. İnsan, kadere inanarak hayatındaki olumlu ve olumsuz olaylar/durumlar arasında denge kurar. (12)	.57		.58	
28. Kadere inanmak, insanın değiştiremeyeceği şeyleri kabul etmesine yardımcı olur. (11)	.56		.57	
Factor 3: Helplessness *(7 items)*				
29. İnsan bazı şeylere engel olamaz. (32)	.64			.71
30. Hayatta insanın gücünün yetmediği şeyler vardır. (37)	.67			.70
31. İnsanın seçemediği şeyler vardır. (30)	.59			.69
32. Bazı şeyler insanın elinde değildir. (39)	.65			.67
33. İnsanın açıklama getiremediği şeyler vardır. (38)	.58			.59
34. İnsanın çaresiz kaldığı zamanlar olur. (36)	.46			.56
35. Hayatta bazı şeylere razı olmak gerekir. (40)	.45			.54

Table 3.2 *(continued)*

Factor 4: Submission *(8 items)*							
36. Ne kadar çabalarsa çabalasın, insanın kaderini değiştirmesi mümkün değildir. (24)	.67				**.65**		.43
37. Kader, insanın elinde olan bir şey değildir. (29)	.56				.63		
38. İnsan, başına gelecekleri değiştiremez. (31)	.63				.62		
39. İnsanın her yaşadığı kaderdendir. (58)	.63	.41			**.59**		
40. Kader, insan hayatının önceden belirlenmiş olmasıyla ilgilidir. (42)	.39				.47		
41. İnsanın kaderinde olanı yaşaması onun iyiliğinedir. (3)	.67				.47		
42. Başa gelen çekilir. (23)	.37				.43		
43. Sorgulamadan kadere inanmak sağlıklı değildir.* (14)	.42				.43		
Factor 5: Valuation *(6 items)*							
44. Kadere sığınmak insanı pasifleştirir.* (17)	.69					.75	
45. Olayları kadere bağlamak sadece bahanedir.* (15)	.66					.62	
46. Hayatın gidişatını kadere bağlamak insanı çıkmaza sokar. * (16)	.50					.59	
47. Kadercilik, amaçsız yaşamak gibidir.* (18)	.58					.58	
48. İnsanlar kadere gereğinden fazla önem veriyor.* (60)	.58					.55	
49. Her şeyi kadere bağlamak anlamsızdır.* (62)	.50					.42	

Table 3.2 *(continued)*

Factor 6: Uncontrollability *(5 items)*								
50. İnsan akıl ve mantıkla kaderini yönlendirebilir.* (28)	.58						.71	
51. İnsan, iradesiyle kendi kaderini yaratabilir.* (26)	.61						.69	
52. Hayatın kontrolü insanın kendi elindedir. * (34)	.53						.68	
53. İnsanın neyi nasıl yaşayacağı kendisine bağlıdır.* (33)	.47						.63	
54. İnsan kararlı olursa kaderini değiştirebilir.* (27)	.56						.63	
Factor 7: Luck *(4 items)*								
55. Hayatta şanslı olmanın bir önemi yoktur.* (55)	.65							.83
56. Şans hayatın bir parçasıdır. (54)	.73							.82
57. Bazı şeyler şans işidir. (52)	.72							.81
58. Hayatta tesadüflere yer yoktur.* (56)	.53							.71
Eigenvalue		9.53	6.67	4.17	4.09	3.63	3.48	3.15
Explained variance		15.38	10.76	6.72	6.59	5.85	5.61	5.07
Internal consistency (α)		.95	.91	.82	.82	.82	.78	.83

Note. For factor analysis, $N = 251$ (listwise deletion method was used to deal with missing data). Item-total correlations and internal consistency values are based on $N = 251$ for Factor 1 and $N = 361$ for the remaining six factors. Original item numbers (i.e., item numbers used in Study 1) are given in parentheses. Bold loadings indicate the subscale that the cross-loaded items are part of.
** Reverse items (n = 19)*

The item-total correlations ranged between .81 and .55 for *destiny* (the first factor), .74 and .56 for *functionality* (the second factor), .67 and .45 for *helplessness* (the third factor), .67 and .37 for *submission* (the fourth factor), .69 and .50 for *valuation* (the fifth factor), .61 and .47 for *uncontrollability* (the sixth factor), and .73 and .53 for *luck* (the seventh factor). With the overall range between .37 and .81, all the item-total correlations were above the criteria of at least .30 (see Tabachnick & Fidell, 2007).

The reliability of the GFAT subscales were assessed with Cronbach's alpha coefficient for internal consistency. The alpha coefficient of the subscales ranged between .78 and .95, thus were all higher than the criteria of .70. These results indicate that the subscales were homogeneous and reliably measured the seven dimensions of general fatalistic beliefs.

3.3.2 Subscales

Intercorrelations among the seven subscales of GFAT are provided in Table 3.3. A mean score of the responses given to the subscales was used as the score for each subscale. Results indicated that all the subscales were significantly and positively correlated with each other (ranging from .18 to .72, $p < .01$), except for luck. The only subscale that luck was significantly correlated with was helplessness ($r = .17$, $p < .01$). Luck was not correlated with destiny, functionality, submission, valuation, and uncontrollability. The subscales were further examined with regard to their association with participants' self-reported levels of religiousness and belief in fatalism. They all correlated significantly with religiousness (ranging from -.25 to .58, $p < .01$; except for *uncontrollability* with $r = .05$, $p = .41$) and belief in fatalism (ranging from -.16 to .82, $p < .01$) (also see Table 3.3).

Table 3.3 *Correlations among the GFAT Subscales, Religiousness, and Belief in Fatalism*

Subscales	REL	FAT	F1	F2	F3	F4	F5	F6	F7
Religiousness (REL)	-								
Belief in fatalism (FAT)	.57**	-							
Destiny (Factor 1)	.58**	.82*	-						
Functionality (Factor 2)	.23**	.40**	.45**	-					
Helplessness (Factor 3)	.32**	.43**	.54**	.47**	-				
Submission (Factor 4)	.30**	.53**	.72**	.37**	.43**	-			
Valuation (Factor 5)	.38**	.64**	.70**	.44**	.43**	.56**	-		
Uncontrollability (Factor 6)	.05	.30**	.43**	.18**	.29**	.54**	.41**	-	
Luck (Factor 7)	-.25**	-.16**	-.08	.07	.17**	-.00	-.05	.05	-

Note. N = 361. Pairwise deletion method was used to deal with missing data (N = 251 for religiousness correlations). Higher scores on the subscales (rated on a 6-point Likert scale with 1 = *strongly disagree*; 6 = *strongly agree*) indicate higher levels of destiny, functionality, helplessness, submission, valuation, uncontrollability, and luck. Higher ratings on self-reported religiousness (1 = *not at all*; 5 = *very much*) and fatalism indicate higher levels of religiousness and belief in fatalism. Fn = Factor n.
* $p < .05$, ** $p < .01$.

3.3.3 Gender Differences

Table 3.4 lists gender differences for the seven subscales of GFAT, providing descriptive information regarding the variables of interest. The results revealed that males and females significantly differed with respect to their scores on *destiny* and *valuation*. In particular, females showed significantly higher levels of destiny belief (M = 3.72, SD = 1.24) than males did (M = 3.22, SD = 1.35), $t(212.14) = 3.40$, p = .001. Similarly, females viewed fatalism as a valuable faith significantly higher (M = 2.82, SD = 1.03) than males did (M = 2.51, SD = .90), $t(258.9) = 2.92$, p = .004. However, males and females did not differ with respect to their scores on functionality, helplessness, submission, uncontrollability, and luck.

3.3.4 Validity

Having established the factor structure of the GFAT scale, its convergent and discriminant validity were assessed based on the factors' correlations with the selected criterion measures. The correlations between the seven fatalism subscales and the measures of LOC, GBJW, MROS (i.e., IRO, ERO, QRO, and FRO), and IRM are shown in Table 3.5. It was reasoned that the subscales would show significant associations with the criterion variables, particularly, positive correlations with LOC, GBJW, IRO, ERO, FRO, and IRM and a negative correlation with QRO.

The first five subscales, namely, *destiny, functionality, helplessness, submission*, and *valuation* were significantly correlated with all the criterion variables. As expected, higher scores on these subscales were associated with external LOC (ranging from .26 to .43), higher levels of GBJW (ranging from .12 to .39), IRO (ranging from .24 to .57), ERO (ranging from .30 to .60), and FRO (ranging from .16 to .61), lower levels of QRO (ranging from -.19 to -.47), and intrinsic religious motivation (ranging from .38 to .74). In fact, it was the destiny factor that showed the highest correlations with religiosity measures (ranging from .47 to .74). As for *uncontrollability*, as expected, higher scores on this subscale were associated with external LOC (r = .33), higher levels of FRO (r = .16), intrinsic religious motivation

(r = .13), and lower levels of QRO (r = -.76). Notably, the highest correlation among all was the one between *uncontrollability* and QRO. There were no significant correlations between *uncontrollability* and the criterion variables GBJW, IRO, and ERO. As for *luck*, higher scores on this subscale were associated with external LOC (r = .37), lower levels of GBJW (r = -.31), FRO (r = -.27), and extrinsic religious motivation (r = -.31). There were no significant correlations between *luck* and the criterion variables of IRO, ERO, and QRO. Thus, FRO was the only MROS subscale that *luck* was associated with.

Overall, these results indicate that people high in GFAT (with exceptions for the subscales *uncontrollability* and *luck*) tended to have extrinsic LOC and higher levels of GBJW as well as exhibit higher levels of IRO, ERO, and FRO but lower levels of QRO and IRM (i.e., higher levels of devotion to God). While the expected pattern of correlations provided support for the convergent validity of the GFAT subscales, the somewhat unexpected pattern of correlations for *uncontrollability* and *luck* underscore the discriminant validity of these two subscales.

Table 3.4 *Gender Differences for the GFAT Subscales*

Subscales	Overall (N = 358)		Females (n = 241		Males (n = 117)		t	p	*95% CI*
	M	*SD*	*M*	*SD*	*M*	*SD*			
Destiny	3.56	1.29	3.72	1.24	3.22	1.35	3.40[a]	.00	[.21, .80]
Functionality	4.18	.93	4.24	.92	4.06	.92	1.64	.10	[-.03, .38]
Helplessness	4.62	.73	4.60	.74	4.65	.69	-.57	.57	[-.21, .11]
Submission	2.71	.86	2.72	.84	2.70	.91	.29	.77	[-.16, .22]
Valuation	2.72	1.00	2.82	1.03	2.51	.90	2.92[a]	00	[.10, .52]
Uncontrollability	2.40	.73	2.41	.71	2.38	.77	.36	.72	[-.13, .19]
Luck	4.40	1.00	4.38	1.02	4.44	.95	-.53	.60	[-.28, .16]

Note. N = 358 (Three participants who did not indicate their gender were excluded from N = 361). Higher scores on the subscales (rated on a 6-point Likert scale with 1 = *strongly disagree*; 6 = *strongly agree*) indicate higher levels of destiny, functionality, helplessness, submission, valuation, uncontrollability, and luck.

[a] The assumption of equality of variances was not met for the subscales *destiny* and *valuation*. For these, values for "equal variances not assumes" were reported.

Table 3.5 *Correlations of the GFAT Subscales with LOC, GBJW, MROS, and IRM*

Subscales	LOC (n = 324)	GBJW (n = 332)	MROS (n = 208)				IRM (n = 226)
			IRO	ERO	QRO	FRO	
Destiny (Factor 1)	.43**	.39**	.57**	.60**	-.47**	.61**	.74**
Functionality (Factor 2)	.26**	.12*	.31**	.40**	-.21**	.36**	.38**
Helplessness (Factor 3)	.41**	.13*	.42**	.30**	-.19**	.37**	.46**
Submission (Factor 4)	.39**	.35**	.29**	.41**	-.44**	.51**	.43**
Valuation (Factor 5)	.41**	.25**	.24**	.36**	-.31**	.33**	.43**
Uncontrollability (Factor 6)	.33**	-.06	.06	.08	-.76**	.16*	.13*
Luck (Factor 7)	.37**	-.31**	-.02	-.13	.05	-.27**	-.31**

Note. Pairwise deletion method was used to deal with missing data. LOC = Locus of Control; GBJW = General Belief in a Just World; MROS = Muslim Religious Orientation Scale; IRO = Intrinsic Religious Orientation; ERO = Extrinsic Religious Orientation; QRO = Quest Religious Orientation; FRO = Fundamentalist Religious Orientation. Higher scores on the GFAT subscales (rated on a 6-point Likert scale with 1 = *strongly disagree*; 6 = *strongly agree*) indicate higher levels of destiny, functionality, helplessness, submission, valuation, uncontrollability, and luck. Higher scores on LOC, GBJW, MROS, and IRM indicate external LOC (with lower scores indicating internal LOC); higher levels of belief in a just world; higher levels of IRO, ERO, QRO, and FRO; and higher levels of intrinsic religious motivation (i.e., higher levels of devotion to God), respectively.
* $p < .05$, ** $p < .01$.

In order to further assess the discriminant validity of the GFAT subscales, differentiation of GFAT from LOC was examined based on the correlations of each with the criterion variables GBJW, MROS (i.e., IRO, ERO, QRO, and FRO), and IRM. Fatalism subscales all showed significant correlations with GBJW (ranging from .12 to .39; except for the correlation between *uncontrollability* and GBJW, which was insignificant) and IRM (ranging from -.31 to .74) whereas LOC did not correlate with GBJW (r = -.06, p = .29) and IRM (r = .13, p = .064). As for the MROS subscales, in general, fatalism subscales tended to have higher correlations with IRO (ranging from .24 to .57; except for *uncontrollability* and *luck* which were insignificant), ERO (ranging from .30 to .60; except for *uncontrollability* and *luck* which were insignificant), and QRO (ranging from -.19 to -.76; except for *luck* which was insignificant) than LOC did (r = .18, p < .05; r = .22, p < .01; and r = -.14, p < .05 respectively for IRO, ERO, and QRO). Fatalism subscales all showed significant correlations with FRO (ranging from .16 to .61) whereas LOC did not correlate with FRO (r = .12, p = .082). These correlational patterns point out that the GFAT subscales shared more of the variance with GBJW, MROS, and IRM than does LOC. Thus, the results indicate that GFAT subscales are related to, but different from, LOC.

3.4 Discussion and Conclusion

The second study established the factor structure of the newly developed GFAT scale as well as its convergent and discriminant validity. The findings of the exploratory factor analysis demonstrated that the measure developed in Turkish with 58 items is reliable and valid and also has a good factor structure. Though in the literature a fatalism orientation scale was developed in Turkish with a sample of high school and university students (Kaya & Bozkur, 2015), the item generation process of this scale was not informed by qualitative interviews - it was based only on literature and expert opinions for the initial version of the item pool and a pilot study for its final version. The developed measure of fatalism orientation consisted of a total of 24 items consisting of the subscales predetermination, personal control, superstition, and luck. The present study further provided a measure of fatalism whose development, particularly, item generation process was also informed by qualitative interviews. In this respect, GFAT scale consisted of more dimensions as there were additional domains tapping fatalism beliefs pertaining to functionality, submission, and valuation.

The GFAT subscales seem to portray a conceptualization that is consistent with the typical characterization of fatalism in the psychological literature (e.g., external LOC, belief in predetermination; also see Esparza et al., 2015). However, the findings notably demonstrated that fatalism is related to but at the same time distinguishable from external LOC. This finding is consistent with what Norenzayan and Lee (2010) proved in their study investigating cultural variations in fate attributions. As have been noted by these researchers, establishing the uniqueness of the fatalism construct – in the present study with a psychometric tool – negates the confounding of existing research of fatalism with other related constructs (Norenzayan & Lee, 2010). Thus, in addition to development of a reliable and valid measure for assessing general fatalistic beliefs, the present study can be further considered to contribute to the existing psychological research on fatalism by delineating its associations with religiosity measures in a predominantly Muslim culture. Overall, it can be concluded that the GFAT scale can be used as a reliable and valid measure in future studies to investigate the role of different fatalism dimensions in various attitudes and behaviors. This would be especially fruitful in understanding the psychological processes involved in risk-taking and protective behaviors pertaining to major life events such as earthquakes, traffic accidents, and diseases.

CHAPTER 4

THE THIRD STUDY:
HYPOTHESIS TESTING WITH EXPERIMENTAL DESIGN

In this chapter, the third study devoted to testing of the research hypotheses delineated in the first chapter is presented. This study was conducted to experimentally investigate, after controlling for EQEXPO, (*i*) how MS and ST influence fatalism and system justification (as indirect and direct forms of bolstering the perceived legitimacy of the system, respectively) and also individual earthquake preparedness, and whether this influence differs with respect to (*ii*) general and specific (i.e., disaster-related) levels of MS and ST.

4.1 Method

4.1.1 Participants

The sample of the experimental study consisted of 308 participants (194 women, 112 men, 2 not indicated) recruited online through convenience sampling. The mean age was 26.41 (*SD* = 12.17). Of the participants, 132 were recruited via social media (Facebook) and 176 (undergraduate students from TOBB University of Economics and Technology, Ankara [*n* = 15] and Bülent Ecevit University, Zonguldak [*n* = 161]) participated in exchange for partial course credit. The sociodemographic characteristics of the sample are listed in Table 4.1

Table 4.1 *Sociodemographic Characteristics of the Sample (N = 308, Study 3)*

Variables	Frequency	Percentage	M	SD	Range
Age			26.41	12.17	17-74
Gender					
Female	194	63			
Male	112	36.4			
Not indicated	2	.6			
Education					
Primary school	1	.3			
High school	158	51.3			
Vocational school	21	6.8			
University degree (undergraduate)	92	29.9			
University degree (postgraduate)	96	11.7			
Perceived SES			5.78	1.58	1-10
Income					
below 1499 TL	65	21.1			
1500 - 3999 TL	129	41.9			
4000 - 5999 TL	59	19.2			
above 6000 TL	55	17.9			
Employment status					
Employed	66	21.4			
Self-employed	18	5.8			
Student	199	64.6			
Retired	15	4.9			
Unemployed	0	3.2			
Home status					
Owner	71	23.1			
Family owned	91	29.5			
Renter	86	27.9			
Other	60	19.5			
Marital status					
Single	232	75.3			
Living with partner	2	.6			
Married	68	22.1			
Divorced	5	1.6			
Widowed	1	.3			
Place mostly lived in					
Town	23	7.5			
Village	4	1.3			
Province	65	21.1			
City	75	21.4			
Metropolis city	140	45.5			
Political orientation			4.89	1.76	1-10
Religion					
Muslim	263	85.4			
Not belonging to any religion	31	10.1			
Other	14	4.6			
Religiousness			2.54	1.10	0-5
Belief in fatalism			2.93	1.12	1-5

4.1.2 Design and Procedure

Participants were randomly assigned to one of 9 conditions of a 3 (MS: *death* vs. *earthquake* vs. *control*) X 3 (ST: *general* vs. *disaster-related* vs. *control*) between-subjects design with EQEXPO as the covariate. The study employed three sets of dependent variables, which were fatalism, system justification, and earthquake preparedness. Both fatalism and system justification were assessed at two levels, namely, general and specific (i.e., disaster-related). Fatalism involved GFAT (consisting of the subscales destiny, functionality, helplessness, submission, valuation, uncontrollability, and luck) and DFAT (consisting of the variables earthquake fatalism, earthquake blame, damage blame, and damage preventability). System justification included GSJ and DSJ. Earthquake preparedness consisted of four variables, namely, general preparedness, intention, self-efficacy, and outcome expectancy.

Ethical approval for conducting the study was granted from METU Human Subjects Ethics Committee (see Appendix F, Study 3). The study was announced as an online study ostensibly about personality, cognition and social attitudes about various topics with an estimated duration of 30-40 minutes. There were no specific criteria required for participation other than age. Adults aged 18 and older were invited to participate in the study. Qualtrics, an online survey-based research platform that allows random allocation of participants to different experimental conditions, was used for data collection which took place in October 2016.

Upon consenting to participate in the study, all participants completed the measures presented consecutively with no break between them. Initially, participants were randomly assigned to the experimental manipulation conditions for MS and ST. Both of the manipulations were followed by their respective manipulation check measures, DTA and system evaluation. The order of the two experimental manipulations was counterbalanced across participants. Participants then completed the measures for the dependent variables fatalism and system justification (both at general and specific levels), and also earthquake preparedness. The order of fatalism and system justification measures (both within and between) was counterbalanced across participants, except for preparedness which was presented as the last dependent measure. Finally, participants completed the measures for EQEXPO and demographic information. At the end of the survey, participants were asked to indicate their impression about the study and share any comments they have. Upon completion of the survey, participants were debriefed and thanked for their collaboration (for the survey flow, see Figure 4.1).

4.1.3 Measures

The survey included measures of experimental manipulations for MS and ST and their manipulation checks (DTA and system evaluation, respectively), general and disaster-related fatalism (GFAT and DFAT, respectively), general and disaster-related system justification (GSJ and DSJ, respectively), earthquake preparedness, EQEXPO, and sociodemographic information. All the measures can be seen in Appendix D.

4.1.3.1 Manipulation of Mortality Salience (MS)

MS manipulation was induced by asking participants to answer two open-ended questions about either their own death, their own experience of an earthquake, or a neutral topic (watching television). The death and control conditions included the typical MS manipulation questions used in TMT research (Pyszczynski et al., 2004; e.g., Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989). In particular, participants responded to the questions "*Please briefly describe the emotions that the thought of your own death (or watching television) arouse in you*" and "*Jot down, as specifically as you can, what you think will happen to you as you physically die (or as you watch television)*". For the earthquake condition, these two questions were reworded to reflect EQEXPE. Specifically, participants in this condition responded to the questions "*Please briefly describe the emotions that the thought of you experiencing an earthquake arouse in you*" and "*Jot down, as specifically as you can, what you think will happen to you as you physically experience a major earthquake*". Hence, the manipulation consisted of three conditions (*death* vs. *earthquake* vs. *control*) to which participants were randomly assigned. In all three conditions, the measure was introduced as "The Projective Life Attitudes Assessment" to obscure the aim of the MS manipulation.

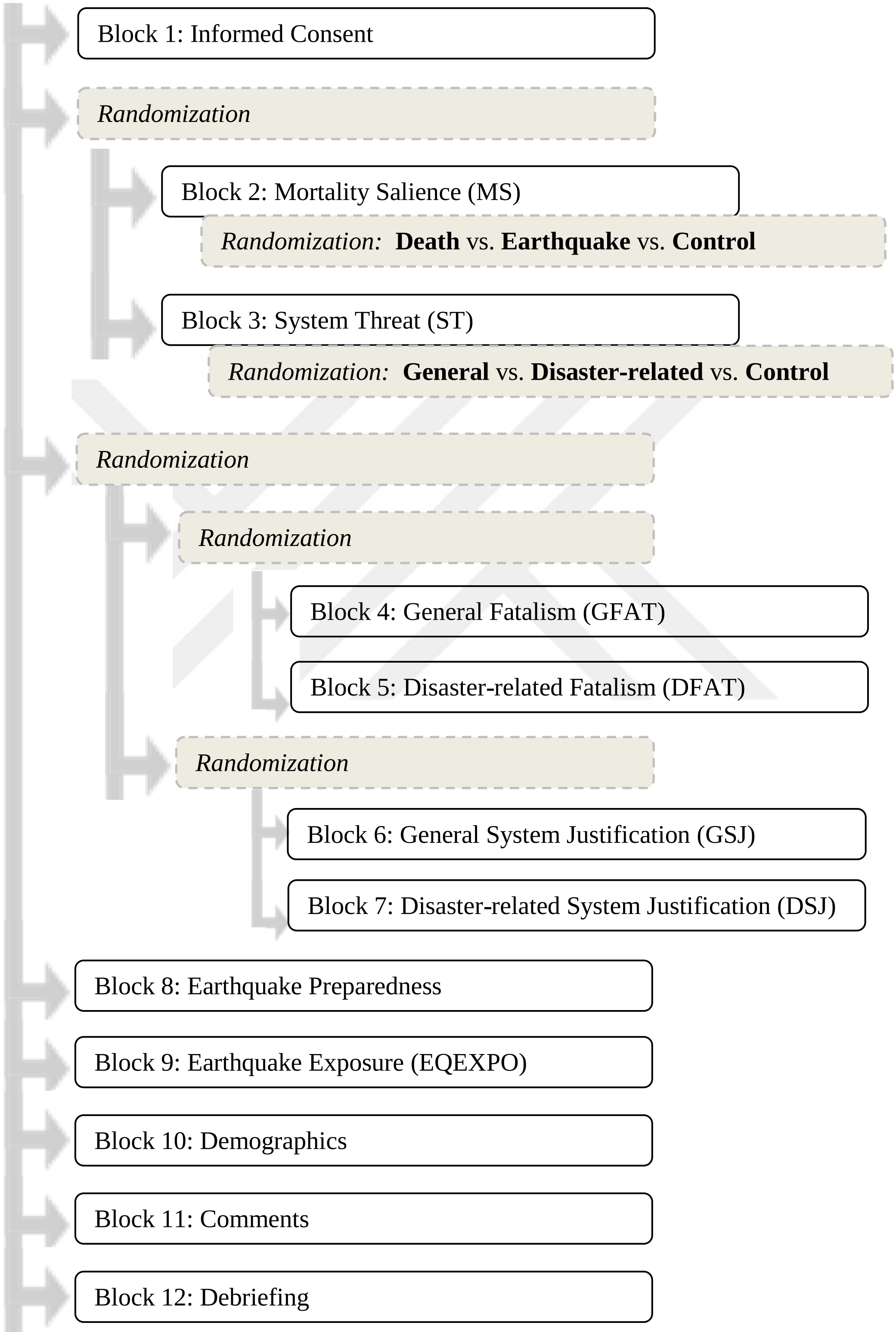

Figure 4.1 *Survey Flow in Qualtrics*

4.1.3.2 Death-thought Accessibility (DTA)

A word-fragment completion task developed by the researcher was used to assess the accessibility of death-related cognitions, serving as a manipulation check for the MS conditions. Following the MS manipulation, participants were presented with a list of 25 fragment words which they were asked to complete with the first word that comes to their minds by filling in the missing letters. Seven fragments (e.g., _ E_ EN) can be completed with either a death-related (e.g., *kefen*) or a neutral word (e.g., *keten*). Other six possible death fragments are ME_A_ (*mezar* or *mekan*), _ E_ AZ_ (*cenaze* or *terazi*), _ _ PRAK (*toprak* or *yaprak*), _ _ÜM (*ölüm* or üzüm), TA_ _T (*tabut* or or *taşıt*), _ÖM_EK (*gömmek* or *gömlek*). Higher numbers of death-related words that a participant completes indicate higher DTA. Of the 25 fragment words, the remaining 18 can be completed only with neutral words (e.g., K_ L_UK as *koltuk*; DE_T_R as *defter*). Higher DTA in the death and earthquake conditions compared to the control condition would prove the effectiveness of the MS manipulation. The DTA measure also provided a delay between the MS manipulation and the dependent variable assessment. The delay task enables death-related thoughts to remain accessible but be outside of consciousness as previous research on TMT has shown that the MS effect is stronger when death-related thoughts are highly accessible but not conscious (e.g., Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994).

4.1.3.3 Manipulation of System Threat (ST)

ST manipulation was designed to activate the need to justify the system for which participants were randomly assigned to one of the three conditions, namely, general ST, disaster-related ST, and no threat (the control condition). In the two threat conditions, participants were asked to read one of two passages where the legitimacy and stability of two different systems were threatened with focus on system problems. The passages were introduced as excerpts ostensibly written by a local journalist about how Turks feel about the state of Turkey in general or specifically about the DRM in Turkey. A bogus reference was given to increase credibility of the passages. Participants were asked to read the passage as carefully as possible to become familiar with it so that they could respond to a series of filler questions about the passage (evaluation of the journalist's writing skills with regard to seven criteria).

For the general ST condition, the passage used by Kay et al. (2005) and adapted to Turkish by Solak (2015) was used. In this condition, participants read the following passage in which the social, economic, and political conditions in Turkey were portrayed by the journalist as worsening:

> These days, many people in Turkey feel disappointment and worry with the nation's condition. Many citizens feel that the country has reached a low point in terms of social, economic, and political factors. People do not feel as safe and secure as they used to, and there is a sense of uncertainty, pessimism and chaos regarding the country's future. Many believe that the country conditions are getting worse, and any day now chaos and anarchy could erupt around us. People do not see stability in social, economic, and political arenas and believe that the county is unlivable. Many people believe that the system and order of Turkey are not for hard working and honest people. That is, people believe that in their daily lives, they do not get what they deserve and pulling strings, injustice, and exploitation are widespread. It seems that many countries in the world are enjoying much better social, economic, and political conditions than Turkey. More and more people express a willing to leave Turkey and emigrate to other nations.

In the disaster-related ST condition, participants instead read a passage where the DRM in Turkey was criticized. The passage used in the general ST condition was adapted by the researcher to refer to disaster-related ST. The adaptation was based on the themes on the perceptions of DRM in Turkey, derived from the qualitative analysis of the interviews conducted as part of the first study as well as on the UNISDR's (2009) definition of DRM. These themes were further used to operationalize DRM to be given in the instruction of this condition for ease of understanding of the passage.

On the other hand, in the no ST condition, participants read a passage that was neither related to the social, economic, and political conditions nor the DRM in Turkey. The passage in this condition focused on the recent fall fashion trend in Turkey. For this, an online newspaper article about the fall 2015 trend in the world (Süzmen, 2015) was shortened and modified to refer to fall trend of 2016 in Turkey.

4.1.3.4 System Evaluation

The effectiveness of the ST manipulation was assessed by asking participants to evaluate Turkey regarding the social, economic, and political conditions (i.e., nation - the topic of the general ST condition), DRM (the topic of the disaster-related ST condition), and fall fashion (the topic of the no ST condition). Hence, all participants rated Turkey in all the three topics. System evaluation was presented as one of the filler questions that the participants were asked to respond to about the passage. Ratings were done using a 9-point Likert type scale ranging from *not very favorable* (1) to *very favorable* (9) with higher scores indicating more favorable evaluation. The effectiveness of the ST manipulation would be confirmed if nation and DRM evaluations in the general and disaster-related ST conditions are more favorable than evaluations in the no threat condition.

4.1.3.5 General Fatalism (GFAT)

The 58-item GFAT scale developed in the second study was used to assess fatalism in general. It aims at revealing individual differences in dispositional fatalistic beliefs. The scale consists of seven subscales, namely, destiny (17 items; α = .95), functionality (11 items; α = .91), helplessness (7 items; α = .82), submission (8 items; α = .82), valuation (6 items; α = .82), uncontrollability (5 items; α = .78), and luck (4items; α = .83) (also see Table 3.2 and Appendix D). Participants were asked to indicate on a 6-point Likert type scale (1 = *strongly disagree*, 6 = *strongly agree*) their degree of agreement.

The factor structure of the GFAT scale was further tested in the experimental study. An exploratory factor analysis with promax rotation was conducted on the 58 items of the GFAT scale. Examination of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity revealed that data was suitable for factor analysis (KMO = .94; χ^2(1653) = 10532.67, p < .001) (see Tabachnick & Fidell, 2007). Principal components was used as the extraction method for examining the factor structure of the 58 fatalism items. The maximum number of iterations was set at 99 and .40 was used as the cut-off point for factor loadings. The Kaiser criterion of eigenvalues over 1.0, the Cattell scree plot test, parallel analysis, and the interpretability of factors were the four criteria used for determining the number of factors. In the initial analysis in which all the items had communalities greater than .40, nine factors had eigenvalues over 1.0, explaining 61.37% of the total variance. However, the scree plot and parallel analysis supported a seven- and six-factor structure, respectively. Overall, based on theoretical interpretability and the seven-factor structure obtained in the second study (see chapter 3), exploratory factor analysis (with promax rotation and principal components as the extraction method) limited to seven factors was conducted on the 58 GFAT items.

As expected and consistent with the original factor structure, the findings revealed seven interpretable factors explaining 57.58% of the total variance. However, two *helplessness* (item 33 "İnsanın açıklama getiremediği şeyler vardır", item 35 "Hayatta bazı şeylere razı olmak gerekir",) and two *submission* items (item 40 "Kader, insan hayatının önceden belirlenmiş olmasıyla ilgilidir", and item 42 "Başa gelen çekilir") were eliminated because their communality scores were below .40 (item 35 also did no load on any of the factors). Further, though reverse coded for the analysis, item 12 ("Elinden geleni yaptıktan sonra gerisi kaderdir") negatively loaded to *destiny* (-.76), indicating that it is not actually a reverse item. That is, item 12 was found to be a reverse item in Study 2 and but not in Study 3, indicating that it was an ambiguous item. Due to such inconsistency in meaning as revealed by exploratory factor analyses conducted in two different studies, elimination of item 12 was deemed appropriate. Item 28 ("Kadere inanmak, insanın değiştiremeyeceği şeyleri kabul etmesine yardımcı olur") was also eliminated because it negatively cross-loaded to *destiny* (-.49) in addition to its original factor *functionality* (.53). Thus, after elimination of these six items, the seven-factor structure was as follows: *destiny* (15 items; α = .95), *functionality* (10 items; α = .91), *helplessness* (5 items; α = .78), *submission* (6 items; α = .82), *valuation* (7 items; α = .83), *uncontrollability* (5 items; α = .80), and *luck* (4 items; α = .80). The seven factors explained 60.24% of the total variance.

As different from the original factor structure obtained in the second study, item 14 ("İnsan kaderinde ne varsa onu yaşar") loaded to *submission* (.53) in addition to its original factor *destiny* (.44). Despite higher loading for *destiny,* item 14 was retained in *submission* due to better fit for the item content. Item 39 ("İnsanın her yaşadığı kaderdendir"), originally an item of the factor *submission*, cross-loaded to both *submission* and *valuation* with the same loading of .45. Due to better content fit, it was retained as a *submission* item. Item 43 ("Sorgulamadan kadere inanmak sağlıklı değildir") loaded to *valuation* instead of *submission*, which was considered to be a better fit for the item content. The updated factor structure of the GFAT scale with 52 items, factor loadings, item-total correlations, eigenvalues, proportions of explained variance, and reliability values are summarized in Table 4.2. A mean score of the responses given to the items of each subscale was used as an index for GFAT.

A confirmatory factor analysis was further conducted to test the measurement model for GFAT, i.e., the hypothesis that a relationship between observed variables and their underlying latent constructs (destiny, functionality, helplessness, submission, valuation, uncontrollability, and luck) exists and that the seven-factor model fits the data well. The model was tested by using the structural equation modelling software LISREL 8.51 (Jöreskog & Sörbom, 2001). The results revealed acceptable fitness (χ^2 (1253, N = 308) = 2852.55, p < .001), CFI = .85, $RMSEA$ = .06, 90% CI [.06, .07]). Thus, the final version of the developed GFAT scale consisted of seven factors with a total of 52 items (see Appendix E).

Table 4.2 *The Updated Factor Structure of the GFAT Scale*

Factors (n = 7) and Items (n = 52)	Item-Total Correlations	Factor Loadings						
		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
Factor 1: Destiny *(15 items)*								
1. Doğum, ölüm gibi şeyler önceden belirlenmiştir.	.80	.97						
2. Başımıza ne geleceğini bir Allah/Tanrı bilir.	.80	.97						
3. İnsanın hayatı, kendinden daha üstün bir güç/varlık tarafından belirlenmiştir.	.73	.85						
4. Allah'ın/Tanrı'nın herkes için bir planı vardır.	.80	.89						
5. Bizim için neyin iyi ya da kötü olduğunu Allah/Tanrı bilir.	.79	1.00						
6. Kader, batıl inançtan başka bir şey değildir.*	.80	.85						
7. İnsanın başına gelecekler ezelden bellidir.	.74	.68						
8. Kader, insanın hayatında önemli bir yere sahiptir.	.73	.44						
9. İnsanın hayatını belirleyen kendinden daha üstün bir irade yoktur.*	.58	.49						
10. Hayatta hiçbir şey önceden belirlenmiş değildir.*	.73	.73						
11. Her işte bir hayır vardır.	.65	.55						
13. Kader, hayatın birçok alanını ilgilendirir.	.75	.58						
15. Kader, insanın hayatına denge getirir.	.68	.45						
16. Kader, insan hayatı için belirleyici bir şey değildir.*	.71	.52						
17. Bir şeyin olacağı varsa olur.	.61	.46						

Table 4.2 *(continued)*

Factor 2: Functionality *(10 items)*			
18. Kader inancı insanı psikolojik olarak rahatlatır.	.75	.89	
19. Kadere inanmak insanı teselli eder.	.72	.87	
20. Kader, insanın başına gelenleri kabullenmesini kolaylaştırır.	.64	.79	
21. Bir çıkış yolu bulamadığında olayları kadere bağlamak insanı rahatlatır.	.63	.90	
22. Kadere inanan insan daha sabırlı olur.	.62	.61	
23. Kadere inanmak, hayata tutunmayı kolaylaştırır.	.73	.67	
24. Olumsuz olaylar/yaşantılar sonrasında kadere sığınmak insana güç verir.	.68	.73	
25. Kader inancı, insana zorluklara rağmen hayata devam etme gücü verir.	.73	.70	
26. İnsan kadere inanarak yaşadıklarına anlam yükler.	.63	.53	
27. İnsan, kadere inanarak hayatındaki olumlu ve olumsuz olaylar/durumlar arasında denge kurar.	.63	.46	
Factor 3: Helplessness *(5 items)*			
29. İnsan bazı şeylere engel olamaz.	.60		.76
30. Hayatta insanın gücünün yetmediği şeyler vardır.	.55		.70
31. İnsanın seçemediği şeyler vardır.	.58		.76
32. Bazı şeyler insanın elinde değildir.	.57		.65
34. İnsanın çaresiz kaldığı zamanlar olur.	.50		.68

Table 4.2 *(continued)*

Factor 4: Submission *(6 items)*							
36. Ne kadar çabalarsa çabalasın, insanın kaderini değiştirmesi mümkün değildir.	.63				.74		
37. Kader, insanın elinde olan bir şey değildir.	.52				.69		
38. İnsan, başına gelecekleri değiştiremez.	.60				.66		
39. İnsanın her yaşadığı kaderdendir.	.49				**.45**	.45	
41. İnsanın kaderinde olanı yaşaması onun iyiliğinedir.	.59				.46		
14. İnsan, kaderinde ne varsa onu yaşar.	.68	.44			**.53**		
Factor 5: Valuation *(7 items)*							
44. Kadere sığınmak insanı pasifleştirir.*	.69					.83	
45. Olayları kadere bağlamak sadece bahanedir.*	.63					.46	
46. Hayatın gidişatını kadere bağlamak insanı çıkmaza sokar. *	.60					.72	
47. Kadercilik, amaçsız yaşamak gibidir.*	.63					.58	
48. İnsanlar kadere gereğinden fazla önem veriyor.*	.63					.72	
49. Her şeyi kadere bağlamak anlamsızdır.*	.48					.54	
43. Sorgulamadan kadere inanmak sağlıklı değildir.*	.41					.54	
Factor 6: Uncontrollability *(5 items)*							
50. İnsan akıl ve mantıkla kaderini yönlendirebilir.*	.59						.53
51. İnsan, iradesiyle kendi kaderini yaratabilir.*	.63						.57
52. Hayatın kontrolü insanın kendi elindedir. *	.49						.73
53. İnsanın neyi nasıl yaşayacağı kendisine bağlıdır.*	.55						.67
54. İnsan kararlı olursa kaderini değiştirebilir.*	.64						.63

Table 4.2 *(continued)*

Factor 7: Luck *(4 items)*								
55. Hayatta şanslı olmanın bir önemi yoktur.*	.56							.80
56. Şans hayatın bir parçasıdır.	.71							.84
57. Bazı şeyler şans işidir.	.73							.82
58. Hayatta tesadüflere yer yoktur.*	.48							.69
Eigenvalue		16.30	4.23	1.62	2.83	3.15	1.76	1.44
Explained variance (Total 60.24%)		31.35	8.14	3.11	5.43	6.06	3.39	2.77
Internal consistency (α)		.95	.91	.78	.82	.83	.80	.80

Note. N = 308. Bold loadings indicate the subscale that the cross-loaded items are part of.
* *Reverse items (n = 18)*

4.1.3.6 Disaster-related Fatalism (DFAT)

Fatalism pertaining to disasters (particularly earthquakes) was assessed with a set of measures enquiring about participants' perception of earthquake fatalism in general, earthquake blame, damage blame, and damage preventability. The first two measures (*earthquake fatalism* and *earthquake blame*) were taken from Joffe et al. (2013) and adapted to Turkish as part of the cross-cultural, longitudinal intervention study *fix-it* conducted in Seattle, USA and Izmir, Turkey (Joffe, Perez-Fuentes, Potts, & Rossetto, 2016). The remaining two measures (*damage blame* and *damage preventability*) were taken from İkizer (2014, the quantitative study) which were developed based on the ones used by McClure et al. (2001) and the findings of the qualitative study by İkizer (2014). In the present study, however, only the questions focusing on earthquakes in general were used and their wording were adapted based on the wording of the earthquake blame question.

Earthquake fatalism was measured with three items tapping fatalistic beliefs about earthquake risk and its reduction. It pertained to three sources, namely, individual ("If an earthquake happens, it will, and there is nothing I can do about it"), city/society ("If an earthquake happens, there is not much my city/community can do to lessen its effect"), and experts ("Decisions about how to reduce the damaging effects of an earthquake should be left to experts"). Ratings were made on a 4-point Likert type scale (1 = *strongly disagree* to 4 = *strongly agree*). A mean score of the responses given to the three items was used as an index for general earthquake fatalism with higher scores reflecting higher levels of fatalistic beliefs (α = .28).

Earthquake blame was measured by asking participants to indicate the extent to which earthquakes were the result of the following: human actions, act of God, act of nature, and/or other. Ratings were made on a 4-point Likert type scale (1 = *not at all* to 4 = *very much*). Higher levels of fatalistic beliefs would be indicated by higher earthquake blame ratings for God and nature and lower blame ratings for human actions.

Damage blame, used to measure attributions of post-quake damage, was measured by asking participants to indicate the extent to which damage caused by earthquakes were caused by the result of the following: human actions (non-sturdy design/non-resistance of buildings), act of God, act of nature (earthquake magnitude), and/or other. Ratings were made on a 4-point Likert type scale (1 = *not at all* to 4 = *very much*). Higher levels of fatalistic beliefs would be indicated by higher damage blame ratings for God and nature and lower blame ratings for human actions.

As for *damage preventability* assessing perceptions of the extent to which damage caused by earthquake can be prevented, participants were asked to indicate the extent of likelihood that, in general, damage caused by earthquakes can be prevented. Ratings were made on a 4-point Likert type scale (1 = *not at all* to 4 = *very much*). Responses given to this question were reverse coded so that higher scores reflected higher levels of fatalism in terms of perceived damage preventability.

4.1.3.7 General System Justification (GSJ)

The 8-item GSJ Scale (α = .88; Wakslak, Jost, & Bauer, 2011), which is a slightly adapted version of Kay and Jost's (2003) general (American) system justification scale (α = .87), was used to obtain a measure of GSJ at the national level. GSJ scale is an individual difference self-report measure for assessing the extent to which participants perceive the prevailing social system they live in to be fair, legitimate, and justifiable. The scale consists of eight opinion statements which were reworded to refer to the Turkish system instead of the American system as in the original scale (e.g., "Everyone in Turkey has a fair shot at wealth and happiness"). Participants were asked to indicate their degree of agreement with each item on a 9-point Likert type scale ranging from *strongly disagree* (1) to *strongly agree* (9). Responses were coded such that higher scores indicate higher levels of system justification. A mean score of the responses given to the eight items was used as an overall index for GSJ. The GSJ scale used by Kay and Jost (2003) was adapted to Turkish by Göregenli (2004; 2005) (α = .71), which was used by İslambay (2014) and Solak (2015). Upon reviewing this adapted version, the GSJ scale used by

Wakslak and his colleagues (2011) was adapted to Turkish by the researcher and used for the current study (α = .85).

4.1.3.8 Disaster-related System Justification (DSJ)

DSJ scale was designed by the researcher to measure the extent to which participants justify the disaster risk management system in Turkey. This scale was constructed by changing the wording of the Turkish version of the GSJ scale used by Wakslak et al. (2011) to refer to disaster risk management in Turkey (e.g., "Disaster risk management in Turkey operates as it should"). Participants were asked to indicate their degree of agreement with each item on a 9-point Likert type scale ranging from *strongly disagree* (1) to *strongly agree* (9). Responses were coded such that higher scores indicate higher levels of justification of the DRM system in Turkey. A mean score of the responses given to the eight items was used as an overall index for disaster-related system justification (α = .88). The explanation on what DRM entails (one that was used in the instruction of ST condition) was also given in the instruction of the scale for ease of understanding of the items.

4.1.3.9 Earthquake Preparedness

Participants' level of earthquake preparedness was assessed by using measures of *actual preparedness* and *intention to prepare*. Actual preparedness was assessed at both general and specific levels. As for general preparedness, participants were asked to indicate the extent to which they thought they were prepared for a major earthquake on a 7-point Likert type scale (1 = *not at all prepared*, 7 = *very prepared*) with higher scores reflecting higher levels of preparation. Thus, this measure was based on participants' own general judgment of their earthquake preparedness. For the specific measure of actual preparedness, the set of 16 earthquake preparedness items used in the cross-cultural, longitudinal intervention study *fix-it* conducted in Seattle, USA and Izmir, Turkey was used. Consisting of low-cost and easy to adopt adjustment measures for earthquakes (e.g., "I have stored heavy objects on the floor."), this measure is a modified version of the preparedness items used in Joffe et al. (2013) (see Joffe et al., 2016). Participants were asked to indicate (*Yes* or *No*) whether they adopted each preparedness item (α = .77). For the items that were answered as not adopted, participants were asked to indicate on a 7-point Likert type scale (1 = *very unlikely*, 7 = *very likely*) the likelihood that they would adopt each of the adjustment measure in the next three months, with higher scores reflecting higher levels of intention to prepare. The set of items for earthquake preparedness were adapted to Turkish by a team of Turkish researchers (one of whom was the author of this thesis) who took part in the *fix-it* intervention study in Izmir.

In order to obtain an overall index for intention, a composite weighted score was computed using the answers to the *fix-it* items for both actual preparedness (recoded as 1=1 for *Yes* and 2=0 for *No*) and intention to prepare. The scores ranged between 0 and 1, with higher scores reflecting higher levels of intention for undertaking non-adopted preparedness activities. The formula for this scoring, which was generated based on the consultation of an expert statistician, is as follows (after recoding of the 7-point scale for intention from 1-7 to 0-6):

(Fixit_YES / 16) + [(Fixit_NO / 16)(Intention_meanRC / 7)]*

In order to better understand intention to prepare, self-efficacy (personal belief that one has the ability and capacity to engage in preparedness behaviors) and outcome expectancy (personal belief that one can effectively mitigate or reduce hazard effects with his/her actions) were also assessed. *Self-efficacy* was measured with 10 items used in Joffe et al. (2016), which is a modified version of the Personal Efficacy Beliefs Scale (Riggs & Knight, 1994). Specifically, it was reworded to focus on ability to do the basic tasks to prepare for earthquakes (instead of ability to do the tasks required by one's job) (e.g., "I have confidence in my ability to do the various preparedness tasks"). Ratings were made on a 4-point Likert type scale (1 = *strongly disagree* to 4 = *strongly agree*). A mean score of the responses given to the ten items was used as an index for self-efficacy with higher scores reflecting higher levels of efficacy beliefs (α = .75). As for *outcome expectancy*, participants were asked to indicate the extent to which they thought it would be useful to do four adjustment measures to prevent or reduce damage due to an earthquake (e.g., “Securing heavy, tall furniture to the wall”) (Joffe et al., 2016). Ratings were made on a 4-point Likert type scale (1 = *of no use* to 4 = *very useful*). A mean score of the responses given to the four items was used as an index for outcome expectancy with higher scores reflecting higher levels of expectancy beliefs (α = .71).

4.1.3.10 Earthquake Exposure (EQEXPO)

Measures of *prior disaster experience* (including earthquake and other disasters), *severity of EQEXPO* and *post-disaster adversity* were used to assess EQEXPO as a covariate. *Prior disaster experience* (including earthquakes and other disasters) were assessed with two *Yes/No* questions asking participants to indicate whether they have experienced a major earthquake or other disaster in their lives. Participants who answered *Yes* to the first question were further asked to indicate when and where they experienced the particular earthquake. Participants who answered *Yes* to the second question were further asked to indicate what particular disaster(s) they experienced.

Severity of EQEXPO (both objective and subjective) and *post-disaster adversity* were assessed with the measures used by İkizer (2014; the quantitative study), but were adapted to focus on lifetime EQEXPO instead of the 2011 Van earthquakes. Participants who indicated having prior EQEXPE answered *severity of EQEXPO* questions which were assessed with eleven *Yes/No* questions addressing both subjective and objective impact from prior EQEXPE. These questions were formed by İkizer (2014) according to the diagnostic criteria for post-traumatic stress disorder in DSM-IV-TR (American Psychiatric Association [APA], 2000), particularly, criterion A specifying what qualifies as a traumatic event. “Subjective severity of EQEXPO”, corresponding to the criterion A2, included four questions (α = .64) asking participants to indicate whether they thought their or a close one’s life was threatened, felt helpless or experienced intense fear or horror during the earthquake. “Objective severity of EQEXPO”, corresponding to the criterion A1, included seven questions (α = .61) asking participants to indicate whether they experienced, witnessed, or were confronted with actual or threatened death or serious injury, or threat to the physical integrity of self or others during the earthquake. Responses were coded such that higher scores reflect higher levels of severity of EQEXPO (both subjective and objective). The sum of the responses given to the eleven items was used as an index for severity of EQEXPO (n = 82; α = .79).

Participants who indicated having prior EQEXPE were then asked to answer eleven *Yes/No* questions about *post-disaster adversity*, specifically, their experience of possible adverse events and conditions after the earthquake. These questions were formed by İkizer (2014) based on the domains of resource loss that were identified by the researcher in Hobfoll, Lilly, and Jackson's (1992) Resource Loss Scale and Sattler et al.'s (2006) Conversation of Resources Evaluation Scale. The identified resource loss domains included forced migration, temporary accommodation, material loss (money for living expenses, household appliances, furniture, etc.), disruptions in work conditions as well as in social relationships including family relations, and health problems (both physical and psychological). There were also two questions on material/financial and emotional support for which *No* responses indicate resource loss in the domain support from others. Higher scores reflect higher levels of post-disaster adversity. Due to the low item-total correlations of the items addressing forced migration, support from others, temporary accommodation, and material loss (ranging between .03 and .14), only the items addressing disruptions in work life and conditions, disruptions in social relationships, and health-related problems (with Cronbach's alpha increasing from .45 to .60) were retained for the analyses in İkizer's (2014) study. In the present study, all the ten items were used to assess post-disaster adversity despite the low item-total correlations of half of the items. Responses were coded such that higher scores reflect higher levels of post-disaster adversity. The sum of the responses given to the ten items was used as an index for post-disaster adversity (n = 82; α = .81).

The mean of the scores for severity of EQEXPO and post-disaster adversity was used as an overall index for EQEXPO. Participants who indicated not having prior EQEXPE, thus, who did not answer severity and adversity questions (n = 82) were given a score of 0 for both severity of exposure and post-disaster adversity. Thus, higher scores indicate higher levels of EQEXPO.

4.1.3.11 Sociodemographic Measures

Participants reported their age, gender, education, perceived SES (based on participants' reports of their standing in their community relative to other people in the community, on a ladder with ten steps from *1* referring to people at the bottom, having the lowest standing to *10* referring to people at the top, having the highest standing), income, employment status, home status, marital status, place they lived in most of their life, political orientation (based on participants' reports on a continuum ranging from 1 *extreme left* to 10 *extreme right*), religion, religiousness (based on a 6-point Likert scale from 0 *I have no religious belief* and 1 *not at all* to 5 *very much*), and belief in fatalism (based on a 5-point Likert scale from 1 *not at all* to 5 *very much*).

4.1.4 Analysis

IBM SPSS v.20 was used for conducting all data analyses which were performed mainly in four stages. Firstly, descriptive statistics for the main study variables (also referred to as the dependent variables) were examined. It was followed by correlation analyses conducted to understand the relationship among the main study variables as well as their relationship with the sociodemographic and independent (i.e., experimental manipulation) variables. Then, a series of univariate analysis of variance (ANOVA) was performed on DTA and system evaluation to examine the effectiveness of the MS and ST manipulations, respectively. Finally, a series of 3 (ST) X 3 (MS) between subjects analysis of covariance (ANCOVA) and multivariate analysis of covariance (MANCOVA) with EQEXPO as the covariate was conducted to test the main hypotheses of the experimental study for the three sets of dependent variables, namely, fatalism, system justification, and earthquake preparedness. Fatalism involved GFAT (consisting of the subscales destiny, functionality, helplessness, submission, valuation, uncontrollability, and luck) and DFAT (consisting of the variables earthquake fatalism, earthquake blame [human actions, act of God, act of nature], damage blame [human actions, act of God, act of nature], and damage preventability). System justification involved the variables GSJ and DSJ. Earthquake preparedness consisted of the variables general preparedness, intention, self-efficacy, and outcome expectancy. In the hypothesis testing analyses, the effects of MS and ST as well as their interactions on the dependent variables were examined.

4.2 Results

Before proceeding with the analyses, the responses of 308 participants were screened for data accuracy and assumptions of multivariate analysis (outliers, normality, linearity, and multicollinearity). There were no missing values since the online survey software (Qualtrics, LLC) did not allow continuing the survey without answering all the questions in a page (except for earthquake and damage blame questions). Further, Qualtrics was set up to record only the responses of participants who completed the survey from the beginning to the end. All the correlations among the main study variables were smaller than .70, assuring that the variables are independent. As for normality, skewness and kurtosis values of all the variables were within the acceptable range. Data screening for multivariate outliers among 308 cases revealed five cases whose Mahalanobis scores for the main study variables were above the critical value ($\chi^2(21, n = 308) = 46.80, p < .001$), thus were excluded from the analyses. Though a number of cases with z scores outside the range of -3.29 and 3.29 were identified as univariate outliers (particularly for the variables uncontrollability, earthquake blame: act of nature, damage blame: human actions and act of nature, damage preventability, general preparedness, self-efficacy, outcome expectancy, and EQEXPO), these cases were not excluded not to affect the distribution of cases among experimental conditions. None of the variable pairs were suspected to be nonlinearly and heteroscedastically related with each other as all the variables had acceptable skewness and kurtosis values. None of the variables were found to be highly correlated with each other (i.e., $r > .90$), suggesting that multicollinearity and singularity were not an issue (Tabachnick & Fidell, 2007). Thus, all the analyses were conducted with 303 participants. The number of participants across experimental manipulation conditions can be seen in Table 4.3.

Table 4.3 *Number of Participants across Experimental Manipulation Conditions (N = 303)*

	Mortality Salience (MS)		
System threat (ST)	*Death* (n = 104, 34.3%)	*Earthquake* (n = 108, 35.6 %)	*Control* (n = 91, 30.0%)
General (n = 112, 37.0%)	35 (11.6%)	42 (13.9%)	35 (11.6%)
Disaster-related (n = 83, 27.4%)	40 (13.2%)	25 (8.3%)	18 (5.9%)
Control (n = 108, 35.6%)	29 (9.6%)	41 (13.5%)	38 (12.5%)

Note. The two between-subjects variables MS and ST were not found to be independent ($\chi^2(4, n = 303) = 10.63$, $p = .03$). However, before excluding five cases identified as multivariate outliers, they were found to be independent ($\chi^2(4, n = 308) = 8.84$, $p > .05$).

The results of the third study are presented in four parts. Firstly, descriptive statistics for the study variables are given. It is followed by examination of correlations including the correlations among the main study variables (i.e., the dependent variables) as well as their correlations with the sociodemographic and independent (i.e., experimental manipulation) variables. Then, ANOVAs conducted for the manipulation checks on MS and ST (for the measures DTA and system evaluation, respectively) are given. Finally, hypothesis testing with 3 (MS: *death* vs. *earthquake* vs. *control*) X 3 (ST: *general* vs. *disaster-related* vs. *control*) between-subjects ANCOVAs and MANCOVAs controlling for EQEXPO are presented.

4.2.1 Descriptive Statistics

Descriptive statistics including means, standard deviations, and ranges for the main study variables are presented in Table 4.4. Mean scores for these variables were assessed in terms of their closeness to midpoint scores of their respective scoring range. This assessment was done to obtain descriptive information on the extent to which the sample endorsed fatalistic beliefs and justified the system in both general and disaster-related domains as well as on the preparedness, intention, self-efficacy, outcome expectancy, and EQEXPO levels of the sample.

Regarding fatalism in general, the sample tended to endorse moderate levels of fatalistic beliefs. Specifically, participants tended to endorse more fatalistic beliefs regarding destiny (M = 4.15, SD = 1.14), functionality (M = 4.30, SD = .96), helplessness (M = 4.88, SD = .77), and luck (M = 4.12, SD = 1.08) as the mean scores for these variables were higher than the scale midpoint. On the other hand, participants tended to be relatively less fatalistic in terms of submission (M = 3.00, SD = 1.02), valuation (M = 2.85, SD = 1.05), and uncontrollability (M = 2.57, SD = .86).

As for fatalism pertaining to disasters, participants seemed to be moderately fatalistic about earthquakes in general (M = 2.21, SD = .56), but were relatively less fatalistic about damage preventability as they tended to think that damage caused by earthquakes can be prevented (M = 1.60, SD = .58). When the mean scores for earthquake blame were examined, the mean for human actions (M = 2.25, SD = 1.08) was lower than the scale midpoint whereas the means for act of God (M = 2.97, SD = 1.13) and act of nature (M = 3.57, SD = .76) were higher, suggesting that the sample seemed to be fatalistic in terms of earthquake attributions. When the mean scores for damage blame were examined, the mean for act of God (M = 2.50, SD = 1.16) corresponded to the scale midpoint whereas the means for human actions (M = 3.84, SD =.41) and act of nature (M = 3.53, SD = .74) were higher, suggesting that the sample seemed to be moderately fatalistic in terms of post-quake damage attributions.

With regard to system justification, participants' tendencies to justify the general (M = 2.91, SD = 1.39) and disaster-related (M = 3.79, SD = 1.46) system were relatively low as their mean scores were lower than the scale midpoint. As for earthquake preparedness, participants reported low levels of preparedness in general (M = 2.25, SD = 1.33) and their intention to prepare for non-adopted preparedness activities (M = .51, SD = .24) corresponded to the midpoint of the scoring range. Further, mean scores for self-efficacy (M = 2.59, SD = .42) and outcome expectancy (M = 3.51, SD = .47) were higher than the scale midpoints, suggesting that the sample had high levels efficacy and expectancy beliefs. Lastly, participants had low levels of EQEXPO (M = .74, SD = 1.64).

Table 4.4 *Descriptive Statistics for the Main Study Variables (N = 303)*

Variables	Mean	SD	Range
GFAT			1 - 6
Destiny	4.15	1.14	
Functionality	4.30	.96	
Helplessness	4.88	.77	
Submission	3.00	1.02	
Valuation	2.85	1.05	
Uncontrollability	2.57	.86	
Luck	4.12	1.08	
DFAT			
Earthquake Fatalism	2.21	.56	1 - 4
Earthquake Blame			1 - 4
Human Actions (*n* = 302)	2.25	1.08	
Act of God (*n* = 300)	2.97	1.13	
Act of Nature (*n* = 302)	3.57	.76	
Damage Blame			1 - 4
Human actions (*n* = 301)	3.84	.41	
Act of God (*n* = 295)	2.50	1.16	
Act of Nature (*n* = 298)	3.53	.74	
Damage Preventability	1.60	.58	1 - 4
System Justification			
GSJ	2.91	1.39	1 - 9
DSJ	3.79	1.46	1 - 9
Earthquake Preparedness			
General Preparedness	2.25	1.33	1 - 7
Intention	.51	.24	0 - 1
Self-efficacy	2.59	.42	1 - 4
Outcome Expectancy	3.51	.47	1 - 4
EQEXPO	.74	1.64	0 - 10.5

Note. *N* = 303. GFAT = General Fatalism; DFAT = Disaster-related Fatalism; GSJ = General System Justification; DSJ = Disaster-related System Justification; EQEXPO = Earthquake Exposure.

4.2.2 Correlations among the Study Variables

Bivariate correlations among the study variables are reported in three parts, namely, correlations among the main study (i.e., dependent) variables (see Table 4.5) and their correlations with the independent (experimental manipulation) variables and the disaster-related sociodemographic variables (see Table 4.6) as well as with the key sociodemographic variables (see Table 4.7).

Correlations among the main study variables were first examined with respect to the correlations among the GFAT subscales followed by their correlations with DFAT, system justification, and preparedness variables. As for the relationships among GFAT subscales, destiny, functionality, helplessness, submission, and valuation all had significant and positive correlations with each other (ranging from .28 to .69, $p < .01$). Uncontrollability was significantly and positively correlated with destiny, functionality, submission, and valuation (ranging from .18 to .50, $p < .01$), but not with helplessness and luck. Luck was negatively associated with destiny and valuation (both $r = -.19$, $p < .01$) and positively associated with helplessness ($r = .18$, $p < .01$) whereas it showed no associations with functionality, submission, and uncontrollability.

Concerning the relationships of GFAT subscales with DFAT variables, earthquake fatalism was observed to have significant positive correlations with helplessness ($r = .16$, $p < .01$), submission ($r = .23$, $p < .01$), and valuation ($r = .13$, $p < .05$), but not with others. Earthquake blame on human actions was not associated with any of the subscales, whereas earthquake blame on God was significantly correlated with all the subscales, which were positive for all except luck (ranging from .25 to .69; for luck, $r = -.21$, $p < .01$). Earthquake blame on nature had significant correlations with all the subscales except helplessness. It had a positive association with luck ($r = .27$, $p < .01$) and negative associations with others (ranging from -.25 to -.12). Damage blame on human actions was significantly correlated with only uncontrollability ($r = -.13$, $p < .05$) whereas damage blame on God significantly correlated with all the subscales ($p < .01$). There was a negative association with luck ($r = -.19$) and a positive association with the rest (ranging from .22 to .59). The only GFAT subscales that damage blame on nature had significant correlations with were helplessness and luck, which were positive for both ($r = .13$, $p < .05$ and $r = .18$, $p < .01$, respectively). Damage preventability was significantly and positively correlated with only destiny ($r = .22$, $p < .01$), submission ($r = .23$, $p < .01$), and valuation ($r = .19$, $p < .01$), but was not associated with the other subscales.

With regard to the relationship between GFAT and system justification, GSJ was observed to have a significant correlation with all the GFAT subscales (ranging from .14 to .38, for luck -.20, $p < .01$) except for helplessness. On the other hand, DSJ was significantly correlated with only three subscales, which were destiny (r = .36, $p < .01$), submission (r = .36, $p < .01$), and valuation (r = .31, $p < .01$). As for the relation of GFAT subscales with earthquake preparedness variables, it was observed that general preparedness was significantly and negatively correlated with functionality (r = -.15, $p < .05$) and helplessness (r = -.13, $p < .05$), but not was unrelated to the rest of the subscales. Intention had a significant correlation with only helplessness (r = -.23, $p < .01$). Self-efficacy significantly and negatively correlated with destiny (r = -.13, $p < .05$), functionality (r = -.18, $p < .01$), and valuation (r = -.16, $p < .01$). Outcome expectancy had significant negative correlations with submission (r = -.18, $p < .01$), valuation (r = -.17, $p < .01$), and uncontrollability (r = -.29, $p < .05$).

Next, correlations among DFAT variables are examined along with their correlations with system justification and earthquake preparedness variables. As for earthquake blame, nature was significantly correlated with both human actions (r = -.18, $p < .01$) and God (r = -.23, $p < .01$) whereas the two were unrelated. On the other hand, damage blame on God had a negative correlation with human actions (r = -.19, $p < .01$) and a positive correlation with nature (r = .13, $p < .05$) whereas the two were not related to each other. Furthermore, earthquake blame on nature had a significant negative correlation with damage blame on God (r = -.17, $p < .01$) and positive correlation with damage blame on nature (r = .28, $p < .01$). And as expected, earthquake and damage blame on God were highly related to each other (r = .65, $p < .01$). Earthquake fatalism was significantly and negatively correlated with earthquake blame on human actions (r = -.20, $p < .01$), but was associated neither with earthquake blame on God and nature nor damage blame on human actions, God, and nature. As for damage preventability, there were no significant correlations with earthquake blame on human actions and nature. It was significantly and positively correlated with both earthquake blame on God (r = .17, $p < .01$) and damage blame on God (r = .29, $p < .01$). Damage preventability also had a significant negative correlation with damage blame on human actions (r = -.15, p < .05), but was not associated with damage blame on nature.

When the relationship of blame variables with system justification is examined, both GSJ and DSJ had significant positive correlations with earthquake blame on God (r = .36, p < .01 and r = .30, p < .01, respectively) and negative correlations with earthquake blame on nature (r = -.19, p < .01 and r = -.14, p < .05, respectively), but were unrelated to earthquake blame on human actions. Similarly, both GSJ and DSJ were significantly and positively correlated with damage blame on God (r = .36, p < .01 and r = .29, p < .01, respectively). Only GSJ, but not DSJ, had a significant correlation with damage blame on human actions (r = -.15, p < .05). Still, neither GSJ nor DSJ was related to damage blame on nature. When the relationship of DFAT variables with blame variables is examined, self-efficacy was significantly and negatively correlated with earthquake blame on both human actions and God (both r = -.12, p < .05). Further, damage blame on human actions was observed to have a significant negative correlation with general preparedness (r = -.15, p < .05) and positive correlation with outcome expectancy (r = .22, p < .01). The remaining correlations among blame variables and preparedness variables were not significant.

Moreover, there was a significant and positive correlation between earthquake fatalism and damage preventability (r = .15, p < .05). However, earthquake fatalism did not show any associations with variables pertaining to system justification and preparedness. Damage preventability was significantly and positively correlated with both GSJ (r = .21, p < .01) and DSJ (r = .25, p < .01). It also had significant negative correlations with self-efficacy (r = -.16, p < .01) and outcome expectancy (r = -.13, p < .05), but was unrelated to general preparedness and intention.

Finally, correlations among system justification and preparedness variables are examined. As for system justification variables, as expected, GSJ and DSJ were highly related to each other as they had a significant correlation of .64 (p < .01). Both GSJ and DSJ had significant correlations with general preparedness (r = .23, p < .01 and r = .17, p < .01, respectively) and outcome expectancy (r = -.16, p < .01

and $r = -.12$, $p < .05$, respectively). DSJ was also significantly correlated with self-efficacy ($r = -.12$, $p < .05$). Neither GSJ nor DSJ was associated with intention. Regarding the correlations among the preparedness variables, general preparedness had significant positive correlations with intention ($r = .34$, $p < .01$) and self-efficacy ($r = .20$, $p < .01$), though the two did not show any association. There were also no significant correlations between outcome expectancy and the rest of the preparedness variables. All the correlations among the main study variables can be seen in Table 4.5.

The correlations of the main study variables with the independent (experimental manipulation) and the disaster-related sociodemographic variables are listed in Table 4.6. The only main study variable that MS was significantly correlated with was uncontrollability ($r = .12$, $p < .05$), indicating that reminding death was associated with increased fatalism with respect to uncontrollability beliefs. There were no significant correlations between ST and the main study variables, suggesting that ST was not associated with any changes in levels of fatalism, system justification, and preparedness variables.

As for the relationships between GFAT and disaster-related sociodemographic variables, both EQEXPE and EQEXPO were significantly and negatively correlated with destiny ($r = -.15$, $p < .05$ and $r = -.19$, $p < .01$, respectively), functionality ($r = -.14$, $p < .05$ and $r = -.13$, $p < .05$), and helplessness ($r = -.16$, $p < .01$ and $r = -.13$, $p < .05$). EQEXPO also had a significant and negative correlation with submission ($r = -.12$, $p < .05$) and valuation ($r = -.17$, $p < .01$), whereas experience did not correlate with them. Neither experience and nor exposure were significantly correlated with uncontrollability and luck.

Table 4.5 *Correlations among the Main Study Variables*

Variables	1	2	3	4	5	6	7	8	9	10	11
GFAT											
1. Destiny	-										
2. Functionality	.55**	-									
3. Helplessness	.45**	.41**	-								
4. Submission	.65**	.41**	.31**	-							
5. Valuation	.69**	.47**	.28**	.60**	-						
6. Uncontrollability	.35**	.18**	.11	.50**	.48**	-					
7. Luck	-.19**	-.05	.18**	-.11	-.19**	-.05	-				
DFAT											
8. Earthquake Fatalism	.08	.09	.16**	.23**	.13*	.05	.07	-			
Earthquake Blame											
9. Human Actions	-.01	-.06	-.10	-.10	-.06	.04	.-01	-.20**	-		
10. Act of God	.69**	.26**	.26**	.43**	.49**	.25**	-.21**	.03	-03	-	
11. Act of Nature	-.21**	-.14*	-.03	-.12*	-.25**	-.16**	.27**	.09	-.18**	-.23**	-
Damage Blame											
12. Human actions	-.01	.05	-.01	-.07	-.10	-.13*	.04	-.08	.03	-.05	.06
13. Act of God	.59**	.24**	.23**	.40**	.46**	.22**	-.19**	-.01	.11	.65**	-.17**
14. Act of Nature	.00	-.02	.13*	.06	.03	.05	.18**	.09	.04	-.09	.28**
15. Damage Preventability	.22**	.04	.11	.23**	.19**	.10	-.05	.15*	-.01	.17**	-.05
System Justification											
16. GSJ	.38**	.14*	.05	.31**	.37**	.14*	-.20**	.06	-.02	.36**	-.19**
17. DSJ	.36**	.10	.10	.36**	.31**	.13*	-.03	.04	-07	.30**	-.14*

Table 4.5 *(continued)*

Variables	1	2	3	4	5	6	7	8	9	10	11
Earthquake Preparedness											
18. General Preparedness	-.05	-.15*	-.13*	.06	-.03	.02	-.01	-.03	-.03	.02	-.00
19. Intention	-.09	-.06	-.23**	-.04	-.03	-.01	.03	-.09	.06	-.03	.03
20. Self-efficacy	-.13*	-.18**	-.04	-.09	-.16**	-.07	.10	-.01	-.12*	-.12*	.08
21. Outcome Expectancy	-.05	.06	.07	-.18**	-.17**	-.29*	.10	-.06	.01	-.08	.06

Variables	12	13	14	15	16	17	18	19	20	21
DFAT										
Damage Blame										
12. Human actions	-									
13. Act of God	-.19**	-								
14. Act of Nature	.08	.13*	-							
15. Damage Preventability	-.15*	.29**	.10	-						
System Justification										
16. GSJ	-.15*	.36**	-.03	.21**	-					
17. DSJ	-.09	.29**	.06	.25**	.64**	-				
Earthquake Preparedness										
18. General Preparedness	-.15*	-06	-.01	-.05	.23**	.17**	-			
19. Intention	-.05	-.07	-.10	-.11	.08	-.01	.34**	-		
20. Self-efficacy	-.01	-.10	.03	-.16**	-.08	-.12*	.20**	.10	-	
21. Outcome Expectancy	.22**	-.11	-.08	-.13*	-.16**	-.12*	-.06	.10	.06	-

Note. N = 303. Pairwise deletion method was used to deal with missing data on blame variables. For earthquake blame correlations; N = 302 for human actions and act of nature, N = 300 for act of God. For damage blame correlations; N = 301 for human actions, N = 295 for act of God, and N = 298 for act of nature. GFAT = General Fatalism; DFAT = Disaster-related Fatalism; GSJ = General System Justification; DSJ = Disaster-related System Justification.
* p < .05, ** p < .01.

Regarding the relationships between DFAT and disaster-related sociodemographic variables, EQEXPE was significantly correlated only with damage blame on God (*r* = -.15, *p* < .01), but not with others. EQEXPO was significantly and negatively correlated with earthquake fatalism (*r* = -.16, *p* < .01), earthquake blame on God (*r* = -.17, *p* < .01), damage blame on God (*r* = -.16, *p* < .01), and damage preventability (*r* = -.17, *p* < .01). There were no significant correlations between exposure and the rest of the variables. When the relationships between system justification and disaster-related sociodemographic variables were examined, both GSJ (*r* = -.11, *p* < .05) and DSJ (*r* = -.20, *p* < .01) were significantly and negatively correlated with EQEXPO. DSJ also showed a negative association with EQEXPE (*r* = -.15, *p* < .01). Among earthquake preparedness variables, experience showed significant positive correlations with general preparedness (*r* = .13, *p* < .05), intention (*r* = .12, *p* < .05), and self-efficacy (*r* = .14, *p* < .050, but not with outcome expectancy. Exposure was also significantly correlated with intention (*r* = .16, *p* < .01) and self-efficacy (*r* = .17, *p* < .01), but not with general preparedness and outcome expectancy.

EQEXPE and EQEXPO were highly related with each other, as expected, with a significant positive correlation of .75 (*p* < .01). Though the size and valence of the correlations of these two variables with the dependent variables seemed to show a similar pattern, exposure was significantly correlated with more of the variables than experience was. All the variables that had significant correlations with experience were also significantly correlated with exposure. The only exception to this was general preparedness, which was correlated with experience (*r* = .13, *p* < .05), but not with exposure (*r* = .10, *p* > .05). Thus, use of EQEXPO as the covariate in hypothesis testing analyses for all the dependent variables, except for general preparedness, was deemed appropriate. EQEXPE was used as the covariate in hypothesis testing analysis for general preparedness.

Table 4.6 *Correlations of the Main Study Variables with the Independent (Experimental Manipulation) and Disaster-related Sociodemographic Variables*

	Independent Variables		Disaster-related Sociodemographic Variables [a]		
Variables	MS	ST	EQEXPE	EQEXPO	HOMES
GFAT					
Destiny	.04	.00	-.15*	-.19**	.00
Functionality	.04	.02	-.14*	-.13*	.01
Helplessness	.03	.08	-.16**	-.13*	.09
Submission	.06	-.03	-.03	-.12*	-.08
Valuation	.05	-.08	-.11	-.17**	-.01
Uncontrollability	.12*	-.01	.00	-.06	-.04
Luck	.09	.08	-.01	-.02	.04
DFAT					
Earthquake Fatalism	.08	.09	-.09	-.16**	-.05
Earthquake Blame					
Human Actions	-.08	-.09	-.00	.01	.00
Act of God	-.02	-.06	-.10	-.17**	-.04
Act of Nature	-.05	.05	.01	.08	.07
Damage Blame					
Human actions	.06	.05	.02	.03	-.03
Act of God	.02	-.03	-.15**	-.16**	.05
Act of Nature	.06	-.01	-.02	-.02	-.00
Damage Preventability	.09	.07	-.10	-.17**	.01
System Justification					
GSJ	.03	-.08	-.08	-.11*	-.02
DSJ	.09	-.00	-.15**	-.20**	.06
Earthquake Preparedness					
General Preparedness	-.06	-.03	.13*	.10	-.10
Intention	-.01	-.06	.12*	.16**	-.23**
Self-efficacy	-.04	-.02	.14*	.17**	-.06
Outcome Expectancy	-.04	-.00	-.01	.04	-.02

Note. N = 303. Pairwise deletion method was used to deal with missing data on blame variables. For earthquake blame correlations; N = 302 for human actions and act of nature, N = 300 for act of God. For damage blame correlations; N = 301 for human actions, N = 295 for act of God, and N = 298 for act of nature. GFAT = General Fatalism; DFAT = Disaster-related Fatalism; GSJ = General System Justification; DSJ = Disaster-related System Justification. MS = Mortality Salience; ST = System Threat; EQEXPE = Earthquake Experience; EQEXPO = Earthquake Exposure; HOMES = Home Status. MS coded as 1 = control; 2= earthquake; 3 = death. ST coded as 1 = control; 2= disaster; 3 = general. EQEXPE coded as 0 = no; 1 = yes. HOMES coded as 1 = owner; 2 = family owned; 3 = renter; 4 = other. Higher scores on EQEXPO indicate higher levels of exposure to earthquakes.

[a] $r_{EQEXPE, EQEXPO} = .75$, $p < .01$; $r_{HOMES, EQEXPE} = -.08$, $p > .05$; $r_{HOMES, EQEXPO} = -.05$, $p > .05$

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

As for home status, neither experience nor exposure was significantly correlated with whether one lives in house that is owned by oneself or one's family, or that is rented or has a different status (e.g., dormitory). Home status was significantly correlated with only intention ($r = -.23$, $p < .01$), with which also experience (r =

.12, $p < .05$) and exposure ($r = .16$, $p < .01$) had significant positive correlations. Hence, for hypothesis testing analysis for intention, both exposure and home status were used as covariates.

The correlations of the main study variables with the key sociodemographic variables are listed in Table 4.7. Gender had significant correlations with destiny, functionality, valuation, damage blame on God, and outcome expectancy in the negative direction (ranging from -.11 to -.17) and with general preparedness and self-efficacy in the positive direction ($r = .13$, $p < .05$ and $r = .21$, $p < .01$, respectively). Age showed significant negative correlations with destiny, functionality, helplessness, valuation, blame on God (for both earthquake and damage), damage preventability, and system justification (both GSJ and DSJ) (ranging from -.33 to -.12). It also showed significant positive correlations with general preparedness, intention, and self-efficacy (ranging from .20 to .22), but not with outcome expectancy. Education was negatively and significantly correlated with destiny, helplessness, valuation, blame on God (for both earthquake and damage), damage preventability, and system justification (both GSJ and DSJ) (ranging from -.37 to -.17), but was not significantly associated with any of the preparedness variables. Perceived SES had a significant negative correlation with helplessness as well as significant positive correlations with general preparedness, intention, and self-efficacy (ranging from .17 to .19).

Political orientation, religiousness, and fatalism were significantly and positively correlated with all the subscales of GFAT (ranging from .14 to .77) except for luck, which was negative (ranging from -.25 to -.20). They also showed significant positive correlations with blame on God (for both earthquake and damage), damage preventability, and system justification (both GSJ and DSJ) as well as a significant negative correlation with earthquake blame on God. Whereas the three sociodemographic variables showed significant and positive correlations with earthquake and damage blame on God (ranging from .41 to .60) and also damage preventability (ranging from .12 to .17), they had negative correlations with earthquake blame on nature (ranging from -.27 to -.15). Political orientation, religiousness, and fatalism were further significantly and positively correlated with

GSJ and DSJ (ranging from .33 to .50). There was also a significant negative correlation between fatalism and self-efficacy (r = -.13, p < .05).

Table 4.7 *Correlations of the Main Study Variables with the Key Sociodemographic Variables*

Variables	GEN	Age	EDU	PSES	POL	REL	FAT
GFAT							
Destiny	-.11*	-.31**	-.36**	-.06	.51**	.65**	.77**
Functionality	-.16**	-.16**	-.10	-.09	.27**	.28**	.45**
Helplessness	-.04	-.22**	-.17**	-.13*	.20**	.23**	.30**
Submission	.01	-.03	-.09	-.01	.37**	.39**	.50**
Valuation	-.17**	-.24**	-.22**	-.08	.39**	.49**	.67**
Uncontrollability	-.05	-.09	-.04	-.03	.14*	.19**	.33**
Luck	-.06	-.01	.06	.02	-.24**	-.20**	-.25**
DFAT							
Earthquake Fatalism	.00	.03	.02	.04	.02	-.01	-.00
Earthquake Blame							
Human Actions	.03	.00	-.04	-.04	-.03	-.01	.04
Act of God	-.10	-.28**	-.37**	-.03	.42**	.58**	.60**
Act of Nature	-.08	.10	.04	.02	-.15**	-.17**	-.27**
Damage Blame							
Human actions	-.02	.04	.01	.04	-.06	-.04	-.03
Act of God	-.12*	-.33**	-.35**	-.09	.41**	.45**	.54**
Act of Nature	.01	.00	-.06	-.00	.03	-.03	.01
Damage Preventability	-.05	-.14*	-.22**	-.09	.12*	.12*	.17**
System Justification							
GSJ	.07	-.12*	-.19**	.09	.50**	.39**	.35**
DSJ	.07	-.21**	-.27**	.05	.41**	.37**	.33**
Earthquake Preparedness							
General Preparedness	.13*	.21**	.05	.17**	.03	.03	-.03
Intention	-.07	.20**	.05	.19**	-.11	-.05	-.08
Self-efficacy	.21**	.22**	.10	.18**	-.04	-.01	-.13*
Outcome Expectancy	-.15**	.11	.04	.05	-.08	-.08	-.07

Note. N = 303. Pairwise deletion method was used to deal with missing data on blame variables. For earthquake blame correlations; N = 302 for human actions and act of nature, N = 300 for act of God. For damage blame correlations; N = 301 for human actions, N = 295 for act of God, and N = 298 for act of nature. GFAT = General Fatalism; DFAT = Disaster-related Fatalism; GSJ = General System Justification; DSJ = Disaster-related System Justification. GEN = Gender; EDU = Education; PSES = Perceived SES; POL = Political Orientation; REL = Religiousness; FAT = Fatalism. Gender coded as 1 = female; 2= male; 3 = other/prefer not to say. EDU coded as 1 = never went to school; 2 = primary school; 3 = secondary school; 4 = high school; 5 = vocational school; 6 = university degree (undergraduate); 7 = university degree (postgraduate). Higher scores on PSES (*bottom* 1 – 10 *top*), POL (*extreme left* 1 – 10 *extreme right*), REL (*have no religious belief* 0, *not at all* 1 – 5 *very much*), and FAT (*not at all* 1 – 5 *very much*) indicate higher levels of perceived SES and self-reported right wing orientation, religiousness, and belief in fatalism.
* p < .05, ** p < .01.

4.2.3 Manipulation Checks

4.2.3.1 Mortality Salience (MS)

A one-way between-subjects ANOVA was conducted on DTA to examine the effectiveness of the MS manipulation. The results yielded a significant effect of MS on the accessibility of death-related cognitions, $F(2, 300) = 7.26$, $p = .001$, partial $\eta^2 = .046$ (though the assumption of equality of error variances was not met) (see Table 4.8). A significant difference between the three conditions (i.e., higher levels of DTA in the death and earthquake conditions compared to the control condition) would prove the effectiveness of the manipulation. Post hoc comparisons revealed that participants in the death condition ($M = 1.42$, $SD = 1.32$) had higher DTA scores than participants in the earthquake ($M = .93$, $SD = 1.01$) and control ($M = .89$, $SD = .97$) conditions. However, there was no significant difference between DTA scores of participants in the earthquake and control conditions (see Table 4.8). Thus, the MS manipulation was effective for only the death condition, but not for the earthquake condition, indicating that reminding earthquake did not induce MS.

4.2.3.2 System Threat (ST)

In order to examine the effectiveness of the ST manipulation, a series of one-way between-subjects ANOVA was conducted on the system evaluation ratings for nation (social, economic, and political conditions), DRM, and fall fashion corresponding to general, disaster-related, and control topics of ST, respectively. A significant difference between the three conditions (i.e., more favourable ratings of the nation and DRM in the general and disaster-related ST conditions as compared to the no threat condition) would prove the effectiveness of the manipulation. The results revealed that, for all the three ratings, the effect of ST on evaluations of nation ($F(2, 300) = .70$, $p = .50$, partial $\eta^2 = .005$), DRM ($F(2, 300) = .25$, $p = .78$, partial $\eta^2 = .002$), and fashion ($F(2, 300) = .64$, $p = .53$, partial $\eta^2 = .004$) was not significant (see Table 4.8). Thus, the ST manipulation did not increase system evaluations, indicating that it failed to activate the need to justify neither the general nor the disaster-related system.

Table 4.8 *Experimental Manipulations and Mean Differences for the Manipulation Check Measures*

Variables	MS								*F (2, 300)*	*p*	η_p^2
	General (*N* =303)		Death (*n* = 104)		Earthquake (*n* = 108)		Control (*n* = 91)				
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*			
DTA	1.09	1.14	1.42_b	1.32	$.93_a$	1.01	$.89_a$	.97	7.26	.00	.046
	ST										
	General (*N* =303)		General (*n* = 112)		Disaster-related (*n* = 83)		Control (*n* = 108)				
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*			
SE: Nation	3.01	1.96	2.99	1.88	3.22	2.04	2.88	2.00	.70	.50	.005
SE: DRM	3.16	1.80	3.12	1.71	3.28	1.86	3.10	1.84	.25	.78	.002
SE: Fashion	5.22	1.68	5.11	1.60	5.19	1.74	5.36	1.73	.64	.53	.004

Note. MS = Mortality Salience; ST = System Threat; DTA = Death-thought Accessibility; SE = System Evaluation. DRM = Disaster Risk Management. MS coded as 1 = control; 2 = earthquake; 3 = death. ST coded as 1 = control; 2= disaster-related; 3 = general. Higher scores on DTA and SE indicate higher levels of death-related cognitions and favorable evaluations of the system, respectively. The assumption of equality of error variances was not met for DTA, $F(2, 300) = 5.65$, $p < .01$. Bonferroni correction was used for pairwise comparisons. Mean scores that do not share the same letter subscript on the same row are significantly different from each other.

4.2.4 Hypothesis Testing

In order to investigate, after controlling for EQEXPO, (*i*) how MS and ST influence fatalism, system justification, and earthquake preparedness and (*ii*) whether and how this influence differs with respect to general and disaster-related levels of MS and ST, it was tested whether mean differences in the dependent variables across levels of MS and ST were significant after removing the effect of the covariate. Thus, the dependent variables (i.e., the main study variables) consisted of variables pertaining to fatalism, system justification, and preparedness. *Fatalism* included GFAT (consisting of the subscales destiny, functionality, helplessness, submission, valuation, uncontrollability, and luck) and DFAT (consisting of the variables earthquake fatalism, earthquake blame, damage blame, and damage preventability). *System justification* included the variables GSJ and DSJ. *Earthquake preparedness* consisted of four variables, namely, general preparedness, intention, self-efficacy, and outcome expectancy.

Hypothesis testing involved a 3 (MS: *death* vs. *earthquake* vs. *control*) X 3 (ST: *general* vs. *disaster-related* vs. *control*) between-subjects ANCOVAs and MANCOVAs. EQEXPO was used as the covariate in hypothesis testing analyses of the dependent variables with which it was significantly correlated with. Since it was EQEXPE, not EQEXPO, which was significantly correlated with general preparedness, experience was used as the covariate for ANCOVA conducted for this dependent variable. Home status was used as the second covariate for ANCOVA conducted for intention as it was significantly correlated with both exposure and home status.

The main and interaction effects on the dependent variables were expected to be significant to provide support for the hypotheses. Specifically, it was expected that (1) participants in the death and earthquake conditions would report increased levels of fatalism and system justification and decreased levels of preparedness compared to participants in the control (i.e., baseline) condition, (2) participants in the threat conditions would report increased levels of fatalism and system justification as well as decreased levels of preparedness compared to participants in the no threat (i.e., baseline) condition, and (3) participants assigned to the death and earthquake conditions who were exposed to ST would show the highest levels of fatalism and system justification and also the lowest levels of preparedness.

4.2.4.1 Fatalism

EQEXPO was used as the covariate for hypothesis testing analysis for GFAT as it was significantly correlated most of the GFAT subscales, which were destiny, functionality, helplessness, submission, and valuation. A 3 (MS) X 3 (ST) between-subjects MANCOVA with exposure as the covariate was conducted on the seven dimensions of GFAT. Box's M was found to be significant ($p < .05$) indicating that the assumption of equality of covariance matrices was not met. Further, the assumption of equality of error variances among the independent variables was not met for luck, $F(8, 294) = 3.05$, $p < .01$. Hence, Pillai's Trace was used as the multivariate test statistic when interpreting the results. The analysis yielded significant results neither for the main effects of MS (Pillai's Trace = .04, $F(14, 576) = .88$, $p = .58$, partial $\eta^2 = .021$) and ST (Pillai's Trace = .04, $F(14, 576) = .87$, $p = .60$, partial $\eta^2 = .021$) nor their interaction (Pillai's Trace = .08, $F(28, 1160) = .87$, $p = .67$, partial $\eta^2 = .020$). Thus, the hypotheses were not supported for GFAT (see Table 4.9 for mean differences).

As for hypothesis testing analyses conducted for DFAT variables, EQEXPO was used as the covariate due to its significant correlation with most of them. The results of the 3 (MS) X 3 (ST) between-subjects ANCOVA conducted for earthquake fatalism with exposure as the covariate yielded a main effect of MS ($F(2, 293) = 4.91$, $p < .01$, $\eta_p^2 = .032$) whereas the main effect of ST ($F(2, 293) = 1.63$, $p = .20$, partial $\eta^2 = .011$) and the interaction effect of MS and ST ($F(4, 293) = 1.15$, $p = .34$, partial $\eta^2 = .015$) were insignificant. Post hoc comparisons for the main effect of MS revealed that participants who were in the earthquake condition (i.e., who were reminded of earthquake as MS) ($M = 2.31$, $SD = .60$) endorsed higher levels of fatalistic beliefs about earthquakes than participants in the control (i.e., baseline) condition ($M = 2.09$, $SD = .49$). Thus, the hypotheses for earthquake fatalism were only partially supported.

A 3 (MS) X 3 (ST) between-subjects MANCOVA with exposure as the covariate was conducted on the three dimensions of earthquake blame, namely, human actions, act of God, and act of nature. The analysis yielded significant results neither for the main effects of MS (Wilks' Lambda = .99, $F(6,574) = .74$, $p = .62$, partial $\eta^2 = .008$) and ST (Wilks' Lambda = .99, $F(6, 574) = .72$, $p = .64$, partial $\eta^2 = .007$) nor their interaction (Wilks' Lambda = .97, $F(12, 759.62) = .63$, $p = .82$, partial $\eta^2 = .009$). Thus, the hypotheses were not supported for earthquake blame (see Table 4.9 for mean differences).

A 3 (MS) X 3 (ST) between-subjects MANCOVA with exposure as the covariate was conducted on the three dimensions of damage blame, namely, human actions, act of God, and act of nature. Box's M was found to be significant ($p < .01$) indicating that the assumption of equality of covariance matrices was not met. Further, the assumption of equality of error variances among the independent variables was not met for human actions ($F(8, 285) = 5.28$, $p < .001$). Hence, Pillai's Trace was used as the multivariate test statistic when interpreting the results. The analysis yielded significant results neither for the main effects of MS (Pillai's Trace = .02, $F(6, 566) = .78$, $p = .59$, partial $\eta^2 = .008$) and ST (Pillai's Trace = .02, $F(6, 566) = .72$, $p = .63$, partial $\eta^2 = .008$) nor their interaction (Pillai's Trace = .03, $F(12, 852) = .80$, $p = .65$, partial $\eta^2 = .011$). Thus, the hypotheses were not supported for damage blame (see Table 4.9 for mean differences).

The results of 3 (MS) X 3 (ST) between-subjects ANCOVA conducted for damage preventability revealed that neither the main effects of MS ($F(2, 293) = 2.46$, $p = .09$, partial $\eta^2 = .016$) and ST ($F(2, 293) = .58$, $p = .56$, partial $\eta^2 = .004$) nor their interaction ($F(4, 293) = 1.93$, $p = .11$, partial $\eta^2 = .026$) were significant. It should also be noted that the assumption of homogeneity of regression slopes was not met for MS and ST as their interaction with the covariate (i.e., EQEXPO) were found to be significant, $F(2, 289) = 3.53$, $p < .05$, $\eta_p^2 = .024$ for MS and $F(2, 289) = 4.31$, $p < .05$, $\eta_p^2 = .029$ for ST. Thus, the hypotheses were not supported for damage preventability (see Table 4.9 for mean differences).

Table 4.9 *Experimental Manipulations and Mean Differences for the Dependent Variables*

	Independent Variables											
	MS					ST					MS X ST	
Dependent Variables	Death	EQ	Control	F	η_p^2	General	DIS	Control	F	η_p^2	F	η_p^2
Destiny	4.25	4.06	4.14			4.10	4.28	4.09				
Functionality	4.43	4.26	4.28			4.30	4.34	4.27				
Helplessness	4.93	4.84	4.87			4.93	4.94	4.78				
Submission	3.03	3.06	2.89	$.88^{ns}$	.021	2.96	3.01	3.03	$.87^{ns}$	.021	$.87^{ns}$	.020
Valuation	2.92	2.82	2.78			2.72	2.93	2.91				
Uncontrollability	2.67	2.58	2.42			2.57	2.53	2.59				
Luck	4.26	4.08	4.02			4.20	4.17	4.00				
EQ Fatalism	2.21	2.31	2.09	4.91**	.032	2.28	2.18	2.16	1.63^{ns}	.011	1.15^{ns}	.015
EQ Blame: Human	2.13	2.28	2.34			2.15	2.20	2.38				
EQ Blame: God	2.99	2.86	3.06	$.74^{ns}$	.008	2.85	3.06	3.01	$.72^{ns}$	.007	$.63^{ns}$	.009
EQ Blame: Nature	3.54	3.56	3.62			3.63	3.55	3.53				
DMG Blame: Human	3.84	3.88	3.77			3.84	3.90	3.78				
DMG Blame: God	2.57	2.41	2.53	$.78^{ns}$	.008	2.45	2.54	2.53	$.72^{ns}$	.008	$.80^{ns}$	.011
DMG Blame: Nature	3.62	3.43	3.52			3.50	3.58	3.51				
DMG Preventability	1.71	1.52	1.58	2.46^{ns}	.016	1.63	1.65	1.54	$.58^{ns}$	.004	1.93^{ns}	.026

Table 4.9 *(continued)*

Dependent Variables	Independent Variables											
	MS					ST					MS X ST	
	Death	EQ	Control	F	η_p^2	General	DIS	Control	F	η_p^2	F	η_p^2
GSJ	2.99	2.85	2.89	$.25^{ns}$	.002	2.75	3.02	3.00	1.55^{ns}	.010	1.37^{ns}	.018
DSJ	3.99	3.69	3.68	1.41^{ns}	.009	3.79	3.76	3.80	$.24^{ns}$	.002	$.19^{ns}$	.003
General Preparedness	2.19	2.19	2.40	$.86^{ns}$	.006	2.24	2.16	2.33	$.10^{ns}$	.001	$.22^{ns}$	.003
Intention	.51	.50	.51	$.22^{ns}$	.001	.49	.51	.53	$.55^{ns}$	.004	$.96^{ns}$	.013
Self-efficacy	2.56	2.62	2.60	$.56^{ns}$	.004	2.59	2.59	2.60	$.17^{ns}$	.001	1.47^{ns}	.020
Outcome Expectancy	3.51	3.47	3.56	1.21^{ns}	.008	4.49	3.56	3.49	$.79^{ns}$	.005	$.25^{ns}$	.003

Note. MS = Mortality Salience; ST = System Threat; EQ = Earthquake; DIS = Disaster-related; DMG = Damage; GSJ = General System Justification; DSJ = Disaster-related System Justification. MS coded as 1 = control; 2= earthquake; 3 = death. ST coded as 1 = control; 2= disaster-related; 3 = general.
* $p < .05$, ** $p < .01$.

4.2.4.2 System Justification

Due to its significant correlations with both GSJ and DSJ, EQEXPO was used as the covariate for hypothesis testing analyses for system justification. Results of the 3 (MS) X 3 (ST) between-subjects ANCOVA conducted for the dependent variables GSJ and DSJ after controlling for EQEXPO revealed that the main effect of MS was not significant for both GSJ ($F(2, 293) = .25$, $p = .78$, partial $\eta^2 = .002$) and DSJ, ($F(2, 293) = 1.41$, $p = .25$, partial $\eta^2 = .009$). A similar pattern emerged for the main effect of ST as it was significant for neither GSJ ($F(2, 293) = 1.55$, $p = .21$, partial $\eta^2 = .010$) nor DSJ, ($F(2, 293) = .24$, $p = .79$, partial $\eta^2 = .002$). The interaction effect of MS and ST was also not significant for both GSJ ($F(4, 293) = 1.37$, $p = .25$, partial $\eta^2 = .018$) and DSJ, ($F(4, 293) = .19$, $p = .94$, partial $\eta^2 = .003$). Thus, the hypotheses were not supported for system justification variables (see Table 4.9 for mean differences).

Further examination of whether the effects of MS and ST on GSJ and DSJ differed across different types of system (i.e., general and disaster-related corresponding to nation and DRM systems) after controlling for EQEXPO was deemed necessary. To this end, a 3 (MS) X 3 (ST) X 2 (system type) mixed design ANCOVA with repeated measures on the last factor was conducted for system justification (see Table 4.10 for mean differences). The only significant main effect was that of system type ($F(1, 293) = 132.09$, $p < .001$, $\eta_p^2 = .311$), indicating that participants justified the DRM system ($M = 3.79$, $SD = 1.46$) more strongly than the general (i.e., nation) system ($M = 2.91$, $SD = 1.39$). The analysis also yielded a significant two-way interaction effect of ST and system type, $F(2, 293) = 3.26$, $p < .05$, $\eta_p^2 = .022$. Reflecting the pattern of the system type main effect, in each of the ST conditions, participants engaged in system justification (both types of justification combined) more strongly for the DRM system (for general ST, $M = 3.79$, $SD = 1.38$; for disaster-related ST, $M = 3.76$, $SD = 1.44$; and for control, $M = 3.80$, $SD = 1.55$) as compared to the general system (for general ST, $M = 2.75$, $SD = 1.41$; for disaster-related ST, $M = 3.02$, $SD = 1.27$; and for control, $M = 3.00$, $SD = 1.45$). However, there were no significant differences in mean justification scores to indicate higher levels of justification when threat and type pertained to the same social system than when the two referred to different systems. Furthermore, the three-way interaction between MS, ST, and system type was marginally significant, $F(4, 293) = 2.30$, $p = .06$, $\eta_p^2 = .030$. Post hoc comparisons revealed that there was a marginal trend for participants in the death condition to justify the DRM system more when the general system is threatened ($M = 4.13$, $SD = 1.18$) as compared to when the DRM system is threatened ($M = 3.87$, $SD = 1.52$). Thus, though marginally significant, higher levels of system justification was observed when being reminded of death was accompanied by a mismatch of the two social systems (i.e., when threat and type pertained to different social systems), particularly, when DRM system is evaluated following exposure to general ST. There was also a marginal trend for participants across all MS and ST conditions except the "MS control and disaster-related ST" condition to justify the DRM system more strongly than the general system.

Table 4.10 *Experimental Manipulations and Mean Differences for the System Justification Variables*

ST	*Total*	MS		
		Death	Earthquake	Control
General				
GEN	2.75 (1.41)	3.06 (1.44)	2.72 (1.52)	2.46 (1.18)
DRM	3.79 (1.38)	4.13 (1.18)	3.55 (1.47)	3.75 (1.43)
Disaster-related				
GEN	3.02 (1.27)	2.87 (1.17)	2.93 (1.28)	3.47 (1.45)
DRM	3.76 (1.44)	3.87 (1.52)	3.76 (1.42)	3.51 (1.32)
Control				
GEN	3.00 (1.45)	3.06 (1.61)	2.94 (1.52)	3.02 (1.26)
DRM	3.80 (1.55)	3.97 (1.35)	3.79 (1.59)	3.69 (1.68)
Total (GEN)	2.91 (1.39)	2.99 (1.38)	2.85 (1.46)	2.89 (1.31)
Total (DRM)	3.79 (1.46)	3.99 (1.36)	3.69 (1.50)	3.68 (1.51)

Note. Means with standard deviations in parentheses are given in cells. MS = Mortality Salience; ST = System Threat; DRM = Disaster Risk Management System; GEN = General System. Higher mean scores (ratings done on a 9-point Likert type scale with 1 = *strongly disagree;* 9 = *strongly agree*) indicate higher levels of justification.

4.2.4.3 Earthquake Preparedness

EQEXPO was used as the covariate for hypothesis testing analyses for intention and self-efficacy as it was found to have significant correlations with these two variables. Home status was used as the second covariate for intention as it was also significantly correlated with this disaster-related sociodemographic variable. EQEXPE was used as the covariate for hypothesis testing analysis for general preparedness due to their significant correlation with each other. Since neither experience nor exposure was significantly correlated with outcome expectancy, no covariate was used for the hypothesis testing analysis for this dependent variable.

Results of the 3 (MS) X 3 (ST) between-subjects ANCOVA conducted for general preparedness after controlling for EQEXPE revealed that neither the main effects of MS (F(2, 293) = .86, p = .43, partial η^2 = .006) and ST (F(2, 293) = .10, p = .91, partial η^2 = .001) nor their interaction (F(4, 293) = .22, p = .93, partial η^2 = .003) were significant. Results of the 3 (MS) X 3 (ST) between-subjects ANCOVA conducted for intention after controlling for EQEXPO and home status revealed that neither the main effects of MS (F(2, 292) = .22, p = .81, partial η^2 = .001) and ST (F(2, 292) = .55, p = .58, partial η^2 = .004) nor their interaction (F(4, 292) = .96, p = .43, partial η^2 = .013) were significant. Results of the 3 (MS) X 3 (ST) between-subjects ANCOVA conducted for self-efficacy after controlling for EQEXPO revealed that neither the main effects of MS (F(2, 293) = .56, p = .57, partial η^2 = .004) and ST (F(2, 293) = .17, p = .85, partial η^2 = .001) nor their interaction (F(4, 293) = 1.47, p = .21, partial η^2 = .020) were significant. Results of the 3 (MS) X 3 (ST) between-subjects ANOVA conducted for outcome expectancy revealed that neither the main effects of MS (F(2, 294) = 1.21, p = .30, partial η^2 = .008) and ST (F(2, 294) = .79, p = .46, partial η^2 = .005) nor their interaction (F(4, 294) = .25, p = .91, partial η^2 = .003) were significant. Thus, none of the hypotheses were supported for earthquake preparedness variables (see Table 4.9 for mean differences).

CHAPTER 5

DISCUSSION

The present research addressed system justification processes in disaster context from a terror management perspective in the case of earthquakes in Turkey. Specifically, it aimed to explore the social cognitive processes underlying perceptions of and reactions to earthquakes with focus on fatalism and system justification as indirect and direct forms of bolstering the perceived legitimacy of the system, respectively, and also earthquake preparedness. To this end, an experimental study was conducted to investigate, after controlling for the effect of relevant disaster-related sociodemographic variables (experience of and exposure to earthquakes, home ownership status), (*i*) the influence of MS and ST on fatalism, system justification, and preparedness and (*ii*) whether and how this influence differs with respect to general and specific (i.e., disaster-related) levels of MS and ST.

In addition to the primary aim for which an experimental study was conducted, a secondary aim of this research was to develop a self-report Likert scale to be used in the experimental study (Study 3) for assessing GFAT that would reveal individual differences in dispositional fatalistic beliefs. For this purpose, a qualitative study with semi-structured interviews (Study 1) was conducted to understand how GFAT is perceived, guiding the item generation process for scale development. The psychometric properties of the newly developed GFAT scale were examined in a follow-up study (Study 2).

In this chapter, the findings of the experimental study are discussed in relation to the research questions explored and the existing literature. The discussion begins with an overview of the findings. It is followed by a discussion of the contributions of the present thesis to the literature along with the implications of the findings. Then, certain limitations of this thesis are discussed based on which directions for future research are suggested. The discussion ends with a general conclusion.

5.1 Overview of the Findings

In line with the aims of the experimental study, three main research questions pertaining to MS, ST, and their interplay were explored. The research questions on MS and ST were twofold: The first one concerned whether the disaster-related levels of MS and ST (MS with earthquake reminders and ST with DRM focus, respectively) yield the same effects as typically induced levels of MS and ST (MS with death reminders and ST with nation focus, respectively) do. The second one concerned how the different levels of MS and ST influence fatalism, system justification, and earthquake preparedness. Thus, the research questions on MS and ST focused on their main effects. On the other hand, the research question on the interplay between MS and ST focused on their interaction effect, exploring how the levels of MS and ST interact to influence fatalism, system justification, and preparedness.

Fatalism as an indirect way of defending the system included the variables GFAT (namely, destiny, functionality, helplessness, submission, valuation, uncontrollability, and luck) and DFAT (namely, earthquake fatalism, earthquake blame, damage blame, and damage preventability). System justification as a direct way of bolstering the system included the variables GSJ and DSJ. The variables for earthquake preparedness involved general preparedness, intention, self-efficacy, and outcome expectancy.

Based on the theoretical reasoning reviewed in the first chapter, it was hypothesized that MS and ST would lead to higher levels of fatalism and system justification, and lower levels of preparedness. Moreover, it was hypothesized that MS and ST would interact to yield the highest levels of fatalism and system justification as well as the lowest levels of preparedness. Accordingly, a 3 (MS: *death* vs. *earthquake* vs. *control*) X 3 (ST: *general* vs. *disaster-related* vs. *control*) between-subjects design was used for hypothesis testing. In the following sections, an overview of the findings of the experimental study is given with focus on the main effects of MS and ST and their interaction effect.

5.1.1 The Main Effect of MS

The main effect of MS was examined to see (*i*) whether reminding one's possible experience of earthquake qualify as MS as reminding own death does, and (*ii*) how the levels of MS (death vs. earthquake vs. control) influence fatalism, system justification, and preparedness. As for the MS manipulation, the findings revealed that it was effective only for the death condition, but not for the earthquake condition. Specifically, higher levels of DTA were observed among participants in the death condition as compared to participants in the earthquake and baseline conditions. However, there was no significant difference between earthquake and baseline conditions in terms of DTA. These results indicate that the MS role of death was evident, as typical of TMT research, whereas the MS role of earthquake was not observed contrary to the prediction that reminders of one's own experience of an earthquake would qualify as MS as reminders of death do. This might be in part explained by the association of earthquakes with *not dying* in addition to *dying*. That is, the notion of earthquake might have invoked the possibility of not dying as people can also be rescued alive from the rubble of a collapsed building. Thus, reminders of earthquake experience might not have served a 100% MS function.

As for hypothesis testing for the main effect of MS, the results revealed that MS neither lead to an increase in levels of fatalism and system justification variables nor a decrease in levels of preparedness variables. The only exception to this was the MS effect observed in the variable earthquake fatalism. Particularly, after controlling for EQEXPO, there was a significant main effect of MS in that participants in the earthquake condition had higher levels of fatalistic beliefs about earthquakes than participants in the baseline condition. This result indicates that, among a sample of Turkish participants, reminding possible experience of an earthquake activated and/or strengthened fatalistic tendencies about earthquake risk and risk reduction. However, the MS effect was observed in neither the rest of the

DFAT variables (i.e., earthquake blame, damage blame, and damage preventability) nor GFAT variables (i.e., destiny, functionality, helplessness, submission, valuation, uncontrollability, and luck). A note of caution is due here. According to the manipulation check results for MS, earthquake reminding did not function as MS since DTA levels were similar across earthquake and baseline conditions. Previous research has demonstrated that association of earthquakes with fatalism pertaining to earthquake risk was especially marked in Turkish participants though the association was also prevalent among US and Japan participants (Joffe et al., 2013). In view of this finding, it might be that the observed difference in levels of earthquake fatalism in earthquake and baseline conditions was due to priming of earthquake instead of death priming via making earthquake salient. Further, it is interesting that such effect of earthquake prime did not apply to sources of blame for earthquake and damage as well as damage preventability, which in fact correspond to more domain-specific variables of DFAT.

The typical MS effect, namely, a significant difference between the death and baseline conditions for the dependent variables (which were hypothesized to serve as cultural worldview defense reflecting system justification processes in earthquake context), was not observed in the present study. Though the MS manipulation was effective for the death condition (as indicated by higher levels of DTA compared to the baseline condition), making death salient did not lead to any change in the levels of the dependent variables for fatalism (GFAT and DFAT), system justification (GSJ and DSJ), and preparedness (general preparedness, intention, self-efficacy, and outcome expectancy). The finding that the typical MS effect was not observed for GFAT is inconsistent with previous research showing that belief in fatalism (and also karma) increases in response to MS compared to the control condition among Asian participants and that fatalism belief was a culture-specific way of managing death-related anxiety (Yen, 2013). Overall, in the present study neither fatalism nor system justification variables (both general and disaster-related) served a terror management function. Further, the typical MS did not influence preparedness variables. These results may be partly explained by the duration of delay between the MS manipulation and the dependent variables. In their meta-analysis on the MS hypothesis of TMT conducted with 277 experiments reported in 164 articles, Burke and his colleagues (2010) found that the effect of MS on worldview- and self-esteem-related variables was of moderate size (r = .35). Concerning the role of delay duration, their meta-analysis showed that longer delays, which enable death-related thoughts to be unconscious but highly accessible (e.g., Greenberg et al., 1984), lead to stronger MS effects (Burke et al., 2010). Considering that a particular delay task was not employed in the experimental design before the dependent variable assessment, it might be that lack of delay played a role in obtaining non-significant MS effects.

A further explanation for these results might pertain to culture in that culture is considered to be an important factor influencing the particular ways individuals respond to MS effects. Based on TMT reasoning, cultural variations can be observed in MS effects since worldviews are embedded in the culture that individuals are members of (Pyszczynski & Kesebir, 2012; e.g., Ma-Kellams & Blascovich, 2011; 2012; Yen & Cheng, 2010). For instance, Ma-Kellams and Blascovich (2012) found that, following MS, tendency to think about life and striving to enjoy life was stronger among East Asian participants compared to European American participants. Supporting this finding, Burke et al.'s (2010) meta-analysis findings showed that the MS effect was stronger among American participants (r = .37) than among Europeans or Israelis (r = .31) or Asians (r = .26). There is also research evidence showing that, contrary to TMT predictions, Muslim participants may react less defensively to MS due to "greater acceptance of death among Muslims compared to Christians" (p. 52, Martin & Van den Bos, 2014; e.g., Van den Bos et al., 2012). The findings of the experimental study provide support for this cultural aspect of TMT since MS did not produce the expected effect on the dependent variables. It might be that the typical MS effect was not observed due to these cultural factors.

5.1.2 The Main Effect of ST

The main effect of ST was examined to see (*i*) whether disaster-related ST have the same function as general ST, i.e., to increase the need to justify the system, and (*ii*) how the levels of ST (general vs. disaster-related vs. control) influence fatalism, system justification, and preparedness. As for the ST manipulation, the findings revealed that it was not effective at all since the difference in system evaluations between the threat conditions and the baseline condition failed to reach significance for both the general and the disaster-related systems. Not surprisingly, the ST effect was not observed in any of the dependent variables. This being said, before reaching firm conclusions about the findings, further work is needed to replicate the experimental study with an effective ST manipulation.

The ST manipulation employed in this study involved temporary activation of the system justification motive. As in a typical experimental study with ST, in the present study, it was induced with passages ostensibly written by a local journalist with statements that threaten the legitimacy and stability of the system (Jost et al., 2015). According to SJT research, this motivation shows contextual variations and exposure to ST (i.e., when the system is criticised, challenged or threatened) is one situational factor that leads to activation of (or increase in) system-justifying tendencies (Jost & van der Toorn, 2012; Kay & Friesen, 2011). However, there is also research evidence on ST showing a person-by-situation interaction such that it can be more influential on system-justifying tendencies of individuals who have chronically low levels of this motivation compared to those with chronically high levels of system justification (Jost et al., 2015; e.g., Mallett, Huntsinger, & Swim, 2011; van der Toorn, Nail, Liviatan, & Jost, 2014). An important finding on this interactionist aspect of ST, according to Jost and his colleagues (2015), is that the effect of ST for chronically high vs. low individuals displayed itself in certain kinds of system justification with ST leading to direct, explicit ways of bolstering the system among high system justifiers and indirect, subtle ways of defending the system among low system justifiers (see Cutright, Wu, Banfield, Kay, & Fitzsimons, 2011).

In the present study, the sample in general seemed to consist of chronically low system justifiers as the mean scores on both GSJ and DSJ were below the midpoint of the 9-point scale (2.91 and 3.79, respectively). Accordingly, based on the person-by-situation interaction observed in ST effects, the expected finding would be to obtain significant ST effects. Contrary to the predictions, the results revealed that there was no difference in the threat conditions and the baseline condition in terms of fatalism, system justification, and preparedness variables. However, it is important to bear in mind that the ST manipulation was not successful and that the finding regarding the ST main effect may be limited by this methodological flaw in the experimental design.

5.1.3 The Interaction Effect of MS and ST

The interaction effect of MS and ST was examined to see how the levels of MS and ST interact to influence fatalism, system justification, and preparedness. Bearing in mind that the MS manipulation was effective only for the death condition and that the ST manipulation was not effective at all, the results did not reveal a significant interaction between MS and ST, which was the case for all the dependent variables. Overall, the main effects of MS and ST as well as their interaction were not observed in the experimental study, thereby, not providing support for the hypotheses. This finding might be in part explained by the topic of the study (i.e., earthquakes), which did not involve a particular group context. It is known that TMT and SJT were first developed to account for intergroup phenomena, on which research evidence for the MS and ST effects are abundant. Accordingly, incorporating a group context focus on the topic of earthquake might reveal a different picture, one that might provide support for the hypotheses regarding the MS and ST effects.

Further analyses were conducted for GSJ and DSJ in an attempt to see whether the effects of MS and ST showed variations across the two types of system (namely, general and disaster-related corresponding to nation and DRM systems). To this end, a 3 (MS) X 3 (ST) X 2 (system type) mixed design ANCOVA with repeated measures on the last factor and controlling for EQEXPO was conducted. The results revealed a main effect of system type as indicated by higher levels of justification observed for the DRM system compared to the general (i.e., nation) system. Moreover, an interaction effect of ST and system type was observed. Consistent with the main effect of system type, this interaction effect indicate that across all ST conditions, system justification was stronger for the DRM system compared to the general system. However, there was no empirical evidence to indicate that a parallel combination of ST and type of system (i.e., when they referred to the same system – general ST combined with nation as system type; disaster-related ST combined with DRM as system type) led to increased justification as compared to when they were not parallel (i.e., when they referred to different systems – general ST combined with DRM as system type; disaster-related ST combined with nation as system type). This finding seems to be inconsistent with the notion of *spreading rationalization* that Wakslak and her colleagues (2011) observed in their experimental studies examining justification in the case of large- and small-scale systems. Specifically, their findings showed that support for the national system as a whole (a large-scale system) as well as for the small-scale systems (the high school popularity system in Experiment 1 and the nuclear family system in Experiment 2) increased following exposure to ST targeting each level of the social systems. That is, ST effect *spreaded* from the specific system that was directly threatened to systems at other levels of analysis (Wakslak et al., 2010). Notably, they found that "somewhat greater justification occurred when the threat and justification measure were related to the same social system than when they were related to different social systems" (p. 293, Wakslak et al., 2010). In the present study, spreading rationalization was not observed in a notably non-threatening system conditions. This finding indicates that the spreading effect works under system-threatening conditions, but not in non-threatening conditions.

The results of the mixed design ANCOVA further revealed a marginally significant (p = .06) three-way interaction effect between MS, ST, and system type. This effect was twofold: Firstly, reflecting the main effect of system type, system-bolstering was stronger for DRM than for nation across all conditions with the only exception being the "MS control and disaster-related ST" condition. Secondly and most importantly, when reminded of death, participants engaged in higher levels of justification for the DRM system when ST pertained to the general system (nation) compared to when the disaster-related system (DRM) was threatened. Accordingly, a pattern that was inconsistent with prior research showing that justification is increased when the targets of threat and the system justification measure are the same (Wakslak, 2011) was observed. In the present study, there was a marginal trend in the death condition participants to justify the DRM system more when ST and type of system pertained to different social systems. Thus, it seems to be the case that reminding death reversed the pattern. One explanation for this finding may be related to terror management processes. Specifically, when given the option to justify the two systems following exposure to death reminders, justification of the DRM system served as a stronger buffer for death-related anxiety when the nation was threatened compared to when DRM was threatened. One explanation for this interesting finding might be that the nation system was "too real to be justified" due to the recent socio-political context in the country (see section 5.3.2 for the related discussion). It might also be that participants were more familiar with the nation system than the DRM system. This *unfamiliarity* aspect of DRM might have rendered it a more comfortable venue for justification in compared to the nation which participants were way more familiar with and which was too real with already existing MS and ST conditions in the country. Still, the findings should be interpreted cautiously as the ST manipulation was found to be ineffective.

5.2 Contributions and Implications

The present research embodies both theoretical and practical importance, thereby contributing to the social psychological literature in several respects. Firstly, it points out to the importance of studying system justification processes in disaster context and from a terror management perspective. As have been noted by Kaiser et al. (2008), theoretical perspectives from social psychology have the potential to provide insights into a better understanding of important societal issues and social problems. In this regard, this research can be considered as an attempt to demonstrate how adoption of SJT and TMT as a lens for the social psychological study of disasters might be fruitful in advancing existing knowledge on people's perceptions of and reactions to disasters. Thus, the findings of this research provide an empirical outlook on the theoretical link between the field of disasters and mainstream social psychology.

Secondly, the current research complements prior work on SJT, particularly, the motive of system justification as it relates to disasters, by addressing fatalism (both general and disaster-related) as an indirect way of bolstering the perceived legitimacy of the system. It further provides explanation as to whether and how the need to defend the system influences preparedness and associated variables (namely, general preparedness, intention, self-efficacy, and outcome expectancy). Overall, a distinct contribution of this research is that it explores the possible link between a concept that is not directly related to disasters, i.e., system justification, and various disaster-related topics (i.e., earthquake fatalism and preparedness) from a social psychological perspective. The present research also extends prior work on TMT by addressing terror management processes in the context of disasters. Specifically, the findings provide empirical evidence for the MS role of disasters, which have been rarely studied in TMT research (Kastenmüller et al., 2013; Rutjens & Loseman, 2011; Ullrich & Cohrs, 2007; Västfjäll et al., 2014). The current research further contributes to social psychological literature as it gives an empirical account for the link between SJT and TMT. Previous research on the interplay of system justification and terror management processes (Anson et al., 2009; Arndt, 2002) have focused on the topics of terrorism (Ullrich & Cohrs, 2007), epidemics (Lyons & Martens, 2009), gender (Doğulu, 2012), and voting intention (Sterling, Jost, & Shrout, 2016). The present study complements this line of research by addressing the interplay of SJT and TMT in the context of natural disasters, particularly, in the case of earthquakes in Turkey.

Thirdly, this research further extends our knowledge on system justification processes by addressing DRM as a distinct system whose perceived legitimacy can be bolstered in response to threats to its functioning. In this respect, the present research can be considered as an attempt to define an abstract subsystem (i.e., DRM system) embedded within the concrete general system at the national level involving institutions and/or arrangements pertaining to the social, economic, and political conditions in the country. Thus, this research complements previous SJT research focusing on systems at different levels of analysis (Wakslak et al., 2011) by examining two systems of different scales yet embedded in each other (namely, the nation as a whole and DRM) and by exploring whether *spreading rationalization* applied to justification of these two systems following ST to each system. Further, understanding the social-cognitive processes pertaining to the interplay between the nation-level system and DRM as its subsystem may also hold relevance for interventions to increase preparedness. As have been noted by Joffe et al. (2016), intervention studies targeting disaster preparedness, though rare in number, have revealed that successful interventions (i.e., those that result in improved levels of preparedness) are characterized by use of hands-on training, drills, and face-to-face interactions (e.g., Miller et al., 2014; Simpson, 2002) with focus on social empowerment and community cohesion (e.g., Eisenman et al., 2009; Paton, Smith, Johnston, Johnston, & Ronan, 2003). In addition to these proven aspects of successful disaster preparedness interventions, the findings of the current research, particularly findings on the motive of justifying the nation-level system as well as DRM as its subsystem (though more research is needed to reach firm conclusions), have the potential to inform targeting intervention efforts to facilitate individual preparedness to earthquakes. Notably, with the devastating 1999 earthquakes being a milestone, Turkey has witnessed a major shift of focus in its governmental policies with prioritization of risk mitigation over response and recovery (Balamir, 2002; GFDRR, 2012). *Disaster management* with responsibility solely on the government was superseded by *DRM* with responsibility shared with individuals and communities (Karanci, 2013). Accordingly, there has been an increasing trend in adopting a participatory approach in DRM by promoting preparedness of individuals/communities to earthquakes (e.g., DASK and compulsory earthquake insurance). In this regard, it might be valuable to delineate the dynamics of DRM responsibility attributed to government and individuals/communities as revealed by the interplay between the nation-level system and DRM as its subsystem. This might in turn inform efforts at facilitating individual/community preparedness.

Finally, the present research contributes to social psychological research by introducing a reliable and valid measure for assessing general fatalistic beliefs. The development of this scale, in particular, its item generation process, was based on the qualitative findings of semi-structured interviews conducted with community members of a predominantly Muslim and collectivistic culture (with and without EQEXPE) as well as on the review of existing scales pertaining to fatalistic beliefs. This qualitative background of the scale items combined with satisfactory psychometric properties point out to its usefulness as a measure for assessing fatalism tendencies, thus paving the way for future research on the role of different fatalism dimensions in various attitudes and behaviors.

5.3 Limitations and Directions for Future Research

When interpreting the findings of the experimental study, certain limitations need to be considered. These limitations include both methodological and contextual considerations. In this section, directions for future research are provided with respect to these considerations as they are explained.

5.3.1 Methodological Considerations

There are two main methodological considerations that have bearing on the interpretation of the findings, namely, the effectiveness of experimental manipulations and disaster-related sociodemographic characteristics of the sample. Concerning the experimental manipulations, the findings revealed that the manipulation check for MS was effective only for the death condition with higher levels of DTA in this condition than in the control condition. However, contrary to the prediction regarding the MS role of earthquake, the difference in DTA levels between the earthquake and control conditions failed to reach significance. On the other hand, the manipulation check for ST was not effective at all since the difference in system evaluations between the threat conditions and the control condition failed to reach significance for both the general and the disaster-related systems. Taken together, ineffectiveness of experimental manipulations remains a source of uncertainty as to whether the findings obtained for the dependent variables would be different with stronger manipulations of the independent variables. At this point, it is important to note that data for the experimental study was collected online. This medium of data collection is considered advantageous in terms of generalizability and external validity of the findings as it enables participants to complete the survey at a time and place that is convenient for them (Reips, 2000). However, it might also embody a potential disadvantage for the effectiveness of the manipulations as online data collection can undermine experimental control, thus, internal validity, by bringing about confounding factors such as distraction during completion of the survey (e.g., Clifford & Jerit, 2014). Thus, replicating the experimental study with stronger manipulations and/or in a lab setting would enable to reach more firm conclusions.

As further related to experimental manipulations, the method used for the MS and ST conditions pertaining to disaster might have played a role in the effectiveness of the experimental manipulations. In the present study, earthquake MS condition was made salient by asking participants to write about their own experience of an earthquake and disaster-related ST condition was induced by asking participants to read a passage about DRM in Turkey which was portrayed as worsening by a local journalist. Accordingly, as for the MS manipulation, the earthquake condition involved a writing task on the topic. However, an alternative method might be to use visual stimuli to make disaster salient (e.g., for tsunami, using pictures of the 2004 Indian Ocean tsunami, Kastenmüller et al., 2013; writing down the first three images that the tsunami word brings to mind, Västfjäll et al., 2014). Thus, in future studies, pictures of a specific earthquake event such as the 1999 Marmara earthquakes can be used for this condition to see whether the MS manipulation would be more effective. As for the ST manipulation, the disaster-related condition had a general content as it was about the worsening aspects of DRM in general. An alternative method here would be to use a more case-specific content for DRM with focus on a particular disaster event (e.g., for hurricane, ineffective disaster response to hurricane Katrina as being due to racism, Kaiser et al., 2008). In the case of earthquakes in Turkey, for instance, this can be ineffective disaster response to 2011 Van earthquakes as being due to political nepotism. Thus, it might be useful to investigate in future studies whether using a case-specific content for DRM strengthens the effectiveness of the ST manipulation. This would also enable use of dependent variables for different means of engaging in system justification unique to the particular disaster event, providing a more real-life assessment for the participants (e.g., Hart, 2014; Kaiser et al., 2008).

Regarding the generalizability of the findings obtained from the experimental study, the sample seems to portray a representative profile in terms of general sociodemographic characteristics including education, perceived SES, income, and political orientation. However, the sample was not drawn from a population of residents of a highly seismic area. The experimental study employed both a community sample recruited online through Facebook, a powerful research tool with increasingly popularity (Kosinski, Matz, Gosling, Popov, & Stillwell, 2015), and a student sample recruited from two Turkish universities (one state university in the city of Zonguldak and the other a private university in the capital city of Ankara). Thus, the total sample did not consist of participants who were residents of a particular city and/or region known to be at high risk for earthquakes (e.g., İstanbul, Düzce, etc.). This might imply low levels of risk perception among participants since actual seismic risk is influential in shaping how risk is perceived (Solberg et al., 2010). Though in the analyses the effects of relevant disaster-related sociodemographic variables were removed, actual seismic risk and risk perception might have played a role in the particular findings obtained in the experimental study. Considering that the study was designed with earthquake focus, the findings may be somewhat limited by levels of seismic risk perception of the participants. Based on this reasoning, it is possible to hypothesize that the findings may be different for samples characterized with high risk perception and/or actual seismic risk. Thus, replicating this study with such particular samples (e.g., residents of Düzce which was hit by the 12 November 1999 earthquake, residents of Van which was hit by two consecutive earthquakes in October 23 and November 9, 2011) would enable a better understanding of the system justification processes from a terror management perspective in the context of earthquakes in Turkey.

5.3.2 Contextual Considerations

In addition to these methodological considerations, there is also a major contextual consideration that has bearing on the interpretation of the findings. Particularly, a possible explanation for the results obtained from the experimental study may pertain to the recent socio-political context in Turkey preceding the period of data collection (October, 2016). Situated in a global landscape of conflicts from refugee crisis to spread of terrorism and the concomitant politics of fear, Turkey is listed among the top ten volatile flashpoints in the world foreseen to experience serious conflicts in 2017 (Guéhenno, 2017). The reason for such foresight is mainly the rising terrorism and violence within a climate of political instability.

The country is challenged by major security threats due to the crisis in Iraq and Syria and the armed conflict with Kurdish groups (Almukhtar, 2017; Guéhenno, 2017). There were 15 major terrorist attacks throughout the country since July 2015 (which corresponds to the period following the collapse of cease-fire agreement for the Kurdish conflict), leading to death of more than 400 people (Almukhtar, 2017). The Islamic State and Kurdish militants claimed responsibility for most of the attacks though there were also a few attacks for which no one has claimed responsibility. The attacks by the Islamic State have mostly targeted civilians in popular places, whereas the Kurdish attacks have mainly targeted the police and military members (Almukhtar, 2017). Among the terrorist attacks with the highest death toll were the peace rally attack in Ankara killing more than 100 people (October 10, 2015; ISIS), the public square (Kızılay) attack in Ankara killing more than 37 people (March 13, 2016; Kurdish Militants), the airport attack in Istanbul killing 44 peope (June 28, 2016; ISIS), and the wedding attack in Gaziantep killing more than 50 people (August 20, 2016; ISIS) (for full lists, see Almukhtar, 2017; Montague, Rosen, & Williams, 2016). Considering that the cost included many number of people injured in addition those killed, it can be said that the series of terrorist attacks since July 2015 was traumatizing for the public.

Turkey has been further challenged by a military coup attempt in July 15, 2016, which was supressed by the government the following day (Arango & Yeginsu, 2016). The overnight of the coup attempt witnessed serious violence including raiding of TV stations by soldiers, explosions heard in major cities of the country including Istanbul and Ankara, shooting of protestors clashing with military forces, bombing of the parliament and presidential buildings, shooting down of a military helicopter, and hostage-taking of the Turkish military chief (“Turkey’s Coup Attempt: What you need to know”, 2016). It was a traumatizing event for the country, resulting in the death of more than 250 people and leaving more than 1,400 wounded (Arango & Yeginsu, 2016; “Turkey’s Coup Attempt”, 2016). The government blamed the Islamic community led by Fethullah Gulen, “a powerful, reclusive US-based Muslim cleric”, for the coup attempt and started a crackdown on his suspected followers. Following the failed coup attempt on mid-July, there was a mass wave of detentions and arrests of high-ranking soldiers and military personnel, police officers, prosecutors, judges, journalists, and academicians in addition to dismissal and suspension of more than 80,000 people from various state and civic institutions (Said-Moorhouse, 2016). The post-coup crackdown was extended with a state of emergency declared by the government in late July, intensifying the series of arrests and dismissals (“Turkey’s coup attempt: State of emergency announced”, 2016).

In the wake of the abovementioned terrorist attacks and the failed coup attempt creating instability in the socio-political context, the public was systematically exposed to death and serious nation-related threats. Thus, it is probable that the events have evoked “natural” MS and ST. Considering that the data collection for the experimental study took place in the midst of such socio-political context (October 2016), it might be the case that the alleged nation-wide exposure to MS and ST throughout the country overweighed the experimental manipulations, thereby undermining their effectiveness. Specifically, individuals might have normalized death and system-related threats as they get used to them with the frequently occurring terrorist attacks and the failed coup attempt. Therefore, an important line of research for future studies would be to investigate research questions explored in the experimental study in a country with a relatively stable and unstrained socio-political context such as New Zealand and Japan. This would enable to see whether individuals not systematically exposed to death and nation-related threats display MS and ST effects in the case of earthquakes.

5.3.3 Further Suggestions for Future Research

Based on the theoretical perspective adopted in the current thesis, namely SJT and TMT, there are also further suggestions that can be made for future research. First and foremost, it would be worthwhile to investigate different forms of system justification. Previous research has revealed that racial attitudes (Blodorn et al., 2016; Kaiser et al., 2008), voting intention (Hart, 2014), government confidence (Shephard & Kay, 2014) were among the ways of engaging in system justification. In particular, a focus on the different means of defending the system in the case of earthquakes and also whether and how manifestation of system justification differs according to disasters with different characteristics (e.g., disaster type, natural vs. technological disasters; mortality associated with disaster, earthquakes vs. floods) might be useful for better understanding disaster-related system justification processes. Furthermore, scope of system justification might vary in that people might be motivated to justify the system in general (e.g., direct defense of the status quo – government defense) or they might engage in disaster-specific forms of system justification (e.g., blaming victims for their suffering, complementary stereotyping of disaster victims, etc.) (Napier et al., 2006). In the current thesis, the findings did not provide support for the system-justifying role of GFAT and DFAT as well as GSJ and DSJ. However, since the ST manipulation in the experimental study failed to activate the need to justify the system, the findings need to be interpreted with caution.

The research questions explored in the current thesis can be further studied in different disaster contexts regarding DRM setting and disaster type. As for the DRM setting, there might be variations in system justification processes in countries with different levels of DRM. For instance, an earthquake in Turkey might lead to higher levels of system justification than an earthquake in Japan. Turkey's having more shortcomings in DRM compared to Japan might increase the extent to which earthquakes qualify as a ST in Turkey. Moreover, Turkey's having higher levels casualties due to earthquakes than Japan might make earthquakes perceived as stronger reminders of death in Turkey than in Japan. These discrepancies associated with ST and MS in Turkey and Japan might influence the extent to which people in these two countries have the need to defend the system in the case of earthquakes. Particularly, system justification motives of people living in Turkey might be stronger than those living in Japan. However, in case of tsunamis, if both countries show low levels of competency in DRM, then similar levels of justification might be observed among people in both Turkey and Japan.

Regarding disaster type, there might be variations in system justification processes for different kinds of disasters. Particularly, the strength of system justification motivation might vary depending on the extent to which disasters embody ST, low personal control, and MS. A disaster type that qualifies more as a ST, that embodies high personal control, and that is a stronger reminder of death might lead to higher levels of justification than another disaster type that is less associated with ST, personal control, and MS. For instance, earthquakes might lead to higher levels of system justification than floods would because earthquakes are stronger reminders of death than floods are. Furthermore, people might be more likely to perceive the system as fair and legitimate in the case of technological (i.e., man-made) disasters than in the aftermath of natural disasters. Particularly, it might be that a perception of technological disasters as more controllable and preventable by government and/or related institutions (instead of controllable and preventable by also individuals as in natural disasters) means higher levels of undermined confidence in these external sources in the disaster aftermath. This in turn might yield more system-bolstering effects. Thus, disasters that rely greatly on external sources of responsibility (e.g., mine disaster, epidemics) compared to disasters that rely both on external sources and individuals for responsibility (e.g., earthquakes, floods) might lead to a stronger need to defend the system by denying and minimizing system problems and/or shortcomings.

Another line of research that bears greatly on the topic is based on the need to adopt an all-hazard perspective for preparedness (i.e., readiness) measures to facilitate theory development and testing (Paton, 2015). There is a recent trend in adopting a multi-hazard approach in disaster preparedness (e.g., floods, earthquakes, terrorism, and epidemics, Shreve, Begg, Fordham, & Müller, 2016; earthquake and fire, Joffe et al., 2016). In line with this trend in disaster research, the hypotheses of the experimental study based on SJT and TMT can be tested with a study design involving a multi-hazard scenario (e.g., an earthquake coupled with a fire or tsunami). It can be argued that presence of multiple hazards at a time might embody a stronger threat to the system (nation or DRM) and/or elicit greater MS, thereby, increasing the need for defending the system more as compared to when the threat pertains to only an earthquake event.

Culture might also be important for the future study of system justification processes in the case of disasters. The strength of system-justifying tendencies might differ across cultures since the need to bolster the legitimacy of the system might be influenced by the extent to which members of a culture are tolerant of uncertainty (Hofstede, 2001) associated with disasters. In particular, cultures characterized by high levels of uncertainty avoidance might be motivated to justify the system more as it would satisfy the psychological need to reduce uncertainty in the face of disasters. Hence, future research can explore the role culture plays in system justification processes in disaster context.

5.4 Conclusion

The primary goal of the present thesis was to provide empirical evidence pertaining to system justification processes in disaster context and from a terror management perspective in the case of earthquakes in Turkey. The focus was on fatalism and system justification (assessed at both general and disaster-related levels) as well as preparedness. Particularly, the effects of MS and ST and whether these effects differ with respect to general and specific (i.e., disaster-related) levels of MS and ST were investigated with an experimental study. Overall, though somewhat limited by methodological and contextual considerations, the findings seem to point out to the importance of system justification and terror management processes in shaping perceptions of and reactions to earthquakes. In view of all its contributions and implications as well as its limitations, the current thesis aims to become a springboard for future research on how individuals regulate threats bearing on death and wide-ranging systems in disaster context within a changing world that is becoming more threatening alongside the increasing burden of disasters. In doing so, it is crucial that stronger experimental designs informed by theoretical perspectives from social psychology are employed. Such better understanding might then be of use to policy makers and practitioners in the field of disasters in their efforts to facilitate earthquake preparedness at the individual and household levels.

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APPENDICES

APPENDIX A. Interview Guide

Görüşme No: ____	
Görüşmenin Tarihi (GG/AA/YY)	
Görüşmenin Yapıldığı Şehir	
Görüşme Süresi	
Görüşmeyi Yapan Kişi	
Görüşülen Kişinin:	
Cinsiyeti	☐ Kadın ☐ Erkek
Medeni Durumu	☐ Bekar ☐ Evli ☐ Boşanmış ☐ Dul
Yaşı	....
Eğitimi	Okuma yazmam yok ☐ Okuma yazmam var ☐ İlkokul ☐ Ortaokul ☐ Lise ☐ Yüksekokul ☐ Üniversite ☐ Lisansüstü ☐
Mesleği	....
Hanenize giren geliri değerlendirdiğinizde aylık toplam geliriniz ne düzeydedir?	Çok düşük ☐ Düşük ☐ Orta ☐ Orta üstü ☐ Yüksek ☐
Kendinizi ne kadar dindar biri olarak tanımlarsınız?	Hiç ☐ Biraz ☐ Fazla ☐ Oldukça fazla ☐ Çok fazla ☐
Herhangi bir deprem yaşamışlığınız var mı? Evetse, ...	☐ Evet ☐ Hayır
Depremden sonra dini inancınızda değişiklik oldu mu?	Çok azaldı ☐ Biraz azaldı ☐ Değişiklik olmadı ☐ Biraz güçlendi ☐ Çok güçlendi ☐
Deprem dışında herhangi bir afet yaşadınız mı? Evetse, ...	☐ Evet ☐ Hayır
Genel anlamda, kendinizi politik olarak nasıl tanımlarsınız?	1 -- 2 -- 3 --4 -- 5 -- 6 -- 7 – 8 -- 9 -- 10 Sol Sağ

[BÖLÜM 1]

İlk olarak, genel olarak kadercilik (diğer bir deyişle, kadere inanma, kaderci düşünme) ile ilgili görüşlerinizi öğrenmeye çalışacağım.

1. Sizce kadercilik nedir?
    - ***a.*** *Kadercilik, diğer bir deyişle kader inancı, deyince aklınıza neler geliyor?*
    - ***b.*** *Kaderci olma, kaderci düşünme nasıl olur?*
    - ***c.*** *Kadere inanmaya bir örnek verebilir misiniz?*
2. İnsanlar hangi konularda kadere inanır? Örnek verebilir misiniz?
3. Sizce insanlar neden kadere inanırlar?
4. Hangi durumlarda insanların kaderciliği artar, kadere daha çok inanır?
5. Kadere inanan insanların özellikleri nelerdir?
    - ***a.*** *Kaderci bir yaklaşıma sahip insanlar nasıl düşünür, nasıl davranır?*
6. Kadere inanmak hayatı nasıl kolaylaştırır ya da zorlaştırır?
7. Kadere inanmanın, hayatta karşılaşılan zorluklarla baş etmede nasıl bir rolü vardır?

[BÖLÜM 2]

Şimdi soracağım sorular için, sizden kaderciliği depremlerle ilgili olarak düşünmenizi isteyeceğim.

8. Kadere inanan bir insana göre, depremlerin yol açtığı hasarlar ne kadar önlenebilir?
9. Kadere inanan bir insan, depremlerde oluşan hasar ne(ler)den kaynaklandığını düşünür?
10. Kader inancının, depreme hazırlıklı olmada rolü/etkisi var mıdır? Varsa nasıldır?
    - ***a.*** *Kaderci olma (kadere inanma) depremlere karşı hazırlıklı olmayı nasıl etkiler?*
11. Kader inancının, deprem sonrası halkın hayata devam etmesinde rolü/etkisi var mıdır? Varsa nasıldır?
    - **a.** *Kaderci olma (kadere inanma) deprem yaşantısıyla sağlıklı başa çıkmayı nasıl etkiler?*

[BÖLÜM 3]

Sırada soracağım sorularda, <u>depremler özelinde</u> Türkiye'de afet risk yönetimi, yani depremler öncesi ve sonrası sağlanan yardım ve verilen hizmetler ile ilgili görüşlerinizi öğrenmeye çalışacağım.

12. Sizce, afet risk yönetiminin başarılı olmasında neler etkilidir? Neler başarısızlığa sebep olur?
    - **a.** Deprem olmadan önce (hazırlıklı olma; risk ve zarar azaltma açısından)
    - **b.** Depremden hemen sonra (müdahale)
    - **c.** Depremden sonra (iyileşme, yeniden yapılanma)
13. Deprem sonrasında kimlerden (hangi kurumlardan) destek beklersiniz?
14. Deprem sonrasında ne gibi yardımların sağlanmasını ve hizmetlerin verilmesini istersiniz?
15. Sizce, deprem sonrası halkın hayata devam etmesinde, afet risk yönetimi kapsamında sağlanan yardım ve hizmetlerin rolü nedir?

Son olarak, eklemek istediğiniz başka bir şey var mı?

APPENDIX B. Item Pool for the GFAT Scale

(Initial version, 54 items)

1. Her işte bir hayır vardır.
2. Kadere inanmak insanı teselli eder.
3. Kader inancı, insanı psikolojik olarak rahatlatır.
4. İnsanın kaderinde olanı yaşaması onun iyiliğinedir.
5. İnsanın bir çıkış yolu bulamadığında olayları kadere bağlaması onu rahatlatır.
6. Olumsuz yaşantılar sonrası kadere sığınmak insanı güçlendirir.
7. İnsan kadere inanarak yaşadıklarına anlam yükler.
8. Kader, insanın hayatına denge getirir.
9. Kadere inanan insan daha sabırlı olur.
10. Kadere inanmak, hayata tutunmayı kolaylaştırır.
11. Kader, insanın başına gelenleri kabullenmesini kolaylaştırır.
12. Kadere inanmak, insanın değiştiremeyeceği şeyleri kabul etmesine yardımcı olur.
13. İnsan, kadere inanarak hayatında olumlu ve olumsuz arasında denge kurar.
14. Kader inancı, mücadele edemediği durumlarda insana hayata devam etme gücü verir.
15. Kadere sığınan insan, yaşadıklarını daha rahat kabullenir.
16. Sorgulamadan kadere inanmak sağlıklı değildir.*
17. Her şeyi kadere bağlamak gerekmez.*
18. Kader, batıl inançtan başka bir şey değildir.*
19. Kadercilik, amaçsız yaşamak gibidir.*
20. Olayları kadere bağlamak aslında sadece bahanedir.*
21. Hayatın gidişatını kadere bağlamak insanı çıkmaza sokar.*
22. Kadere sığınmak insanı pasifleştirir.*
23. İnsan, kaderinde ne varsa onu yaşar.

24. Başa gelen çekilir.
25. İnsan, başına gelecekleri değiştiremez.
26. Ne kadar çabalarsa çabalasın insan kaderini değiştiremez.
27. Bazı şeylere razı olmak gerekir.
28. Bazı şeyleri kabullenmek gerekir.
29. Ne yaparsa yapsın insan kaderinin dışına çıkamaz diye bir şey yoktur.*
30. İnsan, kendi iradesiyle kaderini kendi yaratabilir.*
31. İnsanın kaderi elindedir.*
32. İnsan kaderini değiştiremez diye bir şey yoktur.*
33. Kader, insanın kendi çizdiği yoldur. *
34. İnsan, kaderine boyun eğmemelidir.*
35. İnsan kararlı olursa kaderini değiştirebilir.*
36. İnsan akıl ve mantıkla kaderini yönlendirebilir.*
37. *Elinden geleni yaptıktan sonra gerisi kaderdir.**
38. İnsanın çaresiz kaldığı zamanlar olur.
39. Hayatta insanın gücünün yetmediği şeyler vardır.
40. İnsanın açıklama getiremediği şeyler vardır.
41. İnsan, hayatta her şeyi kontrol edemez.
42. İnsanın engel olamayacağı şeyler vardır.
43. Hayatını nasıl yaşayacağı insanın kendi elindedir.*
44. İnsan, yaşayacaklarını seçebilir.*
45. Doğum, ölüm gibi şeyler önceden belirlenmiştir.
46. İnsanın başına gelecekler ezelden bellidir.
47. İnsanın hayatı, kendinden daha güçlü bir şey tarafından belirlenmiştir.
48. İnsanın hayatını belirleyen kendinden daha üstün bir irade yoktur.*
49. Kader, insanın hayatında önemli bir yere sahiptir.
50. İnsanın her yaşadığı kaderdir.
51. Kader, hayatın birçok alanını ilgilendirir.
52. İnsan hayatını kader odaklı yaşamamalıdır.*
53. Bazı şeyler şans işidir.
54. Hayatta mucizeler olur.

APPENDIX C. Measures Used In Study 2

Informed Consent Form

Gönüllü Katılım ve Bilgilendirme Formu

Sayın Katılımcı,

Bu araştırma, Orta Doğu Teknik Üniversitesi (ODTÜ) Psikoloji Bölümü Sosyal Psikoloji Doktora Programı öğrencisi Canay Doğulu tarafından Prof. Dr. Nuray Sakallı Uğurlu danışmanlığındaki doktora tezi kapsamında yürütülmektedir. Bu form sizi araştırma koşulları hakkında bilgilendirmek için hazırlanmıştır.

Çalışmanın amacı nedir?
Araştırmanın amacı, katılımcıların genel olarak kaderciliğe yönelik tutum ve eğilimleriyle ilgili bilgi toplamaktır.

Bize nasıl yardımcı olmanızı isteyeceğiz?
Araştırmaya katılmayı kabul ederseniz, sizden beklenen, ankette yer alan bir dizi soruyu derecelendirme ölçeği üzerinde yanıtlamanızdır. Anketin farklı bölümlerinde soruların nasıl cevaplanacağı konusunda bilgi ilgili bölümün başında verilmiştir. Her soruya vereceğiniz yanıt son derece önemlidir. Lütfen bölüm başlarında verilen açıklamaları dikkatlice okuyarak size en uygun cevabı işaretleyiniz. Ankette yer alan soruların doğru veya yanlış bir cevabı yoktur, önemli olan sizin ne düşündüğünüz ve hissettiğinizdir. Çalışmaya katılım ortalama olarak 20 dakika sürmektedir. Anketi tek oturumda tamamlamanız, araştırmanın güvenilir ve geçerli olması bakımından önem taşımaktadır.

Sizden topladığımız bilgileri nasıl kullanacağız?
Araştırmaya katılımınız tamamen gönüllülük temelinde olmalıdır. Ankette, sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız tamamıyla gizli tutulacak, sadece araştırmacılar tarafından değerlendirilecektir. Katılımcılardan elde edilecek bilgiler toplu halde değerlendirilecek ve bilimsel yayımlarda kullanılacaktır.

Katılımınızla ilgili bilmeniz gerekenler:
Anket, genel olarak kişisel rahatsızlık verecek sorular içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakabilirsiniz. Böyle bir durumda doldurduğunuz anket çalışmaya dahil edilmeyecektir.

Araştırmayla ilgili daha fazla bilgi almak isterseniz:
Veri toplama ve analiz sürecinin sonunda elde edilen bulgularla ilgili tüm sorularınız cevaplanacaktır.

Çalışmaya katıldığınız için şimdiden teşekkür ederiz.

Çalışma hakkında daha fazla bilgi almak için
ODTÜ Psikoloji Bölümü Sosyal Psikoloji Doktora Programı öğrencisi
Canay Doğulu (E-posta: canay.dogulu@metu.edu.tr)
ile iletişim kurabilirsiniz.

Yukarıdaki bilgileri okudum ve bu çalışmaya tamamen gönüllü olarak katılıyorum. Çalışmayı istediğim zaman yarıda bırakabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum.

□ *Evet* □ *Hayır*

Sociodemographic Information

1. Cinsiyetiniz :
   □ Kadın □ Erkek □ Diğer/Söylememeyi tercih ediyorum

2. Yaşınız : _____

3. Medeni durumunuz : □ Bekar □ Evli □ Boşanmış □ Dul

4. Mesleğiniz/İşiniz : ___________________

5. Tamamladığınız en üst eğitim seviyesi nedir?
   □ Okula hiç gitmedim □ İlkokul □ Ortaokul
   □ Lise □ Yüksekokul □ Üniversite (lisans)
   □ Üniversite (yüksek lisans, doktora)

6. Yaşamınızın çoğunun geçtiği (en uzun yaşadığınız) yer:
   □ Köy □ Kasaba/Belde □ İlçe □ İl □ Büyükşehir

7. Aşağıdaki merdivenin Türkiye'deki insanların durduğu yeri temsil ettiğini düşünün.

Merdivenin tepesindekiler her şeyin en iyisine (en çok paraya, en iyi eğitime ve en saygın mesleklere) sahip olanlar.
Merdivenin en altındakiler ise, en kötü koşullara sahip olanlar (en az paraya, en az eğitime ve en az sayılan mesleklere sahip olanlar ya da hiç bir işi olmayanlar).
Bu merdivende daha yüksek bir konuma sahip olmanız en tepedeki insanlara göre daha yakın olduğunuz; daha aşağıda olmanız ise en alttaki insanlara daha yakın olduğunuzu gösterir.

Bu merdivende kendinizi nereye yerleştirirdiniz?
□ En alt 1 □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 □ 8 □ 9 □ En üst 10

8. Genel olarak, kendinizi politik olarak nasıl tanımlarsınız?
   (Lütfen size en uygun olan sayıyı işaretleyiniz)
   □ Sol 1 □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 □ 8 □ 9 □ Sağ 10

9. Aşağıdaki seçeneklerden hangisi dini inancınızı en iyi şekilde tanımlar?
   □ Müslüman
   □ Hristiyan
   □ Musevi
   □ Herhangi bir dine mensup değilim.
   □ Diğer (belirtiniz): ___________

10. Kendinizi ne kadar dindar biri olarak tanımlarsınız?
(9. Soruda ilk üç seçenekten biri seçildiyse)

- □ Hiç dindar değilim (1)
- □ Biraz (2)
- □ Orta derecede (3)
- □ Oldukça fazla (4)
- □ Çok fazla (5)

11. Kendinizi ne kadar kadere inanan biri olarak tanımlarsınız?

- □ Hiç inanmam (1)
- □ Biraz inanırım (2)
- □ Orta derecede inanırım (3)
- □ Oldukça fazla inanırım (4)
- □ Çok fazla inanırım (5)

General Fatalism (GFAT) Scale *(final version of the item pool; 62 items)*

Aşağıda kaderci düşünmeyle ilgili bir dizi ifade yer almaktadır. Lütfen verilen ifadeleri dikkatlice okuyunuz ve her bir ifadeye ne derece katılıp katılmadığınızı ölçekteki sayılardan uygun olan seçeneği işaretleyerek (o seçeneğin üstüne tıklayarak) belirtiniz.

Cevap seçenekleri şu şekildedir:

1 = Kesinlikle katılmıyorum
2 = Katılmıyorum
3 = Biraz katılmıyorum
4 = Biraz katılıyorum
5 = Katılıyorum
6 = Kesinlikle katılıyorum

Functionality (coping skill) (*n = 19*)

1. Kadere inanmak insanı teselli eder.
2. Kader inancı, insanı psikolojik olarak rahatlatır.
3. İnsanın kaderinde olanı yaşaması onun iyiliğinedir.
4. Bir çıkış yolu bulamadığında olayları kadere bağlamak insanı rahatlatır.
5. Olumsuz olaylar/yaşantılar sonrasında kadere sığınmak insana güç verir.
6. İnsan kadere inanarak yaşadıklarına anlam yükler.
7. Kader, insanın hayatına denge getirir.
8. Kadere inanan insan daha sabırlı olur.
9. Kadere inanmak, hayata tutunmayı kolaylaştırır.
10. Kader, insanın başına gelenleri kabullenmesini kolaylaştırır.
11. Kadere inanmak, insanın değiştiremeyeceği şeyleri kabul etmesine yardımcı olur.
12. İnsan, kadere inanarak hayatında olumlu ve olumsuz olaylar/durumlar arasında denge kurar.
13. Kader inancı, insana zorluklara rağmen hayata devam etme gücü verir.
14. Sorgulamadan kadere inanmak sağlıklı değildir.*
15. Olayları kadere bağlamak sadece bahanedir.*
16. Hayatın gidişatını kadere bağlamak insanı çıkmaza sokar.*
17. Kadere sığınmak insanı pasifleştirir.*
18. Kadercilik, amaçsız yaşamak gibidir.*
19. Kader, batıl inançtan başka bir şey değildir.*

Submission to fate (*n = 9*)

20. Her işte bir hayır vardır.
21. Bir şeyin olacağı varsa olur.
22. İnsan, kaderinde ne varsa onu yaşar.
23. Başa gelen çekilir.
24. Ne kadar çabalarsa çabalasın, insanın kaderini değiştirmesi mümkün değildir.
25. İnsan, kaderine boyun eğmemelidir.*
26. İnsan, iradesiyle kendi kaderini yaratabilir.*
27. İnsan kararlı olursa kaderini değiştirebilir.*
28. İnsan akıl ve mantıkla kaderini yönlendirebilir.*

Personal control belief (Internality) (*n = 7*)

29. Kader, insanın elinde olan bir şey değildir.
30. İnsanın seçemediği şeyler vardır.
31. İnsan başına gelecekleri değiştiremez.
32. İnsan bazı şeylere engel olamaz.
33. İnsanın neyi nasıl yaşayacağı kendisine bağlıdır.*
34. Hayatın kontrolü insanın kendi elindedir.*
35. Elinden geleni yaptıktan sonra gerisi kaderdir.*

Helplessness (*n = 6*)

36. İnsanın çaresiz kaldığı zamanlar olur.
37. Hayatta insanın gücünün yetmediği şeyler vardır.
38. İnsanın açıklama getiremediği şeyler vardır.
39. Bazı şeyler insanın elinde değildir.
40. Hayatta bazı şeylere razı olmak gerekir.
41. Hayatı olduğu gibi kabullenmemek lazım.*

Predetermination (*n = 5*)

42. Kader, insan hayatının önceden belirlenmiş olmasıyla ilgilidir.
43. Doğum, ölüm gibi şeyler önceden belirlenmiştir.
44. İnsanın başına gelecekler ezelden bellidir.
45. Hayatta hiçbir şey önceden belirlenmiş değildir.*
46. İnsanın neyi nasıl yaşayacağı önceden bilinemez.*

Divine control (*n = 5*)

47. İnsanın hayatı, kendinden daha üstün bir güç/varlık tarafından belirlenmiştir.
48. Bizim için neyin iyi ya da kötü olduğunu Allah/Tanrı bilir.
49. Allah'ın/Tanrı'nın herkes için bir planı vardır.
50. Başımıza ne geleceğini bir Allah/Tanrı bilir.
51. İnsanın hayatını belirleyen kendinden daha üstün bir irade yoktur.*

Luck (*n* = 5)

52. Bazı şeyler şans işidir.
53. Hayatta mucizeler olur.
54. Şans hayatın bir parçasıdır.
55. Hayatta şanslı olmanın bir önemi yoktur.*
56. Hayatta tesadüflere yer yoktur.*

Centrality in life (*n* = 6)

57. Kader, insanın hayatında önemli bir yere sahiptir.
58. İnsanın her yaşadığı kaderdendir.
59. Kader, hayatın birçok alanını ilgilendirir.
60. İnsanlar kadere gereğinden fazla önem veriyor.*
61. Kader, insan hayatı için belirleyici bir şey değildir.*
62. Her şeyi kadere bağlamak anlamsızdır.*

** Reverse items (n = 22)*

Rotter’s Internal-External Locus of Control Scale
(Rotter, 1966; Dağ, 1991)

Aşağıda yer alan maddeler, toplumda belirli önemli olayların farklı insanları nasıl etkilediğini anlamaya yöneliktir. Her bir maddede iki seçenek bulunmaktadır. Lütfen, her bir madde için, kendinizi düşündüğünüzde, iki seçenekten size en uygun olduğuna inandığınız seçeneği işaretleyiniz (o seçeneğin üstüne tıklayarak).

Seçiminizi, doğru olmasını istediğiniz ya da seçmeniz gerektiğini düşündüğünüz seçeneğe göre değil de; sizin için daha doğru olduğunu düşündüğünüz seçeneğe göre yaptığınızdan emin olunuz. Doğru ya da yanlış cevap yoktur, önemli olan kişisel fikrinizi belirtmenizdir.

1.
a. Ana-babaları çok fazla cezalandırdıkları için çocuklar problemli oluyor.
b. Günümüz çocuklarının çoğunun problemi, ana-babaları tarafından aşırı serbest bırakılmalarıdır.

2.
a. İnsanların yaşamındaki mutsuzlukların çoğu, biraz da şanssızlıklarına bağlıdır.
b. İnsanların talihsizlikleri kendi hatalarının sonucudur.

3.
a. Savaşların başlıca nedenlerinden biri, halkın siyasetle yeterince ilgilenmemesidir.
b. İnsanlar savaşı önlemek için ne kadar çaba harcarsa harcasın, her zaman savaş olacaktır.

4.
a. İnsanlar bu dünyada hak ettikleri saygıyı er geç görürler.
b. İnsan ne kadar çabalarsa çabalasın ne yazık ki değeri genellikle anlaşılmaz.

5.
a. Öğretmenlerin öğrencilere haksızlık yaptığı fikri saçmadır.
b. Öğrencilerin çoğu, notlarının tesadüfi olaylardan etkilendiğini fark etmez.

6.
a. Koşullar uygun değilse insan başarılı bir lider olamaz.
b. Lider olamayan yetenekli insanlar fırsatları değerlendirememiş kişilerdir.

7.
a. Ne kadar uğraşsanız da bazı insanlar sizden hoşlanmazlar.
b. Kendilerini başkalarına sevdiremeyen kişiler, başkalarıyla nasıl geçinileceğini bilmeyenlerdir.

8.
a. İnsanın kişiliğinin belirlenmesinde en önemli rolü kalıtım oynar.
b. İnsanların nasıl biri olacaklarını kendi hayat tecrübeleri belirler.

9.

a. Bir şey olacaksa eninde sonunda olduğuna sık sık tanık olmuşumdur.
b. Ne yapacağıma kesin karar vermek kadere güvenmekten daima iyidir.

10.

a. İyi hazırlanmış bir öğrenci için, adil olmayan bir sınav hemen hemen söz konusu olamaz.
b. Sınav sonuçları derste işlenenle çoğu kez o kadar ilişkisiz oluyor ki, çalışmanın anlamı kalmıyor.

11.

a. Başarılı olmak çok çalışmaya bağlıdır.
b. İyi bir iş bulmak, temelde, doğru zamanda doğru yerde bulunmaya bağlıdır.

12.

a. Hükümetin kararlarında sade vatandaşta etkili olabilir.
b. Bu dünya güç sahibi bir kaç kişi tarafından yönetilmektedir ve sade vatandaşın bu konuda yapabileceği fazla bir şey yoktur.

13.

a. Yaptığım planları yürütebileceğimden hemen hemen eminimdir.
b. Çok uzun vadeli planlar yapmak her zaman akıllıca olmayabilir, çünkü bir çok şey zaten iyi ya da kötü şansa bağlıdır.

14.

a. Hiç bir yönü iyi olmayan insanlar vardır.
b. Herkesin iyi tarafı vardır.

15.

a. Benim açımdan istediğimi elde etmenin talihle bir ilgisi yoktur.
b. Çoğu durumda, yazı-tura atarak da isabetli kararlar verilebilir.

16.

a. Kimin patron olacağı, genellikle, doğru yerde ilk önce bulunma şansına kimin sahip olduğuna bağlıdır.
b. İnsanlara doğru şeyi yaptırmak bir yetenek işidir; şansın bunda payı ya hiç yoktur ya da çok azdır.

17.

a. Dünya meseleleri söz konusu olduğunda, çoğumuz anlayamadığımız ve kontrol edemediğimiz güçlerin kurbanıyızdır.
b. İnsanlar siyasal ve sosyal konularda aktif rol olarak dünya olaylarını kontrol edebilirler.

18.

a. Birçok insan rastlantıların yaşamlarını ne derece etkilediğinin farkında değildir.
b. Aslında ‘şans’ diye bir şey yoktur.

19.

a. İnsan, hatalarını kabul edebilmelidir.
b. Genelde en iyisi insanın hatalarını ispat etmesidir.

20.

a. Bir insanın sizden gerçekten hoşlanıp hoşlanmadığını bilmek zordur.
b. Kaç arkadaşınızın olduğu, ne kadar iyi olduğunuza bağlıdır.

21.

a. Uzun vadede, yaşamınızdaki kötü şeyler iyi şeylerle dengelenir.
b. Çoğu talihsizlikler yetenek eksikliğinin, ihmalin, tembelliğin ya da her üçünün birden sonucudur.

22.

a. Yeterli çabayla siyasal yolsuzlukları ortadan kaldırabiliriz.
b. Siyasetçilerin kapalı kapılar ardında yaptıkları üzerinde halkın fazla bir kontrolü yoktur.

23.

a. Öğretmenlerin verdikleri notları nasıl belirlediklerini bazen anlayamıyorum.
b. Aldığım notlarla çalışma derecem arasında doğrudan bir bağlantı vardır.

24.

a. İyi bir lider, ne yapacaklarına halkın bizzat karar vermesini bekler.
b. İyi bir lider herkesin görevinin ne olduğunu bizzat belirler.

25.

a. Çoğu kez başıma gelenler üzerinde çok az etkiye sahip olduğumu hissederim.
b. Şans ya da talihin yaşamımda önemli bir rol oynadığına inanmam.

26.

a. İnsanlar arkadaşça olmaya çalışmadıkları için yalnızdırlar.
b. İnsanları memnun etmek için çok fazla çabalamanın yararı yoktur, sizden hoşlanırlarsa hoşlanırlar.

27.

a. Liselerde atletizme gereğinden fazla önem veriliyor.
b. Takım sporları kişiliğin oluşumu için mükemmel bir yoldur.

28.

a. Başıma ne gelmişse, kendi yaptıklarımdandır.
b. Yaşamımın alacağı yön üzerinde bazen yeterince kontrolümün olmadığını hissediyorum.

29.

a. Siyasetçilerin neden öyle davrandıklarını çoğu kez anlayamıyorum.
b. Yerel ve ulusal düzeydeki kötü idareden uzun vadede halk sorumludur.

Note. Items 1, 8, 14, 19, 24, and 27 are buffer items.

General Belief in A Just World Scale

(GBJW; Dalbert, Montada & Schmitt, 1987; Yalçın, 2006)

Aşağıda bazı ifadeler yer almaktadır. Lütfen verilen ifadeleri dikkatlice okuyunuz ve her bir ifadeye ne derece katılıp katılmadığınızı ölçekteki sayılardan uygun olan seçeneği işaretleyerek (o seçeneğin üstüne tıklayarak) belirtiniz.

Cevap seçenekleri şu şekildedir:

1 = Kesinlikle katılmıyorum
2 = Katılmıyorum
3 = Biraz katılmıyorum
4 = Biraz katılıyorum
5 = Katılıyorum
6 = Kesinlikle katılıyorum

1. Temelde, dünyanın adaletli bir yer olduğuna inanırım.
2. Genel olarak, insanların hak ettikleri şeyleri elde ettiklerine inanırım.
3. Adaletin her zaman adaletsizliği yendiğine güvenim tamdır.
4. Uzun vadede insanların uğradıkları adaletsizliklerin telafi edileceğine inanırım.
5. Hayatın tüm alanlarındaki (iş, aile, siyaset, vb.) adaletsizliklerin, bir kuraldan ziyade istisna olduğuna kuvvetle inanırım.
6. Bence insanlar önemli kararlar verirken adaletli olmaya çalışırlar.

Religious Orientation Measures

Aşağıda dini değerlerinizle ilgili bir dizi ifade yer almaktadır. Lütfen verilen ifadeleri dikkatlice okuyunuz ve her bir ifadeye ne derece katılıp katılmadığınızı ölçekteki sayılardan uygun olan seçeneği işaretleyerek (o seçeneğin üstüne tıklayarak) belirtiniz.

Cevap seçenekleri şu şekildedir:

1 = Kesinlikle katılmıyorum
2 = Katılmıyorum
3 = Biraz katılmıyorum
4 = Biraz katılıyorum
5 = Katılıyorum
6 = Kesinlikle katılıyorum

Muslim Religious Orientation Scale
(MRO; Harlak, Eskin, & Demirkıran, 2008; Ceylan, 2016; Ercan, 2009)

1. İçimden geldiği için dua ederim. (I)

2. İçimden geldiği için Allah’a inanırım. (I)

3. Allah’ın varlığını hissettiğim zamanlarda şükrederim. (I)

4. Allah’ın varlığını sık sık derinden hissederim. (I)

5. İbadet, benim için Allah’tan bir şey dileme fırsatı değil, sükûnet ve Allah’ın varlığını hissetme yoludur. (I)

6. Allah’a gönülden bağlı olmanın doğru ve mükemmel bir din anlayışına sahip olmaktan daha önemli olduğunu düşünüyorum. (I)

7. İbadet etmek için en önemli sebep Allah’ın yardımını korumasını sağlamaktır. (E)

8. Din, her şeyden önce, başıma acı ve felaket geldiği zaman beni teselli eder. (E)

9. Toplumda iyi bir yer edinmek için dinime bağlı kalmaya çalışırım. (E)

10. Sevap kazanmak için ibadet ederim. (E)

11. Öbür dünyada cezalandırılmamak adına dini kurallara bağlı yaşamaya çalışırım. (E)

12. İbadet etmemin amacı kendimi mutlu ve huzurlu hissetmektir. (E)

13. Birçok dini konu hakkındaki görüşlerim hâlâ değişmektedir. (Q)

14. Ben değiştikçe dini inançlarım da benimle birlikte değişip gelişir. (Q)

15. Dine şüpheci yaklaşmanın beni yeni açılımlara yönlendirdiğini düşünüyorum. (Q)

16. Dini sorgulamadan sunulduğu gibi kabul edemem. (Q)

17. Dinin kurallarını sorgular ve kendime göre uygularım. (Q)

18. Dinimin gerekli gördüğü bütün kuralları yerine getirmeye çalışırım. (F)

19. Hayatta her konuda dini kuralları temel alırım. (F)

20. İnançlı bir kişi olarak dini kuralların yarım yamalak uygulanmasına karşıyım. (F)

21. Din kuralları değiştirilemez bir bütündür; ya hepsini olduğu gibi kabul edersiniz, ya da hepsini reddedersiniz. (F)

22. Dinimin öngördüğü kurallar üzerinde sorgulanıp, yorum yapılmasını dine karşı gelmekle bir tutarım. (F)

(I) = Intrinsic religious orientation (IRO) items
(E) = Extrinsic religious orientation (ERO) items
(Q) = Quest religious orientation (QRO) items
(F) = Fundamentalist religious orientation (FRO) items

Intrinsic Religious Motivation Scale
(IRM; Hoge, 1972; Yilmaz & Bahçekapili, 2015)

1. Dini inancım tüm hayatımı etkiler.

2. Dinimi hayatımdaki tüm diğer işlere katmak için büyük çaba sarf ederim.

3. Hayatımda kutsal bir gücün var olduğunu hissediyorum.

4. Benim için Tanrı'ya hizmet etmekten daha önemli hiçbir şey yoktur.

5. Dini inancım bazen hareketlerimi kısıtlar.

6. İnsan vereceği her önemli kararda Tanrı'nın yol göstericiliğine başvurmalıdır.

7. Hayat görüşümün arkasında yatan asıl şey dini inançlarımdır.

8. Ahlaklı bir hayat yaşadığım sürece neye inandığım çok önemli değildir.*

9. Dindar bir insan olsam da dini meselelerin gündelik işlerimi etkilemesine izin vermem.*

10. Dinime inansam da hayatta daha önemli başka birçok şey olduğunu düşünüyorum.*

** Reverse items*

Katılımınızdan dolayı teşekkür ederiz. Anket burada sonlanmıştır.

İlk katılımcılarından biri olarak, anketin anlaşılır olup olmadığına ve çalışmayla ilgili geliştirebileceğimiz şeyler olup olmadığına dair izlenimlerinizi paylaşarak bize yardımcı olmanızı rica ediyoruz.

1. Öncelikle, çalışmayla ilgili genel izlenimleriniz nelerdir? Çalışmanın amacının ne olduğunu düşündünüz?

   ____

   ____

   ____

2. Başka düşünceleriniz ve yorumlarınız var mı?

   ____

   ____

   ____

APPENDIX D. Measures Used In Study 3

Informed Consent Form

Araştırmaya Gönüllü Katılım Formu

Sayın Katılımcı,

Bu araştırma, Orta Doğu Teknik Üniversitesi (ODTÜ) Psikoloji Bölümü Sosyal Psikoloji Doktora Programı öğrencisi Uzm. Psk. Canay Doğulu tarafından Prof. Dr. Nuray Sakallı Uğurlu danışmanlığındaki doktora tezi kapsamında yürütülmektedir. Bu form sizi araştırma koşulları hakkında bilgilendirmek için hazırlanmıştır.

Çalışmanın amacı nedir?
Araştırmanın amacı; kişilik, biliş ve çeşitli konulara ilişkin sosyal tutumlar arasındaki ilişki hakkında bilgi toplamaktır.

Bize nasıl yardımcı olmanızı isteyeceğiz?
Araştırmaya katılmayı kabul ederseniz, sizden beklenen, ankette yer alan bazı görevleri yapmanız ve çeşitli konulara ilişkin sosyal tutumlarla ilgili bir dizi soruyu derecelendirme ölçeği üzerinde yanıtlamanızdır. Anketin farklı bölümlerinde soruların nasıl cevaplanacağı konusunda bilgi ilgili bölümün başında verilmiştir. Lütfen bölüm başlarında verilen açıklamaları dikkatlice okuyarak size en uygun cevabı işaretleyiniz. Çalışmaya katılım ortalama olarak 30 dakika sürmektedir. Anketi uygun olduğunuz bir zamanda ve tek oturumda ara vermeden tamamlamanız, araştırmanın güvenilir ve geçerli olması bakımından önem taşımaktadır.

Sizden topladığımız bilgileri nasıl kullanacağız?
Araştırmaya katılımınız tamamen gönüllülük temelinde olmalıdır. Ankette, sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız tamamıyla gizli tutulacak, sadece araştırmacılar tarafından değerlendirilecektir. Katılımcılardan elde edilecek bilgiler toplu halde değerlendirilecek ve bilimsel yayımlarda kullanılacaktır.

Katılımınızla ilgili bilmeniz gerekenler:
Anket, genel olarak kişisel rahatsızlık verecek sorular içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi

rahatsız hissederseniz cevaplama işini yarıda bırakabilirsiniz. Böyle bir durumda doldurduğunuz anket çalışmaya dahil edilmeyecektir.

Araştırmayla ilgili daha fazla bilgi almak isterseniz:
Veri toplama ve analiz sürecinin sonunda elde edilen bulgularla ilgili tüm sorularınız cevaplanacaktır.

Çalışma hakkında daha fazla bilgi almak için ODTÜ Psikoloji Bölümü Sosyal Psikoloji Doktora Programı öğrencisi Uzm. Psk. Canay Doğulu (E-posta: canay.dogulu@metu.edu.tr) ile iletişim kurabilirsiniz. Çalışmaya katıldığınız için şimdiden teşekkür ederiz.

Yukarıdaki bilgileri okudum ve bu çalışmaya tamamen gönüllü olarak katılıyorum. Çalışmayı istediğim zaman yarıda bırakabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum.

□ *Evet* □ *Hayır*

Eğer şu an bölünmeyeceğiniz (ara vermeden) ve dikkatinizi dağıtabilecek hiçbir şeyin olmadığı bir 30 dakika civarında vakit ayıramayacaksanız, lütfen sayfayı kapatınız. Bu koşulları sağladığınız uygun bir zamanınızda çalışmaya katılabilir, anketi yapabilirsiniz.
Ankete başlamak için hazırsanız diğer sayfaya geçmek için sağ alt tarafta bulunan ">>" tuşunu tıklayınız.

Mortality Salience (MS) Manipulation

Sonraki bölümde iki tane açık uçlu soru yer almaktadır.
Lütfen, aklınıza ilk gelen olağan cevabı yansıtacak şekilde bu soruları yanıtlayınız.
Katılımcıların bu sorulara sezgisel tepkiler vermelerini bekliyoruz.

Projektif Yaşam Tutumları Değerlendirmesi

Aşağıdaki iki madde, yakın zamanda geliştirilen yenilikçi bir kişilik değerlendirme aracı olarak oluşturulmuştur. Yapılan araştırmalar, yaşama dair duygu ve düşüncelerin kişilik hakkında çok önemli miktarda bilgi sağladığını göstermektedir. Aşağıdaki sorulara vereceğiniz yanıtlar, kişiliğinizin bazı boyutlarını değerlendirmek için analiz edilecektir. Lütfen, söz konusu maddeleri tam olarak cevaplayınız.

(Ölüm Koşulu)

1. Lütfen, kendi ölümünüzü düşünmenin sizde uyandırdığı duyguları kısaca açıklayınız.

____

____

2. Lütfen, fiziksel olarak ölmekte olduğunuzda ve fiziksel olarak artık ölü olduğunuzda size ne olacağı konusundaki düşüncelerinizi olabildiğince açık bir biçimde yazınız.

____

____

(Deprem Koşulu)

1. Lütfen, deprem yaşadığınızı düşünmenin sizde uyandırdığı duyguları kısaca açıklayınız.
2. Lütfen, fiziksel olarak depremi yaşarken ve fiziksel olarak artık deprem bittiğinde size ne olacağı konusundaki düşüncelerinizi olabildiğince açık bir biçimde yazınız.

(Kontrol Koşulu)

1. Lütfen, televizyon seyrettiğinizi düşünmenin sizde uyandırdığı duyguları kısaca açıklayınız.
2. Lütfen, televizyon izlediğinizde size fiziksel olarak ne olacağı konusundaki düşüncelerinizi olabildiğince açık bir biçimde yazınız.

Death-Thought Accessibility (DTA; manipulation check for the MS manipulation)

Lütfen aşağıdakileri, kelime oluşturacak şekilde boşluklardaki harfleri doldurarak tamamlamaya çalışınız. Her boşluğa bir harf gelmesi gerekmektedir.
Lütfen aklınıza gelen ilk kelimeyi yandaki satıra yazınız.
Teşekkürler.

1. _ E _ E N	**10.** K E _ _	**19.** T A _ _ T
2. K _ L _ U K	**11.** _ A S _ I K	**20.** _ _ V Ş _ N
3. _ E _ C E R _	**12.** M E _ A _	**21.** _ L A _ Y E
4. _ İ Ş _	**13.** O _ U _	**22.** O T _ _ Ü S
5. _ _ Ü M	**14.** P _ A _ T İ K	**23.** _ E _ A Z _
6. Ç _ _ E K	**15.** _ A Ş _ K	**24.** D E _ T _ R
7. B _ _ A	**16.** _ _ P R A K	**25.** K _ H _ E
8. _ Ö M _ E K	**17.** M A _ _ S	
9. A J _ _ D A	**18.** Y _ _ E K	

Note. Items 1, 5, 8, 12, 16, 19, 23 are the possible death-related fragments.

Sizce çözdüğünüz kelime bulmacası ne kadar zordu?

- ☐ Çok kolay (1)
- ☐ Kısmen kolay (2)
- ☐ Biraz kolay (3)
- ☐ Ne kolay ne zor (4)
- ☐ Biraz zor (5)
- ☐ Kısmen zor (6)
- ☐ Çok zor (7)

Manipulation of System Threat

(General system threat)

Aşağıdaki paragraf, yerel bir gazetecinin Türklerin Türkiye'nin durumu hakkında ne düşündüğüyle ilgili bir yazısından (Bekfun, 2016) alıntıdır. Lütfen bu paragrafı sonrasında gazeteciyi ve yazısını değerlendirebilmeniz için aşina olacak kadar dikkatlice okuyunuz.

Bugünlerde, Türkiye'deki birçok insan ülkenin durumuyla ilgili hayal kırıklığı ve endişe hissetmektedir. Çoğu vatandaş ülkenin sosyal, ekonomik ve politik açıdan düşük bir seviyeye geldiğini düşünmektedir. İnsanlar eskisi gibi kendilerini güvende hissetmemektedir ve ülkenin geleceğiyle ilgili bir belirsizlik, karamsarlık ve kaos söz konusudur. Çoğu insan ülkenin koşullarının daha kötüye gittiğine ve bugün yarın bir kaos ve anarşinin patlak verebileceğine inanmaktadır. İnsanlar sosyal, ekonomik ve politik alanlarda istikrar görmemekte ve ülkenin yaşanmaz olduğunu düşünmektir. Çoğu insan, Türkiye'de sistemin ve düzenin çalışkan ve dürüst insanlara göre olmadığına inanmaktadır. Diğer bir deyişle, insanlar günlük hayatlarında hak ettiklerini elde edemediklerine ve torpil, adaletsizlik ve sömürmenin yaygın olduğuna inanmaktadır. Öyle görünüyor ki, dünyadaki birçok ülke Türkiye'den daha iyi sosyal, ekonomik ve politik koşullara sahiptir. Gitgide daha fazla insan Türkiye'den ayrılma ve diğer ülkelere göç etme isteğini dile getirmektedir.

(Disaster-related system threat)

Aşağıdaki paragraf, yerel bir gazetecinin Türklerin Türkiye'nin afetler karşısındaki durumu hakkında ne düşündüğüyle ilgili bir yazısından (Bekfun, 2016) alıntıdır. Lütfen bu paragrafı sonrasında gazeteciyi ve yazısını değerlendirebilmeniz için aşina olacak kadar <u>dikkatlice okuyunuz</u>. Yazıyı okurken aşağıda verilen afet risk yönetimi tanımını göz önünde bulundurunuz.

Afet risk yönetimi, depremin yol açabileceği olumsuz etkileri azaltmak ve depremin afete dönüşmesini engellemek amacıyla kısa ve uzun vadede yapılan önleme, zarar azaltma ve hazırlık tedbirleri bütünüdür.

- Bu tedbirlere örnek olarak halka deprem bilinci kazandırılması ve deprem eğitiminin verilmesi, binaların depreme dayanıklı yapılması ve ilgili yönetmeliklere göre denetlenmesi, afete hızlı, etkili ve doğru şekilde müdahale edilmesi ve deprem sonrasında yardımların ve hizmetlerin etkili bir şekilde sağlanması (örn., zamanında, adil, güvenli, vb.) verilebilir.
- Afet risk yönetimi çalışmalarından devletin idari birimlerinden (belediye, valilik, AFAD, diğer resmi kuruluşlar, vb.) Kızılay ve AKUT gibi sivil toplum örgütlerine, güvenlik güçlerinden halka kadar çok çeşitli paydaşlar sorumludur.
- Afet risk yönetimi kapsamında, özellikle deprem sonrası yapılan yardım ve verilen hizmetlerin (arama-kurtarma çalışmaları; konaklama, gıda, sağlık, vb. temel ihtiyaçların karşılanması; yardımların dağıtımı, psikolojik destek verilmesi) depremi yaşayanların afetin yarattığı zorluklarla baş etmesinde ve normal hayatlarına geri dönmesinde önemi büyüktür.

Bugünlerde, Türkiye'deki birçok insan ülkenin afetler karşısındaki durumuyla ilgili hayal kırıklığı ve endişe hissetmektedir. Çoğu vatandaş ülkenin afet risk yönetimi çalışmalarının başarı durumunun düşük bir seviyeye geldiğini düşünmektedir. Olası bir depremle ilgili olarak insanlar eskisi gibi kendilerini güvende hissetmediklerini ve ülkenin afet risk yönetimi açısından geleceğiyle ilgili bir belirsizlik, karamsarlık ve kaos söz konusu olduğunu belirtmektedir. Çoğu insan ülkenin afet risk yönetimi çalışmalarının daha kötüye gittiğine ve bugün yarın bir deprem olduğunda kaos ve anarşinin patlak verebileceğine inanmaktadır. İnsanlar afet risk yönetimi çalışmalarında istikrar görmemekte ve depremin afete dönüşebileceği endişesinden dolayı ülkenin yaşanmaz olduğunu düşünmektir. Çoğu insan, Türkiye'de afet risk yönetimi sisteminin ve düzeninin çalışkan ve dürüst insanlara göre olmadığına inanmaktadır. Diğer bir deyişle, insanlar deprem yaşantıları sebebiyle hak ettikleri yardım ve hizmetleri elde edemediklerine/edemeyeceklerine ve torpil, adaletsizlik ve sömürmenin yaygın olduğuna/olacağına inanmaktadır. Öyle görünüyor ki, dünyadaki birçok ülke Türkiye'den daha iyi afet risk yönetimine sahiptir. Gitgide daha fazla insan Türkiye'den ayrılma ve diğer ülkelere göç etme isteğini dile getirmektedir.

(No system threat)

Aşağıdaki paragraf, yerel bir gazetecinin Türkiye'de 2016 sonbahar modası ve öne çıkan renkler ile ilgili bir yazısından (Bekfun, 2016) alıntıdır. Lütfen bu paragrafı sonrasında gazeteciyi ve yazısını değerlendirebilmeniz için aşina olacak kadar dikkatlice okuyunuz.

Eylül kapıyı çaldı. Sonbahar tüm romantizmi ve yenilikleriyle bizi heyecanlara sürüklemek için beklemede. Moda dünyası da Sonbahar 2016 sezonunda birbirinden çok farklı stillerin podyumlara yansıdığı ve bireyselliğin ön plana çıktığı koleksiyonlarla moda tüketicilerini heyecanlandırıyor. İşte podyumlardan öne çıkan defile ve trendler:

Sonbaharda hangi renklere bürüneceğiz?

Kırmızının elli tonu: Sonbaharda dökülen kızılyapraklara, gücün ve tutkunun rengi olan kırmızı eşlik edecek. **Şaşırtan pembe:** Sezonda öne çıkan lolita stilini destekleyen pembe renk, sevimli olduğu kadar feminen ve asi bir görünümü bütünleyerek ezber bozuyor. **Beyazdan vazgeçmiyoruz:** "Yaz bitti, mevsim sonbahar" diyerek beyaz renge veda etmek zorunda değiliz, zira yazın baştan ayağa beyazlara bürünmek akımı sonbaharda da devam edecek. Beyaz örgüler, şifon, grafik kesimli deriler ile masumiyetin peşinde koşmaya devam edeceğiz. **Ortaya karışık desenler:** Farklı renk ve desenleri karıştırmak annelerimize göre olacak iş değilken, artık çok moda. **Anneanne örgüsü:** Sevgiyle örülmüş bir hırkanın yerini hiçbir şeyin tutmayacağını anlamış olacaklar ki, moda dünyası anneannelerimizin el örgüsü giysilerini 2016'nın en önemli akımlarından biri olarak sundu. Özellikle büyük örgüler ve asimetrik örgü elbiseler nostalji duygusuyla içimizi ısıtacak.

System Evaluation (Manipulation check for the system threat manipulation)

(Filler Question)
Lütfen şimdi paragrafı yazan gazetecinin yazma becerilerini aşağıda yer alan kriterler açısından değerlendiriniz.

	1 Çok zayıf	2 Zayıf	3 Orta	4 İyi	5 Çok iyi
Dilbilgisi (1)	❍	❍	❍	❍	❍
Yazım ve noktalama (2)	❍	❍	❍	❍	❍
Kelime haznesi (3)	❍	❍	❍	❍	❍
Anlaşılırlık (4)	❍	❍	❍	❍	❍
Akıcılık (5)	❍	❍	❍	❍	❍
Anlam bütünlüğü (6)	❍	❍	❍	❍	❍
Yaratıcılık (7)	❍	❍	❍	❍	❍

Dürüst olmanız gerekirse, yazıyı başından sonuna kadar dikkatlice okuduğunuzu söyleyebilir misiniz?

- Evet
- Hayır

Şimdiki bölümde, sizden istenen aşağıda sıralanan çeşitli konularda Türkiye'yi 1'den (hiç olumlu değil) 9'a (çok olumlu) genel olarak değerlendirmenizdir.

	1 Hiç olumlu değil	2 Pek olumlu değil	3 Olumlu değil	4 Biraz olumlu değil	5 Ne olumlu ne olumsuz	6 Biraz olumlu	7 Olumlu	8 Oldukça olumlu	9 Çok olumlu
Sosyal, politik ve ekonomik koşullar	❍	❍	❍	❍	❍	❍	❍	❍	❍
Afet risk yönetimi	❍	❍	❍	❍	❍	❍	❍	❍	❍
Sonbahar modası	❍	❍	❍	❍	❍	❍	❍	❍	❍

General Fatalism (GFAT) *(58 items – version used in the experimental study)*

Aşağıda kaderci düşünmeyle ilgili bir dizi ifade yer almaktadır. Lütfen verilen ifadeleri dikkatlice okuyunuz ve her bir ifadeye ne derece katılıp katılmadığınızı ölçekteki sayılardan uygun olan seçeneği işaretleyerek (o seçeneğin üstüne tıklayarak) belirtiniz.

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Biraz katılmıyorum	4 Biraz katılıyorum	5 Katılıyorum	6 Kesinlikle katılıyorum
1. Doğum, ölüm gibi şeyler önceden belirlenmiştir.	❍	❍	❍	❍	❍	❍
2. Başımıza ne geleceğini bir Allah/Tanrı bilir.	❍	❍	❍	❍	❍	❍
3. İnsanın hayatı, kendinden daha üstün bir güç/varlık tarafından belirlenmiştir.	❍	❍	❍	❍	❍	❍
4. Allah'ın/Tanrı'nın herkes için bir planı vardır.	❍	❍	❍	❍	❍	❍
5. Bizim için neyin iyi ya da kötü olduğunu Allah/Tanrı bilir.	❍	❍	❍	❍	❍	❍
6. Kader, batıl inançtan başka bir şey değildir. *	❍	❍	❍	❍	❍	❍
7. İnsanın başına gelecekler ezelden bellidir.	❍	❍	❍	❍	❍	❍
8. Kader, insanın hayatında önemli bir yere sahiptir.	❍	❍	❍	❍	❍	❍
9. İnsanın hayatını belirleyen kendinden daha üstün bir irade yoktur. *	❍	❍	❍	❍	❍	❍
10. Hayatta hiçbir şey önceden belirlenmiş değildir. *	❍	❍	❍	❍	❍	❍
11. Her işte bir hayır vardır.	❍	❍	❍	❍	❍	❍
12. Elinden geleni yaptıktan sonra gerisi kaderdir. *	❍	❍	❍	❍	❍	❍
13. Kader, hayatın birçok alanını ilgilendirir.	❍	❍	❍	❍	❍	❍
14. İnsan, kaderinde ne varsa onu yaşar.	❍	❍	❍	❍	❍	❍
15. Kader, insanın hayatına denge getirir.	❍	❍	❍	❍	❍	❍
16. Kader, insan hayatı için belirleyici bir şey değildir. *	❍	❍	❍	❍	❍	❍
17. Bir şeyin olacağı varsa olur.	❍	❍	❍	❍	❍	❍
18. Kader inancı insanı psikolojik olarak rahatlatır.	❍	❍	❍	❍	❍	❍
19. Kadere inanmak insanı teselli eder.	❍	❍	❍	❍	❍	❍
20. Kader, insanın başına gelenleri kabullenmesini kolaylaştırır.	❍	❍	❍	❍	❍	❍

21. Bir çıkış yolu bulamadığında olayları kadere bağlamak insanı rahatlatır.	❍	❍	❍	❍	❍	❍
22. Kadere inanan insan daha sabırlı olur.	❍	❍	❍	❍	❍	❍
23. Kadere inanmak, hayata tutunmayı kolaylaştırır.	❍	❍	❍	❍	❍	❍
24. Olumsuz olaylar/yaşantılar sonrasında kadere sığınmak insana güç verir.	❍	❍	❍	❍	❍	❍
25. Kader inancı, insana zorluklara rağmen hayata devam etme gücü verir.	❍	❍	❍	❍	❍	❍
26. İnsan kadere inanarak yaşadıklarına anlam yükler.	❍	❍	❍	❍	❍	❍
27. İnsan, kadere inanarak hayatındaki olumlu ve olumsuz olaylar/durumlar arasında denge kurar.	❍	❍	❍	❍	❍	❍
28. Kadere inanmak, insanın değiştiremeyeceği şeyleri kabul etmesine yardımcı olur.	❍	❍	❍	❍	❍	❍
29. İnsan bazı şeylere engel olamaz.	❍	❍	❍	❍	❍	❍
30. Hayatta insanın gücünün yetmediği şeyler vardır.	❍	❍	❍	❍	❍	❍
31. İnsanın seçemediği şeyler vardır.	❍	❍	❍	❍	❍	❍
32. Bazı şeyler insanın elinde değildir.	❍	❍	❍	❍	❍	❍
33. İnsanın açıklama getiremediği şeyler vardır.	❍	❍	❍	❍	❍	❍
34. İnsanın çaresiz kaldığı zamanlar olur.	❍	❍	❍	❍	❍	❍
35. Hayatta bazı şeylere razı olmak gerekir.	❍	❍	❍	❍	❍	❍
36. Ne kadar çabalarsa çabalasın, insanın kaderini değiştirmesi mümkün değildir.	❍	❍	❍	❍	❍	❍
37. Kader, insanın elinde olan bir şey değildir.	❍	❍	❍	❍	❍	❍
38. İnsan, başına gelecekleri değiştiremez.	❍	❍	❍	❍	❍	❍
39. İnsanın her yaşadığı kaderdendir.	❍	❍	❍	❍	❍	❍
40. Kader, insan hayatının önceden belirlenmiş olmasıyla ilgilidir.	❍	❍	❍	❍	❍	❍
41. İnsanın kaderinde olanı yaşaması onun iyiliğinedir.	❍	❍	❍	❍	❍	❍
42. Başa gelen çekilir.	❍	❍	❍	❍	❍	❍
43. Sorgulamadan kadere inanmak sağlıklı değildir. *	❍	❍	❍	❍	❍	❍
44. Kadere sığınmak insanı pasifleştirir. *	❍	❍	❍	❍	❍	❍
45. Olayları kadere bağlamak sadece bahanedir. *	❍	❍	❍	❍	❍	❍
46. Hayatın gidişatını kadere bağlamak insanı	❍	❍	❍	❍	❍	❍

çıkmaza sokar. *						
47. Kadercilik, amaçsız yaşamak gibidir. *	❍	❍	❍	❍	❍	❍
48. İnsanlar kadere gereğinden fazla önem veriyor. *	❍	❍	❍	❍	❍	❍
49. Her şeyi kadere bağlamak anlamsızdır. *	❍	❍	❍	❍	❍	❍
50. İnsan akıl ve mantıkla kaderini yönlendirebilir. *	❍	❍	❍	❍	❍	❍
51. İnsan, iradesiyle kendi kaderini yaratabilir. *	❍	❍	❍	❍	❍	❍
52. Hayatın kontrolü insanın kendi elindedir. *	❍	❍	❍	❍	❍	❍
53. İnsanın neyi nasıl yaşayacağı kendisine bağlıdır.*	❍	❍	❍	❍	❍	❍
54. İnsan kararlı olursa kaderini değiştirebilir. *	❍	❍	❍	❍	❍	❍
55. Hayatta şanslı olmanın bir önemi yoktur. *	❍	❍	❍	❍	❍	❍
56. Şans hayatın bir parçasıdır.	❍	❍	❍	❍	❍	❍
57. Bazı şeyler şans işidir.	❍	❍	❍	❍	❍	❍
58. Hayatta tesadüflere yer yoktur. *	❍	❍	❍	❍	❍	❍

** Reverse items*

Earthquake Fatalism

Depremlere ve hazırlıklı olmaya yönelik inançlarınız hakkında daha fazla şey öğrenmek istiyoruz. Lütfen aşağıdaki ifadeleri dikkatlice okuyunuz ve verilen ölçekteki sayılardan uygun olan seçeneği işaretleyerek görüşünüzü belirtiniz.

Earthquake Fatalism

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Katılıyorum	4 Kesinlikle katılıyorum
1. Bir deprem olacaksa olur ve bu konuda yapabileceğim hiçbir şey yok.	❍	❍	❍	❍
2. Bir deprem olacaksa, etkisini azaltmak için şehrimin/toplumun yapabileceği pek bir şey yoktur.	❍	❍	❍	❍
3. Depremin yıkıcı etkilerinin nasıl azaltılacağı ile ilgili kararlar uzmanlara bırakılmalıdır.	❍	❍	❍	❍

Earthquake Blame

Sizce depremler aşağıdakilerin ne kadarının sonucudur?	1 Hiç	2 Pek değil	3 Kısmen	4 Çok
İnsan (1)	❍	❍	❍	❍
Allah/Takdir-i ilahi (2)	❍	❍	❍	❍
Doğa (3)	❍	❍	❍	❍
Diğer (Lütfen belirtin): …… (4)	❍	❍	❍	❍

Damage Blame

Sizce depremlerde oluşan hasar aşağıdakilerin ne kadarının sonucudur?	1 Hiç	2 Pek değil	3 Kısmen	4 Çok
İnsan (binaların sağlam olmayışı) (1)	❍	❍	❍	❍
Allah/Takdir-i ilahi (2)	❍	❍	❍	❍
Doğa (depremin şiddeti) (3)	❍	❍	❍	❍
Diğer (Lütfen belirtin): …… (4)	❍	❍	❍	❍

Damage Preventability

Genel olarak, depremlerin yol açtığı hasarın ne kadar önlenebilir olduğunu düşünüyorsunuz?

□ 1 Hiç □ 2 Pek değil □ 3 Kısmen □ 4 Çok

General System Justification
(Wakslak, Jost, & Bauer, 2011)

Lütfen aşağıda verilen ifadeleri dikkatlice okuyunuz ve her bir ifadeye ne derece katılıp katılmadığınızı ölçekteki sayılardan uygun olan seçeneği işaretleyerek (o seçeneğin üstüne tıklayarak) belirtiniz.

	1 Hiç katılmıyorum	2 Pek katılmıyorum	3 Katılmıyorum	4 Biraz katılmıyorum	5 Ne katılıyorum ne katılmıyorum	6 Biraz katılıyorum	7 Katılıyorum	8 Oldukça katılıyorum	9 Kesinlikle katılıyorum
1. Genel olarak, Türkiye adil ve adaletlidir.	❍	❍	❍	❍	❍	❍	❍	❍	❍
2. Genel olarak, Türk toplumu gerektiği gibi işler.	❍	❍	❍	❍	❍	❍	❍	❍	❍
3. Türkiye'nin yeniden yapılandırılması gerekir.*	❍	❍	❍	❍	❍	❍	❍	❍	❍
4. Türkiye, dünyadaki en iyi ülkedir.	❍	❍	❍	❍	❍	❍	❍	❍	❍
5. Türkiye vatandaşlarının iyiliğine en iyi şekilde hizmet eder.	❍	❍	❍	❍	❍	❍	❍	❍	❍
6. Türkiye'de herkes zenginlik ve mutluluk için adil bir fırsata sahiptir.	❍	❍	❍	❍	❍	❍	❍	❍	❍
7. Türkiye her yıl daha kötüye gidiyor. *	❍	❍	❍	❍	❍	❍	❍	❍	❍
8. Türkiye, insanların hak ettiklerini genellikle elde ettikleri şekilde düzenlenmiştir.	❍	❍	❍	❍	❍	❍	❍	❍	❍

** Reverse items*

Disaster-related System Justification
adapted from Wakslak, Jost, & Bauer (2011) by the researcher

Lütfen aşağıda verilen ifadeleri dikkatlice okuyunuz ve her bir ifadeye ne derece katılıp katılmadığınızı ölçekteki sayılardan uygun olan seçeneği işaretleyerek (o seçeneğin üstüne tıklayarak) belirtiniz. Yanıtlarınızı verirken aşağıda verilen afet risk yönetimi tanımını göz önünde bulundurunuz.

Afet risk yönetimi, depremin yol açabileceği olumsuz etkileri azaltmak ve depremin afete dönüşmesini engellemek amacıyla kısa ve uzun vadede yapılan önleme, zarar azaltma ve hazırlık tedbirleri bütünüdür.

- Bu tedbirlere örnek olarak halka deprem bilinci kazandırılması ve deprem eğitiminin verilmesi, binaların depreme dayanıklı yapılması ve ilgili yönetmeliklere göre denetlenmesi, afete hızlı, etkili ve doğru şekilde müdahale edilmesi ve deprem sonrasında yardımların ve hizmetlerin etkili bir şekilde sağlanması (örn., zamanında, adil, güvenli, vb.) verilebilir.
- Afet risk yönetimi çalışmalarından devletin idari birimlerinden (belediye, valilik, AFAD, diğer resmi kuruluşlar, vb.) Kızılay ve AKUT gibi sivil toplum örgütlerine, güvenlik güçlerinden halka kadar çok çeşitli paydaşlar sorumludur.
- Afet risk yönetimi kapsamında, özellikle deprem sonrası yapılan yardım ve verilen hizmetlerin (arama-kurtarma çalışmaları; konaklama, gıda, sağlık, vb. temel ihtiyaçların karşılanması; yardımların dağıtımı, psikolojik destek verilmesi) depremi yaşayanların afetin yarattığı zorluklarla baş etmesinde ve normal hayatlarına geri dönmesinde önemi büyüktür.

	1 Hiç katılmıyorum	2 Pek katılmıyorum	3 Katılmıyorum	4 Biraz katılmıyorum	5 Ne katılıyorum ne katılmıyorum	6 Biraz katılıyorum	7 Katılıyorum	8 Oldukça katılıyorum	9 Kesinlikle katılıyorum
1. Genel olarak, Türkiye'de afet risk yönetimi adil ve adaletlidir.	❍	❍	❍	❍	❍	❍	❍	❍	❍
2. Genel olarak, Türkiye'de afet risk yönetimi gerektiği gibi işler.	❍	❍	❍	❍	❍	❍	❍	❍	❍
3. Türkiye'de afet risk yönetimi yeniden yapılandırılması gerekir. *	❍	❍	❍	❍	❍	❍	❍	❍	❍
4. Türkiye, dünyada afet risk yönetiminin en iyi olduğu ülkedir.	❍	❍	❍	❍	❍	❍	❍	❍	❍
5. Türkiye'de afet risk yönetimi, vatandaşlarının iyiliğine en iyi şekilde hizmet eder.	❍	❍	❍	❍	❍	❍	❍	❍	❍
6. Türkiye'de herkes Türkiye'de afet risk yönetimi hizmetlerinden yararlanmak için zenginlik ve mutluluk için adil bir fırsata sahiptir.	❍	❍	❍	❍	❍	❍	❍	❍	❍
7. Türkiye'de afet risk yönetimi her yıl daha kötüye gidiyor. *	❍	❍	❍	❍	❍	❍	❍	❍	❍
8. Türkiye'de afet risk yönetimi, insanların afet sonrası baş etme ve uyum süreçlerini genellikle kolaylaştıracak şekilde düzenlenmiştir.	❍	❍	❍	❍	❍	❍	❍	❍	❍

** Reverse items*

Earthquake Preparedness

General Preparedness

Büyük bir deprem için hazırlıklı olduğunuzu düşünüyor musunuz?

- ❍ 1 Hiç hazırlıklı değilim
- ❍ 2 Hazırlıklı değilim
- ❍ 3 Kısmen hazırlıklı değilim
- ❍ 4 Ne hazırlıklıyım ne hazırlıklı değilim
- ❍ 5 Kısmen hazırlıklıyım
- ❍ 6 Hazırlıklıyım
- ❍ 7 Çok hazırlıklıyım

Actual Preparedness

Lütfen aşağıda listelenen deprem hazırlığı faaliyetlerini okuyunuz ve yapıp yapmadığınızı belirtiniz.

	Evet	Hayır
1. Ağır eşyaları yere yakın yerleştirdim.	❍	❍
2. Ağır ve yüksek mobilyaların (örn., kitap rafları) duvara sabitlendiğinden veya sağlamlaştırıldığından emin oldum.	❍	❍
3. Büyük elektronik ve diğer elektrikli cihazların (örn., televizyon, bilgisayar, buzdolabı) sabitlendiğinden (kendinden yapışkanlı cırt bant, kaydırmaz plastik örtü, dokuma kayışlar/plastik klipsli şeritler veya kilitler ile) emin oldum.	❍	❍
4. Acil durum için su depoladım (en azından 3 gün için).	❍	❍
5. Acil durum için yiyecek depoladım (en azından 3 gün için).	❍	❍
6. İlk yardım çantası stokladım.	❍	❍
7. Hızlı tahliye durumu için (içinde önemli belgelerin de olduğu) acil durum çantam var.	❍	❍
8. Hastalıklar ve alerjiler (astım solunum cihazı) için ilaç stoğum var.	❍	❍
9. Çalışır durumda kurmalı/pilli radyom var.	❍	❍
10. Kanepelerin veya yatakların üzerine hiçbir eşya (örn., çerçeveli resimler, aynalar) yerleştirilmemiştir.	❍	❍
11. Deprem sigortam var.	❍	❍
12. Belirlenmiş bir toplum buluşma noktası veya alanının nerede olduğunu ve oraya nasıl gidebileceğimi biliyorum.	❍	❍
13. Acil bir durumda desteklemek için mahallemde yaşlıların ve engellilerin nerede yaşadığını biliyorum.	❍	❍
14. Acil bir durumda aile üyelerimle haberleşmek için yollar ayarladım.	❍	❍
15. Deprem için bir aile planım var.	❍	❍
16. Yakın zamanda deprem planı denendi veya üzerinden geçildi.	❍	❍

Intention to Prepare

"Hayır"ı işaretleyerek yapmadığınızı belirttiğiniz deprem hazırlığı faaliyetlerini önümüzdeki üç ay içerisinde yapma olasılığınız nedir? (Faaliyetlerin hepsine "Evet" dediyseniz burada soru gözükmeyecektir, dolayısıyla bir sonraki sayfaya geçebilirsiniz)

	1 Hiç olası değil	2 Pek olası değil	3 Biraz olası değil	4 Hem olası hem olası değil	5 Biraz olası	6 Oldukça olası	7 Büyük olasılıkla
Hayır işaretlenen maddeler için	❍	❍	❍	❍	❍	❍	❍

Self-efficacy

Bir doğal afete hazırlanmak için temel işleri (örn., ağır eşyaları duvara sabitlemek) yapabilme becerinizi düşünün. Aşağıdaki soruları kendi bireysel becerilerinizi ve bu işleri yapabilme yeteneğinizi düşünerek yanıtlayınız.

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Katılıyorum	4 Kesinlikle katılıyorum
1. Farklı hazırlıklı olma işlerini yapabilme yeteneğime güveniyorum.	❍	❍	❍	❍
2. İyi yapamadığım gerekli bazı işler var.	❍	❍	❍	❍
3. Performansım zayıf olduğunda, bu benim yetenek yoksunluğumdandır.	❍	❍	❍	❍
4. Bu işleri yapma yeteneğimle ilgili şüphelenirim.	❍	❍	❍	❍
5. Bu işleri çok iyi yapmak için gerekli tüm becerilere sahibim.	❍	❍	❍	❍
6. Benim durumumda çoğu insan bu işleri benden daha iyi yapabilir.	❍	❍	❍	❍
7. Bu işleri yapmada bir uzmanım.	❍	❍	❍	❍
8. Doğal afetlere hazırlıklı olmaya yönelik beceri yoksunluğumdan dolayı geleceğim tehlikede.	❍	❍	❍	❍
9. Becerilerim ve yeteneklerimle gurur duyarım.	❍	❍	❍	❍
10. Bu işleri yaparken başkaları beni izlediğinde rahatsız hissederim.	❍	❍	❍	❍

Outcome Expectancy

Aşağıdakileri yapmanın deprem kaynaklı zararı önlemek veya azaltmak için ne kadar faydalı olacağını düşünüyorsunuz?

	1 Faydasız	2 Muhtemelen faydasız	3 Muhtemelen faydalı	4 Çok faydalı
1. Ağır elektronik ve diğer elektrikli cihazları kendinden yapışkanlı cırt bant, kaydırmaz plastik örtü, dokuma kayışlar/plastik klipsli şeritler veya kilitler ile sabitlemek	❍	❍	❍	❍
2. Ağır, yüksek mobilyaları duvara sabitlemek	❍	❍	❍	❍
3. Çerçeveli resimleri kanepelerin ve yatakların üzerinden kaldırmak	❍	❍	❍	❍
4. Önemli çıkışların önünü açık tutmak	❍	❍	❍	❍

Earthquake Exposure (EQEXPO)

Disaster Experience

Hayatınızda deprem dışında herhangi bir afet yaşamışlığınız var mı? Cevabınız "Evet" ise lütfen bu cevabın altındaki kutuya hangi afet(ler)i yaşadığınızı yazınız.

❍ Evet ____________________

❍ Hayır

Earthquake Experience

Hayatınızda büyük bir deprem yaşamışlığınız var mı?

❍ Evet

❍ Hayır

(Evet ise) Lütfen bu depremi ne zaman ve nerede yaşadığınızı belirtiniz.

Zaman (ay, yıl) __________________

Yer (şehir, konum) __________________

Earthquake Exposure

(Severity of earthquake exposure)

Deprem sırasında;	Evet	Hayır
1. Hayatınızın tehlikede olduğunu düşündünüz mü?	❍	❍
2. Yakınlarınızdan ya da tanıdıklarınızdan bir kişinin hayatının tehlikede olduğunu düşündünüz mü?	❍	❍
3. Kendinizi çaresiz hissettiniz mi?	❍	❍
4. Büyük bir korku ya da dehşet duygusu yaşadınız mı?	❍	❍
5. Fiziksel bir yara aldınız mı?	❍	❍
6. Yakınlarınızdan ya da tanıdıklarınızdan biri fiziksel bir yara aldı mı?	❍	❍
7. Yakınlarınızdan ya da tanıdıklarınızdan can kaybı oldu mu?	❍	❍
8. Göçük altında kaldınız mı?	❍	❍
9. Binaların yıkıldığına tanık oldunuz mu?	❍	❍
10. Birinin ciddi şekilde yaralandığına tanık oldunuz mu?	❍	❍
11. Birinin hayatını kaybettiğine tanık oldunuz mu ya da hayatını kaybetmiş birini gördünüz mü?	❍	❍

(Post-quake adversity)

Deprem sonrasında;	Evet	Hayır
1. Barınma/eğitim gibi ihtiyaçlarınızı karşılamak için yaşadığınız yerden ayrılmak zorunda kaldınız mı?	❍	❍
2. Maddi yardım (para, gıda yardımı gibi destekler) aldınız mı?	❍	❍
3. Manevi yardım (duygusal destek) aldınız mı?	❍	❍
4. Çadırda ya da konteynerde kaldınız mı?	❍	❍
5. Maddi (geçim giderleri için para, ev eşyası, mobilya gibi) kayıplarınız oldu mu?	❍	❍
6. İş kaybınız ya da çalışma düzeninizde bozulma oldu mu?	❍	❍
7. Aile ilişkilerinizde sorunlar/bozulma oldu mu?	❍	❍
8. Aile dışı sosyal ilişkilerinizde sorunlar/bozulma oldu mu?	❍	❍
9. Tedavi gerektiren fiziksel bir rahatsızlık geçirdiniz mi?	❍	❍
10. Tedavi gerektiren ruhsal bir rahatsızlık geçirdiniz mi?	❍	❍
11. Barınma/eğitim gibi ihtiyaçlarınızı karşılamak için yaşadığınız yerden ayrılmak zorunda kaldınız mı?	❍	❍

Sociodemographic Information

1. Cinsiyetiniz :
   □ Kadın □ Erkek □ Diğer/Söylememeyi tercih ediyorum

2. Yaşınız : _____

3. Tamamladığınız en üst eğitim seviyesi nedir?
   □ Okula hiç gitmedim □ İlkokul □ Ortaokul
   □ Lise □ Yüksekokul □ Üniversite (lisans)
   □ Üniversite (yüksek lisans, doktora)

4. Medeni durumunuz :
   □ Bekar □ Biriyle yaşıyor □ Evli □ Boşanmış □ Dul

5. Çalışma durumunuz :
   □ Çalışan □ Kendi işim/Serbest meslek □ Öğrenci □ Emekli □ İşsiz

6. Mesleğiniz/İşiniz : ___________________

7. Yaşadığınız yere ilişkin iskan durumunuz:
   □ Ev sahibi □ Aileye ait □ Kiracı □ Diğer

8. Yaşamınızın çoğunun geçtiği (en uzun yaşadığınız) yer:
   □ Köy □ Kasaba/Belde □ İlçe □ İl □ Büyükşehir

9. Evinize giren ortalama aylık gelir miktarını belirtiniz.
   □ 1499 TL ve altı
   □ 1500 - 3999 TL
   □ 4000 - 5999 TL
   □ 6000 TL ve üstü

10. Aşağıdaki merdivenin Türkiye'deki insanların durduğu yeri temsil ettiğini düşünün.

Merdivenin tepesindekiler her şeyin en iyisine (en çok paraya, en iyi eğitime ve en saygın mesleklere) sahip olanlar.

Merdivenin en altındakiler ise, en kötü koşullara sahip olanlar (en az paraya, en az eğitime ve en az sayılan mesleklere sahip olanlar ya da hiç bir işi olmayanlar).

Bu merdivende daha yüksek bir konuma sahip olmanız en tepedeki insanlara göre daha yakın olduğunuz; daha aşağıda olmanız ise en alttaki insanlara daha yakın olduğunuzu gösterir.

Bu merdivende kendinizi nereye yerleştirirdiniz?

□ En alt 1 □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 □ 8 □ 9 □ En üst 10

11. Genel olarak, kendinizi politik olarak nasıl tanımlarsınız? (Lütfen size en uygun olan sayıyı işaretleyiniz)
□ Aşırı Sol 1 □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 □ 8 □ 9 □ Aşırı Sağ 10

12. Aşağıdaki seçeneklerden hangisi dini inancınızı en iyi şekilde tanımlar?
- □ Müslüman
- □ Hristiyan
- □ Musevi
- □ Herhangi bir dine mensup değilim.
- □ Diğer (belirtiniz): ___________

13. Kendinizi ne kadar dindar biri olarak tanımlarsınız?
(9. Soruda ilk üç seçenekten biri seçildiyse)
- □ Hiç dindar değilim (1)
- □ Biraz (2)
- □ Orta derecede (3)
- □ Oldukça fazla (4)
- □ Çok fazla (5)
- □ Dini inancım yok (0)

14. Kendinizi ne kadar kadere inanan biri olarak tanımlarsınız?
- □ Hiç inanmam (1)
- □ Biraz inanırım (2)
- □ Orta derecede inanırım (3)
- □ Oldukça fazla inanırım (4)
- □ Çok fazla inanırım (5)

Dürüst bir şekilde söylemeniz gerekirse, sizin verinizi bu çalışmanın analizlerinde kullanmalı mıyız?
- ❍ Evet
- ❍ Hayır

Hepsi bu kadardı, anket burada sonlanmıştır. Zamanınız ve çabanız için çok teşekkürler!

İlk katılımcılardan biri olarak, anketin anlaşılır olup olmadığına ve çalışmayla ilgili geliştirebileceğimiz şeyler olup olmadığına dair izlenimlerinizi paylaşarak bize yardımcı olmanızı rica ediyoruz.

1. Öncelikle, çalışmayla ilgili genel izlenimleriniz nasıldı? Çalışmanın amacının ne olduğunu düşündünüz?
   ____
2. Başka düşünceleriniz ya da yorumlarınız var mı?
   ____

Katılım sonrası bilgi formunu okumak için lütfen bir sonraki sayfaya geçiniz.

Katılım Sonrası Bilgilendirme Formu

Bu araştırma, daha önce de belirtildiği üzere ODTÜ Psikoloji Bölümü öğretim üyelerinden Prof. Dr. Nuray Sakallı Uğurlu danışmanlığında Sosyal Psikoloji Doktora Programı öğrencisi Uzm. Psk. Canay Doğulu'nun tezi kapsamında yürütülmektedir. Katıldığınız araştırmanın amacı, Sistemi Meşrulaştırma Kuramı (SMK) ve Dehşet Yönetimi Kuramı (DYK) çerçevesinde ve Türkiye'de depremlerle ilgili algı ve tepkilerin altında yatan sosyal bilişsel süreçleri kadercilik, sistemi meşrulaştırma ve hazırlıklı olma açısından incelemektir. Katılımcıların araştırmanın hipotezlerini fark etmesi verecekleri tepkileri etkileyebileceğinden, başta araştırmanın amacı açık ve ayrıntılı olarak verilmemiş ve amacın "kişilik, biliş ve çeşitli konulara ilişkin sosyal tutumlar arasındaki ilişki hakkında bilgi toplamak" olduğu belirtilmiştir.

Sosyal psikoloji yazınında çoğunlukla bağımsız olarak çalışılan SMK ve DYK arasındaki kuramsal bağlantı, DYK'nın ana hipotezi olan ölümlülüğün hatırlatılmasının mevcut sistemi meşrulaştırma eğilimi üzerindeki etkisinde dayanmaktadır. Kuramsal olarak, ölümlülüğün hatırlatılmasının sistemi meşrulaştırma eğilimlerini arttıracağına dikkat çekilmiştir. Bu kuramsal ilişki temelinde ve araştırmanın amacına uygun olarak, ölümlülüğün hatırlatılmasının sistemi meşrulaştırmanın dolaylı ve dolaysız yolları olarak ele alınan genel ve depremler özelinde kaderciliği ve sistemi meşrulaştırmayı arttırması; bu artışın da hazırlıklı olma niyetini etkilemesi beklenmektedir. Bu ilişkiyi ortaya çıkarmak amacıyla bu araştırmada, bir grup katılımcıya genel olarak ölüm, bir grup katılımcıya deprem ve kontrol prosedürü olarak da bir diğer gruba televizyon izlemek hatırlatılmıştır (ölümlülük uyarımı). Ayrıca, sistemi meşrulaştırma eğilimlerini aktive etmek için bir grup katılımcıdan genel sistem, bir grup katılımcıdan afet risk yönetimi sistemi ve kontrol prosedürü olarak da bir diğer gruptan sonbahar modası ile ilgili bir metin okumaları istenmiştir (sistem tehdidi). Buna göre, ölümlülük uyarımı ve sistem tehdidinin sistemi meşrulaştırma eğilimlerini arttıracağı; dolayısıyla, katılımcıların genel ve depremler özelinde kadercilik ve sistemi meşrulaştırma ve de hazırlıklı olma düzeylerinin bulundukları gruba göre değişmesi beklenmektedir.

Bu çalışmadan alınacak ilk verilerin Ocak 2017 sonunda elde edilmesi planlanmaktadır. Elde edilen bilgiler sadece bilimsel araştırma ve yazılarda kullanılacaktır. Çalışmanın sağlıklı ilerleyebilmesi ve bulguların güvenilir olması için çalışmaya katılacağını bildiğiniz diğer kişilerle çalışma ile ilgili detaylı bilgi paylaşımında bulunmamanızı dileriz. Bu araştırmaya katıldığınız için tekrar çok teşekkür ederiz.

Araştırmanın sonuçlarını öğrenmek ya da araştırma hakkında daha fazla bilgi almak için Uzm. Psk. Canay Doğulu (e-posta: canay.dogulu@metu.edu.tr) ve Prof. Dr. Nuray Sakallı Uğurlu (e-posta: nurays@metu.edu.tr) ile iletişim kurabilirsiniz. Çalışmaya katkıda bulunan bir gönüllü olarak katılımcı haklarınızla ilgili veya etik ilkelerle ilgili soru veya görüşlerinizi ODTÜ Uygulamalı Etik Araştırma Merkezi'ne (e-posta: ueam@metu.edu.tr) iletebilirsiniz.

APPENDIX E. Final Version of the GFAT Scale

(54 items, 7 factors) – item numbering used in Study 3 is given in parantheses

Aşağıda kaderci düşünmeyle ilgili bir dizi ifade yer almaktadır. Lütfen verilen ifadeleri dikkatlice okuyunuz ve her bir ifadeye ne derece katılıp katılmadığınızı ölçekteki sayılardan uygun olan seçeneği işaretleyerek (o seçeneğin üstüne tıklayarak) belirtiniz.

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Biraz katılmıyorum	4 Biraz katılıyorum	5 Katılıyorum	6 Kesinlikle katılıyorum
Kader *(15 madde)*						
1. Doğum, ölüm gibi şeyler önceden belirlenmiştir. (1)	❍	❍	❍	❍	❍	❍
2. Başımıza ne geleceğini bir Allah/Tanrı bilir. (2)	❍	❍	❍	❍	❍	❍
3. İnsanın hayatı, kendinden daha üstün bir güç/varlık tarafından belirlenmiştir. (3)	❍	❍	❍	❍	❍	❍
4. Allah'ın/Tanrı'nın herkes için bir planı vardır. (4)	❍	❍	❍	❍	❍	❍
5. Bizim için neyin iyi ya da kötü olduğunu Allah/Tanrı bilir. (5)	❍	❍	❍	❍	❍	❍
6. Kader, batıl inançtan başka bir şey değildir.* (6)	❍	❍	❍	❍	❍	❍
7. İnsanın başına gelecekler ezelden bellidir. (7)	❍	❍	❍	❍	❍	❍
8. Kader, insanın hayatında önemli bir yere sahiptir. (8)	❍	❍	❍	❍	❍	❍
9. İnsanın hayatını belirleyen kendinden daha üstün bir irade yoktur.* (9)	❍	❍	❍	❍	❍	❍
10. Hayatta hiçbir şey önceden belirlenmiş değildir.* (10)	❍	❍	❍	❍	❍	❍
11. Her işte bir hayır vardır. (11)	❍	❍	❍	❍	❍	❍
12. Kader, hayatın birçok alanını ilgilendirir. (13)	❍	❍	❍	❍	❍	❍

13. Kader, insanın hayatına denge getirir. (14)	❍	❍	❍	❍	❍	❍
14. Kader, insan hayatı için belirleyici bir şey değildir.* (16)	❍	❍	❍	❍	❍	❍
15. Bir şeyin olacağı varsa olur. (17)	❍	❍	❍	❍	❍	❍
İşlevsellik *(10 madde)*						
16. Kader inancı insanı psikolojik olarak rahatlatır. (18)	❍	❍	❍	❍	❍	❍
17. Kadere inanmak insanı teselli eder. (19)	❍	❍	❍	❍	❍	❍
18. Kader, insanın başına gelenleri kabullenmesini kolaylaştırır. (20)	❍	❍	❍	❍	❍	❍
19. Bir çıkış yolu bulamadığında olayları kadere bağlamak insanı rahatlatır. (21)	❍	❍	❍	❍	❍	❍
20. Kadere inanan insan daha sabırlı olur. (22)	❍	❍	❍	❍	❍	❍
21. Kadere inanmak, hayata tutunmayı kolaylaştırır. (23)	❍	❍	❍	❍	❍	❍
22. Olumsuz olaylar/yaşantılar sonrasında kadere sığınmak insana güç verir. (24)	❍	❍	❍	❍	❍	❍
23. Kader inancı, insana zorluklara rağmen hayata devam etme gücü verir. (25)	❍	❍	❍	❍	❍	❍
24. İnsan kadere inanarak yaşadıklarına anlam yükler. (26)	❍	❍	❍	❍	❍	❍
25. İnsan, kadere inanarak hayatındaki olumlu ve olumsuz olaylar/durumlar arasında denge kurar. (27)	❍	❍	❍	❍	❍	❍
Çaresizlik *(5 madde)*						
26. İnsan bazı şeylere engel olamaz. (29)	❍	❍	❍	❍	❍	❍
27. Hayatta insanın gücünün yetmediği şeyler vardır. (30)	❍	❍	❍	❍	❍	❍
28. İnsanın seçemediği şeyler vardır. (31)	❍	❍	❍	❍	❍	❍
29. Bazı şeyler insanın elinde değildir. (32)	❍	❍	❍	❍	❍	❍
30. İnsanın çaresiz kaldığı zamanlar olur. (34)	❍	❍	❍	❍	❍	❍
Boyun eğme *(6 madde)*						
31. Ne kadar çabalarsa çabalasın, insanın kaderini değiştirmesi mümkün değildir. (36)	❍	❍	❍	❍	❍	❍
32. Kader, insanın elinde olan bir şey değildir. (37)	❍	❍	❍	❍	❍	❍

33. İnsan, başına gelecekleri değiştiremez. (38)	❍	❍	❍	❍	❍	❍
34. İnsanın her yaşadığı kaderdendir. (39)	❍	❍	❍	❍	❍	❍
35. İnsanın kaderinde olanı yaşaması onun iyiliğinedir. (41)	❍	❍	❍	❍	❍	❍
36. İnsan, kaderinde ne varsa onu yaşar. (14)	❍	❍	❍	❍	❍	❍
Biçilen değer *(7 madde)*						
37. Kadere sığınmak insanı pasifleştirir.* (44)	❍	❍	❍	❍	❍	❍
38. Olayları kadere bağlamak sadece bahanedir.* (45)	❍	❍	❍	❍	❍	❍
39. Hayatın gidişatını kadere bağlamak insanı çıkmaza sokar. * (46)	❍	❍	❍	❍	❍	❍
40. Kadercilik, amaçsız yaşamak gibidir.* (47)	❍	❍	❍	❍	❍	❍
41. İnsanlar kadere gereğinden fazla önem veriyor.* (48)	❍	❍	❍	❍	❍	❍
42. Her şeyi kadere bağlamak anlamsızdır.* (49)	❍	❍	❍	❍	❍	❍
43. Sorgulamadan kadere inanmak sağlıklı değildir.* (43)	❍	❍	❍	❍	❍	❍
Kontrol edilemezlik *(5 madde)*						
44. İnsan akıl ve mantıkla kaderini yönlendirebilir.* (50)	❍	❍	❍	❍	❍	❍
45. İnsan, iradesiyle kendi kaderini yaratabilir.* (51)	❍	❍	❍	❍	❍	❍
46. Hayatın kontrolü insanın kendi elindedir. * (52)	❍	❍	❍	❍	❍	❍
47. İnsanın neyi nasıl yaşayacağı kendisine bağlıdır.* (53)	❍	❍	❍	❍	❍	❍
48. İnsan kararlı olursa kaderini değiştirebilir.* (54)	❍	❍	❍	❍	❍	❍
Şans *(4 madde)*						
49. Hayatta şanslı olmanın bir önemi yoktur.* (55)	❍	❍	❍	❍	❍	❍
50. Şans hayatın bir parçasıdır. (56)	❍	❍	❍	❍	❍	❍
51. Bazı şeyler şans işidir. (57)	❍	❍	❍	❍	❍	❍
52. Hayatta tesadüflere yer yoktur.* (58)	❍	❍	❍	❍	❍	❍

** Ters maddeler*

APPENDIX F. Ethics Committee Approval

(Study 1)

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
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Sayı: 28620816/ 387

05 KASIM 2015

Gönderilen: Prof. Dr. Nuray Sakallı -Uğurlu

Psikoloji Bölümü

Gönderen: Prof. Dr. Canan SÜMER

İnsan Araştırmaları Komisyonu Başkanı

İlgi: Etik Onayı

Danışmanlığını yapmış olduğunuz Doktora Öğrencisi Canay DOĞULU "Understanding general and earthquake-specific fatalism: A qualitative study" isimli araştırması İnsan Araştırmaları Komisyonu tarafından uygun görülerek gerekli onay 09.11.2015-15.01.2016 tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Canan SÜMER

Uygulamalı Etik Araştırma Merkezi

İnsan Araştırmaları Komisyonu Başkanı

(Study 2)

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
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ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

Sayı: 28620816 / 74

10 ŞUBAT 2016

Gönderilen: Prof.Dr. Nuray Sakallı UĞURLU

Psikoloji Bölümü

Gönderen: Prof. Dr. Canan SÜMER

İnsan Araştırmaları Komisyonu Başkanı

İlgi: Etik Onayı

Sayın Prof.Dr. Nuray Sakallı UĞURLU'nun danışmanlığını yaptığı doktora öğrencisi Canay DOĞULU'nun Assessing general fatalistic beliefs: Development and validation of a fatalism scale in Turkish" başlıklı araştırması İnsan Araştırmaları Komisyonu tarafından uygun görülerek gerekli onay **2016-SOS-018** protokol numarası **19.02.2016-15.04.2016** tarihleri arasında geçerli olmak üzere verilmiştir.

Prof. Dr. Canan SÜMER

Uygulamalı Etik Araştırma Merkezi

İnsan Araştırmaları Komisyonu Başkanı

(Study 3)

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

12 EKİM 2016

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Sayı: 28620816 / 385

Konu: Değerlendirme Sonucu

Gönderilen: Prof.Dr. Nuray SAKALLI UĞURLU

Psikoloji Bölümü

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın : Prof.Dr. Nuray SAKALLI UĞURLU;

Danışmanlığını yaptığınız doktora öğrencisi Canay DOĞULU'nun "A terror management perspective to system justification in disaster context: The cade of earthquakes in Turkey" başlıklı araştırması İnsan Araştırmaları Kurulu tarafından uygun görülerek gerekli onay **2016-SOS-142** protokol numarası ve **12.10.2016-30.03.2017** tarihleri arasında geçerli olmak üzere verilmiştir

Bilgilerinize saygılarımızla sunarız.

Prof. Dr. Canan SÜMER

İnsan Araştırmaları Etik Kurulu Başkanı

Prof. Dr. Meliha ALTUNIŞIK
İAEK Üyesi

Prof. Dr. Ayhan SOL
İAEK Üyesi

Prof. Dr. Mehmet UTKU
İAEK Üyesi

Prof. Dr. Ayhan Gürbüz DEMİR
İAEK Üyesi

Yrd .Doç .Dr. Pınar KAYGAN
İAEK Üyesi

Yrd. Doç. Dr. Emre SELÇUK
İAEK Üyesi

APPENDIX G. Türkçe Özet

DEHŞET YÖNETİMİ BAKIŞ AÇISIYLA
AFET BAĞLAMINDA SİSTEMİ MEŞRULAŞTIRMA:
TÜRKİYE'DE DEPREMLER ÖRNEĞİ

1. Giriş

Sistemi Meşrulaştırma Kuramı (SMK), afetlerin de dahil olduğu çeşitli sosyal konu ve sorunlarda sistemi meşrulaştırma süreçlerinin rolüne dair uygulamalı bir bakış açısıyla hem kuramsal, hem de görgül araştırmalarla gitgide artan bir ilgiyle çalışılmaktadır. Bu tezin amacı, sistemi meşrulaştırma süreçlerini Türkiye'de depremler özelinde ve Dehşet Yönetimi Kuramı (DYK) çerçevesinde ele alarak ilgili yazına katkıda bulunmaktır. Bu kuramsal yaklaşımların temel alındığı bu tezde, depremlere dair algı ve tepkilerin altında yatan sosyal bilişsel süreçleri anlamak amacıyla sistemin algılanan haklılığını güçlendirmenin dolaylı ve dolaylı olmayan yolları olarak kadercilik ve sistemi meşrulaştırma ve de depremlere hazırlık üzerine odaklanılmıştır. Bu amaç doğrultusunda, ölümlülük uyarımının (ÖU) ve sistem tehdidinin (ST) deprem maruziyeti kontrol edildikten sonra kadercilik, sistemi meşrulaştırma ve deprem hazırlığını nasıl etkilediği ve de bu etkinin ÖU ve ST'nin genel ve spesifik (afetle ilgili) seviyelerinde nasıl farklılaştığı deneysel bir çalışmayla araştırılmıştır.

Bu tez kapsamında, deneysel çalışmayı önceleyen biri nitel (Çalışma 1) diğeri nicel (Çalışma 2) olmak üzere iki ayrı çalışma yapılmıştır. İlk çalışmada, genel kadercilik algıları araştırılarak, deneysel çalışmada (Çalışma 3) kullanılmak üzere kaderci inanış yatkınlığında bireysel farklılıkları yansıtacak geçerli ve güvenilir bir ölçüm aracının geliştirileceği nicel çalışmanın (Çalışma 2) nitel temelinin ortaya konulması amaçlanmıştır. İlk çalışmanın bir diğer amacı ise, Türkiye'de afet risk yönetimine (ARY) dair sistem algılarını anlamaktır. Buradan elde edilecek nitel bulgular ışığında, deneysel çalışmada kullanılacak sistemi meşrulaştırmayla ilgili ölçüm araçlarının (hem manipülasyonlarda, hem de bağımlı değişken ölçümlerinde) içeriğinin oluşturulması amaçlanmıştır.

1.1. Sistemi Meşrulaştırma Kuramı (SMK)

Sosyal psikoloji yazınında son yirmi yıldır gitgide artan bir ilgiyle çalışılan SMK (Jost ve Banaji, 1994; Jost ve van der Toorn, 2012), sosyal ve politik psikoloji alanlarında önemli bir yazın oluşturmuştur. SMK çalışmalarıyla sistemi meşrulaştırmanın altında yatan motivasyonel kaynakları ve meşrulaştırmada rol oynayan sosyal bilişsel süreçler anlaşılmaya çalışılmış; mevcut sistemi adil ve meşru görmenin öncülleri ve sonuçları araştırılmıştır (Jost ve Hunyady, 2005; Liviatan ve Jost, 2011). Kurama göre, insanlar genel olarak, kişisel ve grup çıkarlarıyla çelişse bile, çoğunlukla bilinçdışı seviyede mevcut sosyal düzeni savunma, destekleme ve rasyonelleştirme motivasyonuna sahiptir (Jost ve Banaji, 1994; Jost ve van der Toorn, 2012). SMK; ego, grup ve sistem olmak üzere üç farklı meşrulaştırma motivasyonundan bahseder ve bu üçünün avantajlı grup üyeleri (statükodan avantajlı, ayrıcalıklı) için birbiriyle uyumlu olduğunu, dezavantajlı grup üyeleri (statükodan dezavantajlı, ayrıcalıksız) içinse birbiriyle çelişki içerisinde olabileceğini söyler (Jost, Banaji ve Nosek, 2004; Jost ve Burgess, 2000).

SMK'ya göre; *sistem* insanların ve/veya grupların parçası olduğu mevcut sosyal, ekonomik veya politik kurumlar ve düzenlemelerdir ve sistemler çekirdek aileden ulusal devlete kadar çeşitli ölçeklerde olabilir (van der Toorn ve Jost, 2014). Yapılan araştırmalar, sistemi meşrulaştırmanın çoğunlukla ekonomik (zengin ve fakir), cinsiyet (kadın ve erkek; heteroseksüel ve homoseksüel), yaş (yaşlı ve genç) ve de çeşitli ulusal, etnik ve ırksal geçmişe dayanan ilişkiler bağlamında avantajlı ve dezavantajlı grup üyelerinde gözlemlendiğini göstermiştir (van der Toorn ve Jost, 2014). Sistemi meşrulaştırma; kalıpyargılar, politik ve dini sistemlere verilen ideolojik destek, kurumların ve otoritelerin onaylanması, sistem problemlerinin ya da eksikliklerinin inkarı ya da az görülmesi ve eşitsizliğin rasyonelleştirilmesi gibi yollarla kendini gösterebilir (Jost ve van der Toorn, 2012; van der Toorn ve Jost, 2014). Bu motivasyonunun belirsizliği giderme (bilgisel ihtiyaçlar), tehdidi yönetme (varoluşsal ihtiyaçlar) ve diğerleriyle anılma (ilişkisel ihtiyaçlar) gibi çeşitli psikolojik ihtiyaçları karşılama işlevi vardır (Jost ve Hunyady, 2005; Jost ve van der Toorn, 2012). Dolayısıyla; bilgisel, varoluşsal ve ilişkisel ihtiyaçlardaki durum (bağlam) ve yatkınlık (bireysel farklılıklar) temelli değişkenlikler, bireyin sistemi ne derecede meşrulaştırmaya motive olduğunu etkileyecektir (Jost ve van der Toorn, 2012).

SMK, her ne kadar kalıpyargılar ve gruplar arası ilişkiler konularına açıklama getirmek amacıyla geliştirilmiş olsa da; kuram benlik ve kimlik, sosyal adalet ve politik psikolojiye ilişkin çok çeşitli konularda çalışılmıştır (van der Toorn ve Jost, 2014). Uygulamalı sosyal psikoloji yaklaşımıyla da ele alınan SMK; çevrecilik (örn., Feygina ve ark., 2010), cinsiyetçilik (örn., Napier ve ark., 2010), kolektif eylem (örn., Jost ve ark., 2012) ve afet yönetiminin (örn., Napier ve ark., 2006) de dahil olduğu çeşitli sosyal konu ve sorunlarda sistemi meşrulaştırma süreçlerinin rolüne dair getirdiği açıklamalarla hem kuramsal hem de görgül çalışmalarla ön plana çıkmaktadır. Bu tezde, afet bağlamında sistemi meşrulaştırma motivasyonu Türkiye'de depremler örneğinde ve dehşet yönetimi bakış açısıyla kadercilik, sistemi meşrulaştırma ve hazırlıklı olma konularına ilişkin algı ve tepkilerin altında yatan sosyal bilişsel süreçleri anlamak amacıyla çalışılmıştır.

1.2. Sistemi Meşrulaştırma ve Afetler

SMK'nın afet bağlamında çalışılması kuramsal olarak üç açıklamayla gerekçelendirilebilir. İlk açıklama, SMK çerçevesinde ARY'nin bir sistem olarak nitelendirilmesine dayanmaktadır. Bireyler; yerel, ulusal ve uluslararası seviyede afetlerin ve afet riskinin yönetiminde yer alan paydaş ve faaliyetler ağının bir parçasıdırlar. Bu ağ sosyal, ekonomik ve/veya politik ilişkiler bakımından bireyleri ilgilendirmektedir. SMK açısından ele alındığında; ARY, bireylerin ve/veya grupların parçası olduğu sosyal, ekonomik veya politik kurum ve düzenlemeleri içeren bir sistem olarak düşünülebilir (van der Toorn ve Jost, 2014). Dolayısıyla, ARY'nin bir sistem olarak bireyler ve bireylerin afetlerle ilgili algı ve afetlere verdikleri tepkiler üzerindeki psikolojik yansımasını araştırmak değerli görülmektedir.

İkinci açıklama, sistemi meşrulaştırmanın bağlamsal bir doğaya sahip olmasıyla ilgilidir. Yapılan çalışmalarda ST'nin insanların sistemi meşru görme eğilimlerini arttıran etkenlerden biri olarak tespit edildiğine değinen Kay ve Friesen (2011), doğal afetler sonrasında sistemin eksikliklerini ve başarısızlıklarını ortaya çıkaran müdahalelerin sistemin meşruluğunu tehlikeye sokma potansiyeline sahip olduğu için ST olarak değerlendirilebileceğini öne sürmektedir. Diğer bir deyişle, sistemin devletin yetersiz afet müdahalesi sebebiyle tehdit edildiği durumlarda bireylerin sistemi meşru görme motivasyonlarının daha belirgin olacağı söylenebilir.

Üçüncü açıklama ise, DYK'nın (Greenberg ve ark., 1986; derleme için bkz., Burke ve ark., 2010) insanların ölüm farkındalığının yarattığı kaygıyla kültürel dünya görüşlerini koruma ve bu kültürel dünya görüşlerinin sağladığı değerlere uygun şekilde yaşayarak benlik saygısı kazanma yollarıyla baş edeceği şeklindeki temel önermesine (*ÖU ya da ölüm belirginliği hipotezi*; Burke ve ark., 2010; Greenberg ve ark., 1992; Pyszczynski ve ark., 2003) dayanmaktadır. Dehşet yönetiminin sistemi meşrulaştırma süreçleriyle ilişkisiyle ilgili olarak, ÖU'nun kültürel kaygı tamponunu güçlendirdiği derecede sistemi meşru görme eğilimini arttıracağı söylenebilir (Arndt ve ark., 2002). Nitekim, kişilerin sahip oldukları dünya görüşleri yaşadıkları kültürün barındırdığı sosyal, ekonomik ve politik ideolojiler temelinde oluşmaktadır (Anson, Pyszczynski, Solomon ve Greenberg, 2009). Benzer şekilde, sistemi meşrulaştırma süreçlerini dehşet yönetimi bakış açısıyla afet bağlamında ele alacak olursak, depremin doğal bir ÖU işlevi görmesinden hareketle kişilerin devletin deprem sonrası müdahalesini daha olumlu değerlendirmesi söz konusu olabilir. Yani, kişiler ölüm hatırlatıldığında ARY çalışmalarındaki eksikliklere rağmen devleti afet müdahalesinde yetkin görerek ve depremin olumsuz etkilerinden devletin sorumlu olmadığını düşünerek sistemi meşru görme eğiliminde olabilir.

1.3. Sistemi Meşrulaştırma, Kadercilik ve Deprem Hazırlığı

Sistemi meşrulaştırma süreçlerinin afetlerle ilgili olarak ele alındığı çalışmalara bakıldığında, ilgili yazının görece yeni olduğu görülmektedir (Blodorn ve ark., 2016; Hart, 2014; Kaiser ve ark., 2008; Napier ve ark., 2006; Shepherd ve Kay, 2014). Bu çalışmalarda ırksal tutumlar, kalıpyargılar, devlet yönetimiyle ilgili algılar ve oy verme gibi gruplar arası konulara odaklanılmıştır. Mevcut çalışmalara ek olarak, bu tezde sistemi meşrulaştırma kadercilik ve deprem hazırlığı konularıyla ilgili olarak çalışılmıştır. SMK çerçevesinde kaderci düşünmenin *yanlış bilinç* ile olan ilişkisinden (Jost, 1995) hareketle, tezde kadercilik sistemi meşrulaştırmanın dolaylı bir yolu olarak genel ve afetle ilgili olmak üzere iki seviyede ele alınmıştır. Sistemi meşrulaştırma ayrıca bireysel seviyede deprem hazırlığı için engelleyici bir etken olabilir. Afet bağlamında sistemi meşrulaştırmanın bir şekli olabilecek ARY faaliyetlerindeki eksikliklere ve başarısızlıklara rağmen devleti bu bakımdan başarılı görme algısına sahip olma, afetler gibi büyük ölçekli sorunların idaresinde sistem seviyesinde çözümlerin yeterli olduğu ve bireysel seviyede çözümlerle sürece dahil olmanın gerekli, önemli ya da etkili olmadığı düşüncesini besleyebilir (Shepherd ve Kay, 2014). Buna göre, sistemi meşrulaştırma bireysel seviyede deprem hazırlığını olumsuz yönde etkileyebilir.

1.4. Araştırmaya Genel Bakış

Tezde, genel ve spesifik seviyelere karşılık gelen ülke ve ARY için sisteme dair genel algılara odaklanılmıştır. Genel seviyede ele alınan sistem, ülkedeki sosyal, ekonomik ve politik koşulları (Kay ve ark., 2005) ilgilendirmektedir. Spesifik (afetle ilgili) seviyede ele alınan sistem ise, ARY kapsamında tehlikelerin yıkımını azaltma ve afete dönüşmesini engelleme amacıyla afetlere ilişkin önleme, zarar azaltma ve hazırlıklı olma için atılan adımları ve alınan önlemleri kapsamaktadır. Buradan hareketle, bu çalışmada genel ve afetle ilgili sistemlerin meşrulaştırılması, bu sistemlerin mevcut düzenini savunma, destekleme ve rasyonelleştirmenin dolaylı olmayan bir yolu olarak araştırılmıştır.

Sistemi meşrulaştırmanın bağlamsal yapısı tezde *ST ana etkisi* olarak iki araştırma sorusuyla ele alınmıştır. İlk olarak, afetle ilgili ST'nin genel ST gibi sistemi meşru görme ihtiyacını arttırma işlevine sahip olup olmadığı araştırılmıştır. İkinci olarak, genel veya afetle ilgili olmak üzere iki şekilde verilen ST'nin çalışmanın bağımlı değişkenleri olan kadercilik, sistemi meşrulaştırma ve deprem hazırlığını nasıl etkilediği araştırılmıştır. Sistemi meşrulaştırmanın dehşet yönetimi işlevi *ÖU ana etkisi* olarak iki araştırma sorusuyla ele alınmıştır. İlk olarak, kişilere olası bir deprem yaşadıklarını hatırlatmanın tipik ÖU olan kişilere ölümlerini hatırlatmayla aynı işleve sahip olup olmadığı araştırılmıştır. İkinci olarak, ölüm veya olası bir deprem deneyimi hatırlatılarak yapılan ÖU'nun kadercilik, sistemi meşrulaştırma ve deprem hazırlığını nasıl etkilediği araştırılmıştır. ÖU ve ST'nin düzeylerinin beraber çalışmanın bağımlı değişkenlerini nasıl etkilediği ise *etkileşim etkisi* olarak ele alınmıştır.

İlgili yazın ışığında, araştırma sorularının test edildiği deneysel çalışmada ana etkilerle ilgili olarak ÖU ve ST'nin kadercilik ve sistemi meşrulaştırmayı arttırırken deprem hazırlığını azaltacağı hipotezi test edilmiştir. Etkileşim etkisiyle ilgili olarak da, ÖU ve ST düzeylerinin kadercilik ve sistemi meşrulaştırmayı en yüksek düzeye çıkaracak ve hazırlıklı olmayı en düşük düzeye indirecek şekilde etkileşim göstereceği hipotezi test edilmiştir.

2. Birinci Çalışma

Bu çalışmanın amacı, ana (deneysel) çalışmada kullanılmak üzere genel kadercilik için geliştirilecek geçerli ve güvenilir ölçüm aracının niteliksel temelini oluşturmaktır. Buna göre, bu çalışmada kaderci inanış yatkınlığında bireysel farklılıkları ortaya koyacak kadercilik algıları araştırılmıştır. Niteliksel bulgular ışığında insanların kaderciliği nasıl algıladığına dair temalar madde üretme sürecinde kullanılmıştır. Bu çalışmada ayrıca Türkiye'de ARY bağlamında *sistem*e dair genel algıların anlaşılması amaçlanmıştır. Bu bilgi, deneysel çalışmada (*i*) afetle ilgili ST metnini yazmak ve (*ii*) Türkiye'de ARY'ye dair sistemi meşrulaştırma ölçeğinde vermek üzere söz konusu *sistem*in işlemsel tanımını yapmak için kullanılmıştır.

2.1. Yöntem

2.1.1. Katılımcılar

Araştırmaya, Ankara ve Düzce'de uygun örnekleme yöntemiyle belirlenmiş 20 kişi (10 kadın ve 10 erkek; yaş 27–60) katılmıştır. Örneklemin heterojenliğini sağlamak adına katılımcılar deprem deneyimi, cinsiyet, yaş, eğitim, sosyo-ekonomik seviye ve meslek değişkenleri göz önünde bulundurularak seçilmiştir. Katılımcıların yarısı büyük bir deprem deneyimi olmadığını belirtirken, diğer yarısı 1999 depremini (17 Ağustos, Gölcük ve/veya 12 Kasım, Düzce) yaşadığını belirtmiştir.

2.1.2. Veri Toplama Araçları

Araştırma kapsamında katılımcılarla yarı-yapılandırılmış görüşmeler yapılmıştır. Görüşmelerde, başta bazı demografik soruları cevaplamaları istenen katılımcılara, daha sonra genel olarak kadercilik (7 soru), depremler özelinde kadercilik (4 soru; konu geçişini sağlama amaçlı) ve Türkiye'de ARY (4 soru) konularında açık uçlu sorular sorulmuştur (bkz. Ek A). Araştırmacının gerekli gördüğü durumlarda katılımcılardan yanıtlarını daha ayrıntılı açıklamaları istenmiştir.

2.1.3. İşlem ve Analiz

Araştırma için etik izin ODTÜ İnsan Araştırmaları Etik Kurulu'ndan alınmıştır (bkz. Ek F). Araştırmanın verileri Kasım-Aralık 2015 tarihinde toplanmıştır. Görüşmeler, katılımcılar için uygun yer ve zamanda, sözlü ve yazılı onam alındıktan sonra yüz yüze yapılmıştır. Süreleri 10 ile 60 dakika arasında değişen görüşmelerin deşifreleme amacıyla ses kaydı alınmıştır. Katılımcılardan kimliklerine ilişkin bilgiler istenmemiş ve deşifrelerde numaralar kullanılmıştır.

Görüşmelerden elde edilen nitel veri, görüşme soruları ve ARY'nin aşamaları ışığında geliştirilen kodlama çerçevesiyle tümdengelimli olarak yapılan tematik analiz (Braun ve Clarke, 2006; Joffe, 2012) ile incelenmiştir. Kodlama çerçevesi, analiz sürecinde yeni çıkan temaları yansıtacak şekilde güncellenmiştir. Güvenilirlik amacıyla, kodlanan bölümlerin sistematik saklanımını ve geri erişimini sağlayan MAXQDA plus 12 veri analizi yazılımı (MAXQDA, 2016) kullanılmıştır.

2.2. Bulgular

2.2.1. Genel Kadercilik Algıları

Görüşme verilerinin tematik analizine göre, kaderciliğe yönelik genel algılar sekiz tema altında toplanmıştır: işlevsellik, boyun eğme, çaresizlik, kişisel kontrol, önceden belirlenmişlik, ilahi kontrol, yaşamsal merkeziyet ve şans. Bu temaları temsil eden katılımcı ifadeleri, ölçek geliştirmede madde üretme amacıyla kullanılmıştır. Yazında kaderci düşünmeyle ilgili içeriğe sahip mevcut ölçekler de gözden geçirilmiş ve madde üretme sürecinde ek kaynak olarak kullanılmıştır. Görüşme bulguları ve ilgili mevcut ölçek içerikleri ışığında, kader inancında bireysel farklılıkları değerlendirmek amacıyla geliştirilecek ölçek için 54 maddelik bir havuz oluşturulmuştur (bkz. Ek B).

2.2.2. ARY Algıları

Türkiye'de depremler özelinde ARY algısı dört temel tema altında toplanmıştır. Görüşmelerde ele alınan konulara paralel olarak şekillenen temalar, özellikle deprem sonrası dönemde ARY'ye yönelik sorumlu paydaşlar, yardım ve hizmetler ve bu yardım ve hizmetlerin süreçteki rolü ile genel olarak ARY'nin etkililiği hakkında görüşleri içermektedir. Özellikle etkililik temasını yansıtan katılımcı ifadeleri göz önünde bulundurularak afetle ilgili ST metni oluşturulmuş ve Türkiye'de ARY'ye dair sistemi meşrulaştırma ölçeğinde vermek üzere sistemin işlemsel tanımı yapılmıştır.

2.3. Tartışma ve Sonuç

Görüşmelerin içerik analizinden elde edilen temalar, genel olarak kaderciliğin ve Türkiye'de ARY'nin nasıl algılandığını ortaya koymuştur. Genel kadercilik algılarına yönelik elde edilen bulgular, kaderciliğin yazında tipik olarak ilişkilendirildiği dışsal kontrol odağı, önceden belirlenmişliğe inanç, gerçekliğin kabulü ya da baş etme becerisi gibi özelliklere (Esparza ve ark., 2015) paralel özellikler barındırdığını göstermiştir. Bulgular, kaderciliğin çok boyutlu bir kavram olduğunu, ancak yazında çoğunlukla ele alınan olumsuz anlamlara (kişisel kontrol yokluğu ya da pasiflik, olumsuz sonuçlara vurgu; Norenzayan ve Lee, 2010) ek olarak uyum ve baş etme açısından olumlu anlamlar da taşıdığına işaret etmektedir. Farklı kadercilik boyutlarının ve bu boyutlar arasındaki ilişkinin çeşitli tutum ve davranışlarda bir psikolojik faktör olarak oynadığı rolün araştırılması yazına önemli katkılar sağlayabilir.

ARY algılarına göre, ARY'nin afet öncesi, sırası ve sonrasını ilgilendiren, çeşitli yönetimsel-kurumsal ve toplumsal paydaşlar ile yardım ve hizmetleri içeren bir bütün olarak algılandığı görülmüştür. Bulgular göz önünde bulundurulduğunda, ARY'ye yönelik bir sistem algısının mevcut olduğu gözlemlenmiştir. Kuramsal olarak bakıldığında, araştırma bulguları, bu algının içeriğiyle ilgili eksiklikler ya da sorunların ARY sistemine bir tehdit olarak da algılanabileceğini, dolayısıyla sistemi meşrulaştırma süreçlerinin devreye girebileceğine işaret etmektedir.

3. İkinci Çalışma

Bu çalışma, deneysel çalışmada kullanılmak üzere kader inancında bireysel farklılıkları ölçmek için geliştirilen yeni ölçeğin geçerlik ve güvenirliğini belirlemek amacıyla yürütülmüştür.

3.1. Yöntem

3.1.1. Katılımcılar

Araştırmaya, uygun örnekleme yöntemiyle belirlenmiş 361 kişi (241 kadın, 117 erkek, 3 belirtilmemiş) katılmıştır. Yaşları 18 ile 72 arasında değişen katılımcılar (*Ort.* = 32.49, *S* = 12.97), çoğunlukla üniversite mezunu, bekar, Müslüman olduklarını ve yaşamlarının çoğunu büyükşehirde yaşadıklarını rapor etmişlerdir. Katılımcıların sosyodemografik özellikleri Tablo 3.1'de verilmiştir.

3.1.2. Veri Toplama Araçları

Genel kadercilik için ilk çalışmada oluşturulan madde havuzu (20'si ters toplam 54 madde; bkz. Ek B) uzman ve meslekten olmayan kişilerin verdiği geribildirim ışığında güncellenmiştir. Çalışmada, madde havuzunun güncellenmiş bu versiyonu (22'si ters toplamda 62 madde; bkz. Ek C) kullanılmıştır. Katılımcılardan, 6 dereceli Likert tipi ölçekte her bir maddeye ne kadar katıldıklarını belirtmeleri istenmiştir (1 *kesinlikle katılmıyorum*, 6 *kesinlikle katılıyorum*). Yanıtlar, yüksek puanlar yüksek düzeyde genel kadercilik inancını yansıtacak şekilde kodlanmıştır.

Bu çalışmada ayrıca güvenirlik incelemesi yapmak amacıyla İçsel-Dışsal Kontrol Odağı (Dağ, 1991; Rotter, 1966), Genel Adil Dünya İnancı (Dalbert, 1999; Dalbert ve ark., 1987; Yalçın, 2006), Müslüman Dini Yönelim (Ercan, 2006; Ceylan, 2016) ve İçsel Dini Motivasyon (Hoge, 1972; Yilmaz ve Bahçekapili, 2015) ölçekleri kullanılmıştır. Yanıt kodlamaları yüksek puanlar dışsal kontrol odağı, yüksek düzeyde adil dünya inancı, yüksek düzeyde içsel, dışsal, sorgulayıcı ve tutucu dini yönelim (Müslüman Dini Yönelim Ölçeği'nin dört alt boyutu) ve yüksek düzeyde içsel dini motivasyonu yansıtacak şekilde yapılmıştır. Ölçek ve/veya alt ölçek puanları hesaplanırken ortalamalar esas alınmıştır. Sosyodemografik bilgi formu ile tüm ölçeklerin yer aldığı anketin tamamı Ek C'de görülebilir.

3.1.3. İşlem

Araştırma için etik izin ODTÜ İnsan Araştırmaları Etik Kurulu'ndan alınmıştır (bkz. Ek F). Araştırmanın verileri Şubat-Nisan 2016 süresince online olarak toplanmıştır. Facebook aracılığıyla duyurulan anket çalışmasına 18 yaş ve üstü yetişkinler davet edilmiştir.

3.2. Bulgular

Genel Kadercilik Ölçeği'nin boyut yapısını incelemek amacıyla 62 madde üzerinde temel bileşenler analizi ve varimaks eksene döndürme yöntemiyle açımlayıcı faktör analizi yapılmıştır. Kaiser-Meyer-Olkin (KMO) istatistiği ve Bartlett testi verinin faktör analizine uygun olduğnu göstermiştir. Boyut sayısına karar verirken Özdeğerin 1'den büyüklüğü, özdeğerlerin grafik dağılımı, paralel analizi ve boyutların yorumlanabilirliği kriterleri kullanılmıştır. Tekrar edilen analizler sonucunda, 58 maddelik 7 faktörlü bir yapı uygun görülmüştür. Dört madde hiçbir faktöre yüklenmediği için madde sayısı 62'den 58'e düşmüştür. *Kader, işlevsellik, çaresizlik, boyu neğme, biçilen değer, kontrol edilemezlik* ve *şans* boyutlarından oluşan yedi faktörlü çözüm toplam varyansın 55.97'sini açıklamıştır. Faktör yükleri, madde-toplam korelasyonları, özdeğerler, açıklanan varyanslar ve Cronbach Alfa iç tutarlılık katsayıları Tablo 3.2'de görülebilir.

Geliştirilen ölçeğin geçerliğini test etmek amacıyla yapılan korelasyon analizleri, genel kader inancının (kontrol edilemezlik ve şans boyutları hariç) dışsal kontrol odağı, adil dünya inancı, içsel, dışsal ve tutucu dini yönelim ile olumlu; sorgulayıcı dini yönelim ve içsel dini motivasyon ile de olumsuz yönde ilişkili olduğunu göstermiştir. Ayrıca korelasyon bulguları, genel kadercilik alt boyutlarının kontrol odağı ile ilişkili olmalarına rağmen kontrol odağından farklı olduklarını göstermiştir.

3.3. Tartışma ve Sonuç

Bu çalışmada, kültüre özgü geliştirilen Genel Kadercilik Ölçeği'nin faktör yapısı ortaya konmuş ve ölçeğin hem birleşen hem de ayrışan geçerliğe sahip olduğu bulunmuştur. Geçerlik ve güvenirlik değerleri tatmin edici düzeyde bulunan bu ölçüm aracı, farklı kadercilik boyutlarının çeşitli tutum ve davranışlarla ilişkisini araştırmak için gelecek çalışmalarda kullanılabilir. Bu çalışmalardan elde edilen bilgiler deprem, trafik kazası ve hastalıklar gibi önemli yaşam olaylarıyla ilgili psikolojik süreçleri anlama imkanı sağlayacaktır.

4. Üçüncü Çalışma

Bu çalışmada, giriş bölümünün sonunda belirtilen araştırma soruları ele alınmıştır. Çalışmanın amacı, deprem deneyimini kontrol ettikten sonra, (*i*) ÖU ve ST'nin kadercilik ve sistemi meşrulaştırma ile bireysel deprem hazırlığını nasıl etkilediğini ve (*ii*) bu etkinin ÖU ve ST'nin genel ve spesifik (afetle ilgili) seviyelerinde farklılaşıp farklılaşmadığını deneysel olarak araştırmaktır.

4.1. Yöntem

4.1.1. Katılımcılar

Araştırmaya, uygun örnekleme yöntemiyle belirlenmiş 308 kişi (194 kadın, 112 erkek, 2 belirtilmemiş; $Ort._{yaş}$ = 26.41, $S_{yaş}$ = 12.17) katılmıştır. Katılımcılardan 132'si sosyal medya (Facebook) aracılığıyla, 176'sı ise (Ankara ve Zonguldak'ta okuyan lisans öğrencileri) ders kredisi karşılığında gönüllü olarak katılmıştır. Katılımcıların sosyodemografik özellikleri Tablo 4.1'de verilmiştir.

4.1.2. Desen ve İşlem

Çalışma kapsamında, 308 katılımcı deprem deneyiminin kontrol edildiği 3 (ÖU: *ölüm* veya *deprem* veya *kontrol*) X 3 (ST: *genel* veya *afetle ilgili* veya *kontrol*) denekler arası desenin 9 deneysel koşulundan birine seçkisiz olarak atanmıştır. Çalışmada kadercilik, sistemi meşrulaştırma (genel ve afetle ilgili olmak üzere iki seviyede) ve deprem hazırlığı olmak üzere üç grup bağımlı değişken kullanılmıştır. Kadercilik, genel kadercilik (kader, işlevsellik, çaresizlik, boyun eğme, değer biçme, kontrol edilemezlik ve şans alt ölçekleriyle) ve afetle ilgili kadercilik (deprem kaderciliği, depremden sorumlu tutma, deprem hasarından sorumlu tutma ve hasar önlenebilirliği değişkenleriyle) ana değişkenlerinden oluşmaktadır. Sistemi meşrulaştırma, genel ve afetle ilgili sistemi meşrulaştırma değişkenlerini kapsamaktadır. Deprem hazırlığı ise, genel hazırlıklı olma, niyet, öz yeterlik ve sonuç beklentisi değişkenlerinden oluşmaktadır. Deneysel manipülasyon koşulları (bağımsız değişkenler) için uygulanan seçkisiz atama ile bağımlı değişkenlerin veriliş sırasını gösteren anket akışı Şekil 4.1'de verilmiştir.

Araştırma için etik izin ODTÜ İnsan Araştırmaları Etik Kurulu'ndan alınmıştır (bkz. Ek F). Araştırma, kişilik, biliş ve çeşitli konulara ilişkin sosyal tutumlar arasındaki ilişkiyi anlamak amacıyla yürütülen ve ortalama 30-40 dakika sürmesi öngörülen bir anket çalışması olarak tanıtılmıştır. Çalışmaya 18 yaş ve üstü yetişkinler davet edilmiştir. Veri toplama için katılımcıların farklı deneysel koşullara rasgele atanması olanağına sahip bir veri toplama platformu olan Qualtrics kullanılmıştır. Araştırmanın verileri Ekim 2016 süresince online olarak toplanmıştır.

4.1.3. Veri Toplama Araçları

Çalışmanın deneysel desenine uygun olarak ÖU ve ST manipülasyonları yapılmıştır (bkz. Ek D). ÖU'nun ölüm ve kontrol koşulları için DYK çalışmalarında tipik olarak kullanıldığı üzere katılımcılardan ölüm ve nötr bir konuyla ilgili (televizyon izleme) iki açık uçlu soruyu cevaplamaları istenmiştir (Pyszczynski ve ark., 2004; Rosenblatt ve ark., 1989). Deprem koşulu içinse katılımcılardan deprem yaşadıklarını düşünmenin uyandırdığı duygu ve düşünceleri iki açık uçlu soruyu verecekleri cevaplar ile belirtmeleri istenmiştir. ÖU manipülasyon kontrolü için ölüm düşüncelerinin ulaşılabilirliği bir kelime bulmacası aracılığıyla ölçülmüştür. Ölüm düşüncelerinin ulaşılabilirliğinin kontrol koşuluna göre ölüm koşulunda daha yüksek olması manipülasyonunun çalıştığını gösterecektir.

ST'nin genel tehdit koşulunda, SMK çalışmalarında sistemi meşru görme ihtiyacını arttırmak amacıyla tipik olarak kullanılan ST metni kullanılmıştır (Kay ve ark., 2005; Solak, 2015). ST'nin afetle ilgili tehdit koşulu için kullanılan metin ise, genel ST metninin Çalışma 1'de Türkiye'de DRM sistemi algısı üzerine elde edilen bulgular ışığında uyarlanmasıyla oluşturulmuştur. Bu iki tehdit koşulunda, katılımcılardan genel olarak ülkenin durumu ya da Türkiye'de ARY'nin durumu hakkında Türklerin ne düşündüğü üzerine yerel bir gazeteci tarafından yazılmış metinler olarak sunulan alıntıları okumaları ve sonrasında gazetecinin yazma becerilerini değerlendirmeleri istenmiştir. İki koşulda da genel ve afetle ilgili sistemlerin meşruluğu ve istikrarı sistem sorunları üzerine odaklanılarak tehdit edilmiştir. Kontrol koşulunda ise dünyada 2012 sonbahar modası üzerine yazılan bir gazete haberinin (Süzmen, 2015) Türkiye'de 2016 sonbahar modasıyla ilgili olacak şekilde değiştirilmiş ve kısaltılmış hali kullanılmıştır. ST manipülasyon kontrolü, üç tehdit koşulunda da tüm katılımcıların Türkiye'yi ülkedeki sosyal, ekonomik ve politik koşullar (ülke; genel ST koşulunun konusu), ARY (afetle ilgili ST koşulunun konusu) ve sonbahar modası (kontrol; ST verilmeyen koşulun konusu) konularında (1) *hiç olumlu değil*'den (9) *çok olumlu*'ya değerlendirmeleriyle yapılmıştır. ST manipülasyonu etkililiği, tehdit koşullarında ülke ve ARY değerlendirmelerinin tehdit olmayan koşuldaki değerlendirmelere göre daha olumlu olması durumunda sağlanmış olacaktır.

Çalışmaya dahil edilen bağımlı değişkenler için kullanılan ölçüm araçları ile kullanılan sosyodemografik bilgi formu aşağıda açıklanmıştır.

- **Genel Kadercilik:** Çalışma 2'de geliştirilen 58 maddeli yedi faktörlü Genel Kadercilik Ölçeği (6'li Likert tipi ölçek; 1 *kesinlikle katılmıyorum*, 6 *kesinlikle katılıyorum*) kullanılmıştır. Deneysel çalışma verisiyle yapılan açımlayıcı faktör analizleri sonucunda Çalışma 2 analizlerinde elde edilen faktör yapısı küçük değişikliklerle (madde sayısında değişiklikler, bazı maddelerin yer değiştirmesi, bazı maddelerin elenmesi) güncellenmiş; ölçeğin son hali kader (15 madde), işlevsellik (10 madde), çaresizlik (5 madde), boyun eğme (6 madde), değer biçme (7 madde), kontrol edilemezlik (5 madde) ve şans (4 madde) olmak üzere toplamda 54 madde ve 7 faktörden oluşmaktadır (bkz. Ek E). Bu yedi faktör toplam varyansın 60.24'sini açıklamıştır. Faktör yükleri, madde-toplam korelasyonları, özdeğerler, açıklanan varyanslar ve Cronbach Alfa iç tutarlılık katsayıları Tablo 4.2'de görülebilir. Ölçeğin son haline göre, 54 maddeli yedi faktörlü yapının uygunluğunu test etmek amacıyla LISREL 8.51 (Jöreskog ve Sörbom, 2001) yapılan doğrulayıcı faktör analizi yapılmıştır. Model uyum indekslerine göre yedi faktörlü çözümle verinin tanımlanabileceği, dolayısıyla modelin kabul edilebilir olduğu bulunmuştur. Alt ölçek puanları hesaplanırken ortalamalar esas alınmıştır.

- **Afetle ilgili Kadercilik:** Kaderciliğin afet üzerinden ele alındığı bu bağımlı değişken grubu; **deprem kaderciliği** (Joffe ve ark., 2013; Joffe ve ark., 2016), **depremden sorumlu tutma** (boyutlar: insan, Allah/Takdir-i ilahi, doğa) (Joffe ve ark., 2013; Joffe ve ark., 2016), **deprem hasarından sorumlu tutma** (boyutlar: insan, Allah/Takdir-i ilahi, doğa) (McClure ve ark., 2001; İkizer, 2014) ve **hasar önlenebilirliği** (McClure ve ark., 2001; İkizer, 2014) değişkenleriyle ölçülmüştür. Deprem kaderciliği (1 *kesinlikle katılmıyorum*, 4 *kesinlikle katılıyorum*) ve hasar önlenebilirliği (1 *hiç*, 4 *çok* önlenebilir) için yanıt kodlamaları, yüksek puanlar yüksek düzeyde kaderciliği (genel olarak ve hasar önlenebilirliği açısından) yansıtacak şekilde yapılmıştır. Bu iki değişkenlerin puanları hesaplanırken ortalamalar esas alınmıştır. Depremden ve deprem hasarından sorumlu tutma boyutları için verilen yanıtlar (1 *hiç*, 4 *çok*), yüksek puanlar o boyutun daha fazla sorumlu tutulduğunu yansıtacak şekilde kullanılmıştır.

- **Genel Sistemi Meşrulaştırma:** Wakslak ve arkadaşlarının (2011) kullandığı ölçeğin (9'lu Likert tipi ölçek; 1 *hiç katılmıyorum*, 9 *kesinlikle katılıyorum*), araştırmacı tarafından ilgili yazında daha önce kullanılan farklı bir versiyonunun (Kay ve Jost, 2003) Türkçe adaptasyonu (Göregenli, 2004; 2005) ve bu adaptasyonun kullanıldığı çalışmalar (İslambay, 2014; Solak, 2015) gözden geçirilerek uyarlanmıştır. Yanıt kodlamaları, yüksek puanlar yüksek düzeyde meşrulaştırmayı yansıtacak şekilde yapılmıştır. Ölçek puanları hesaplanırken ortalamalar esas alınmıştır.

- **Afetle ilgili Sistemi Meşrulaştırma:** Araştırmacı tarafından genel sistemi meşrulaştırma için kullanılan ölçeğin, içerik olarak Türkiye'de ARY'yi yansıtacak şekilde gözden geçirilmesi ve düzenlenmesiyle oluşturulmuştur.

- **Deprem Hazırlığı:** Bu bağımlı değişken grubunun ilk değişkeni olan **genel hazırlıklı olma**, katılımcıların büyük bir deprem için ne kadar hazırlıklı olduklarını düşündüklerini 1 *hiç hazırlıklı değilim*'den 7 *çok hazırlıklıyım*'a kadar belirttikleri bir soruyla ölçülmüştür. İkinci değişken **niyet** ise, Joffe ve arkadaşları (2016) tarafından kullanılan hazırlıklı olma maddelerinde "Hayır" cevabı verilenler için o hazırlık faaliyetini önümüzdeki üç ay içerisinde yapma olasılığı sorularak ölçülmüştür (1 *hiç olası değil*, 7 *büyük olasılıkla*). Tüm katılımcılar için niyet puanları, istatistik uzmanı görüşüyle oluşturulan bir formül ile puanlar 0 ile 1 arasında değişecek ve yüksek puanlar yüksek düzeyde niyeti yansıtacak şekilde hesaplanmıştır. Hazırlıklı olmayı daha iyi anlamak amacıyla, ayrıca deprem hazırlığına yönelik **öz yeterlik** (1 *kesinlikle katılmıyorum*, 4 *kesinlikle katılıyorum*) ve **sonuç beklentisi** (1 *faydasız,* 4 *çok faydalı*) değişkenleri (Joffe ve ark., 2016) kullanılmıştır. Yanıt kodlamaları yüksek puanlar yüksek düzeyde öz yeterlik ve sonuç beklentisi inançlarını yansıtacak şekilde yapılmıştır. Ölçek puanları hesaplanırken ortalamalar esas alınmıştır.

- **Deprem Maruziyeti:** Analizlerde kontrol amaçlı kullanılan bu değişken; geçmiş deprem deneyimi (Evet/Hayır), "Evet" diyenler için depreme maruz kalma şiddeti ve afet sonrası olumsuzluklar ile ilgili kapalı uçlu sorularla (İkizer, 2014) ölçülmüştür. Deprem maruziyeti puanları, şiddet ve olumsuzluklar sorularının toplam puanlarının ortalamaları alınarak hesaplanmıştır. Yüksek puanlar, yüksek düzeyde maruziyeti yansıtmaktadır.
- **Sosyodemografik Bilgi Formu:** Bu formda sosyodemografik değişkenler ile politik görüş, dini inanç, dindarlık ve kader inancı ile ilgili kapalı uçlu sorularla ölçülen değişkenlere yer verilmiştir.

Deneysel manipülasyonlar, bağımlı değişkenler ile sosyodemografik bilgi formunu içeren anketin tamamı Ek D'de görülebilir.

4.1.4. Analiz

Temel analizler öncesinde veri doğruluğu ve çok değişkenli analiz varsayımları açısından veri temizle işlemleri uygulanmıştır. Veride eksik değere rastlanmamıştır. Beş katılımcının verisi p < .001 Mahalanobis uzaklığı incelemesine göre çok değişkenli aykırı değerler olarak saptandığından veri setinden çıkarılmıştır. Bazı bağımlı değişkenler için tek değişkenli aykırı değerler tespit edilse de, katılımcıların deneysel koşullara dağılımını etkilememek adına bu katılımcıların verileri veri setinden çıkarılmamıştır. Buna göre, tüm analizler 303 kişiyle yapılmıştır. Tablo 4.3'te deneysel manipülasyon koşullarına göre katılımcı sayıları görülebilir.

4.2. Bulgular

4.2.1. Betimleyici İstatistikler

Tümü sürekli olan bağımsız değişkenler için ortalama, standart sapma ve aralık değerleri hesaplanmıştır. Bunlar Tablo 4.4'te sunulmuştur.

4.2.2. Korelasyon Analizleri

Çalışmada yer alan değişkenler arasında ikili korelasyonlar analiz edilmiştir. Analizler bağımlı değişkenler arası korelasyonlar ile bağımlı değişkenlerin bağımsız değişkenlerle (deneysel manipülasyonlarla), afetle ilgili sosyodemografik değişkenlerle ve ana sosyodemografik değişkenlerle korelasyonları olmak üzere ayrı ayrı ele alınmıştır. Bu analizlerin sonuçları Tablolar 4.5, 4.6 ve 4.7'de sunulmuştur.

4.2.3. Manipülasyon Kontrolleri

ÖU manipülasyonunun etkililiğini değerlendirmek için yapılan tek yönlü varyans analizi sonuçları, ölüm grubundaki katılımcılarda deprem ve kontrol gruplarındaki katılımcılardakine göre ölüm düşüncelerinin ulaşılabilirliğinin daha yüksek düzeyde olduğunu göstermiştir (bkz. Tablo 4.8). Ancak, deprem ile kontrol grubundaki katılımcılar arasında anlamlı bir fark bulunmamıştır. Bu sonuçlara göre; ÖU manipülasyonu sadece ölüm koşulu için etkili olmuş, deprem koşulu içinse etkili olmamıştır. Diğer bir deyişle, depremi hatırlatmak ÖU işlevi görmemiştir.

ST manipülasyonunun etkililiğini değerlendirmek için yapılan tek yönlü varyans analizi sonuçları, ST koşullarının ülke, ARY ve sonbahar modası konularında yapılan değerlendirmelerin hiçbirinde anlamlı olarak farklılaşmadığını göstermiştir (bkz. Tablo 4.8). Bu sonuçlara göre; ST sistem değerlendirmelerini arttırmamıştır. Diğer bir deyişle, ST manipülasyonu genel ve afetle ilgili sistemleri meşrulaştırma ihtiyacını aktifleştirmede başarısız olmuştur.

4.2.4. Hipotez Testleri

ÖU ve ST'nin kadercilik, sistemi meşrulaştırma ve deprem hazırlığı bağımsız değişkenleri üzerindeki etkisini incelemek için verilere 3 (ÖU: *ölüm* veya *deprem* veya *kontrol*) X 3 (ST: *genel* veya *afetle ilgili* veya *kontrol*) faktörlü bir seri tek ve çok yönlü varyans analizleri uygulanmıştır. Deprem maruziyeti, anlamlı olarak ilişkili olduğu tüm bağımlı değişkenler için yapılan analizlerde kontrol edilmiştir. Genel hazırlıklı olma ile anlamlı ilişkili bulunan deprem maruziyeti değil de deprem deneyimi olduğundan, bu bağımlı değişken için yapılan analizde deprem deneyimi kontrol değişkeni olarak kullanılmıştır. Niyet, hem deprem maruziyeti hem de evin iskan durumu ile anlamlı ilişkili bulunduğundan, bu bağımlı değişken için yapılan analizde iki değişken de kontrol edilmiştir.

Analiz sonuçlarına göre, ÖU'nun ana etkisinin sadece deprem kaderciliği için geçerli olduğunu gösterirken, ST ana etkisi ile ÖU ve ST etkileşiminin bağımlı değişkenlerin hiçbirinde gözlemlenmemiştir. ÖU'nun deprem kaderciliği üzerindeki ana etkisini anlamak amacıyla yapılan analiz sonrası karşılaştırmaların sonuçları, deprem koşulundaki katılımcıların kontrol grubundaki katılımcılara kıyasla daha yüksek düzeyde depremle ilgili kaderci düşünme eğiliminde olduğunu göstermiştir. Deneysel manipülasyon koşullarına göre tüm bağımlı değişkenler için ortalama farklılıkları Tablo 4.9'da verilmiştir.

ÖU ve ST'nin sistemi meşrulaştırma değişkenleri üzerindeki etkileşim etkisinin sistem tipine göre (ülke ve ARY sistemlerine karşılık gelen genel ve afetle ilgili) değişip değişmediği ek bir analizle incelenmiştir. Veriye sistemi meşrulaştırma için deprem maruziyetinin kontrol edildiği 3 (ÖU) X 3 (ST) X 2 (Sistem Tipi) faktörlü, son faktörde tekrarlayan karışık desenli tek yönlü varyans analizi uygulanmıştır (bkz. Tablo 4.10). Analiz sonuçları, sadece sistem tipinin ana etkisinin anlamlı olduğunu göstermiştir. Buna göre, katılımcılar ARY sistemini genel (ülke) sistemine kıyasla daha fazla meşrulaştırmıştır (iki tip meşrulaştırma puanı birleşik). Analiz sonuçları, ST ve sistem tehdidinin iki yönlü etkileşim etkisinin de anlamlı olduğunu göstermiştir. Bu sonuca göre, ST ana etkisine benzer şekilde, tüm ST koşullarında katılımcılar ARY sistemini genel sisteme kıyasla daha fazla meşrulaştırmıştır. Ancak, ortalama meşrulaştırma puanlarında ST ile sistem tipinin aynı sosyal sisteme yönelik olduğunda (aynı sisteme yönelik olmamasına kıyasla) daha yüksek düzeyde meşrulaştırmaya işaret eden anlamlı farklılıklar gözlenmemiştir. Bunlara ek olarak, analiz sonuçları ÖU, ST ve sistem tipinin üçlü etkileşim etkisinin marjinal düzeyde anlamlı olduğunu göstermiştir (p = .06). Yapılan analiz sonrası karşılaştırmaların sonuçlarına göre; ölüm koşulundaki katılımcılar ARY sistemini genel sistem tehdit edildiğinde, ARY sisteminin tehdit edilmesine kıyasla, daha fazla meşrulaştırma eğiliminde olmuştur. Dolayısıyla, ölüm hatırlatmanın iki sosyal sistemin uyumsuzluğu (ST ile sistem tipinin farklı sosyal sistemlerle ilgili olması – ARY sisteminin genel ST'ye maruz kaldıktan sonra değerlendirilmesi) ile eşleşmesi durumunda daha yüksek düzeyde meşrulaştırma gözlenmiştir. Ayrıca, "ÖU: *kontrol* ve ST: *afetle ilgili*" koşulu dışındaki tüm ÖU ve ST ikili koşullarında katılımcılar ARY sistemini genel sisteme kıyasla marjinal düzeyde daha fazla meşrulaştırma eğiliminde olmuştur.

5. Tartışma

Bu tezde, afet bağlamında sistemi meşrulaştırma süreçleri Türkiye'de depremler özelinde ve DYK çerçevesinde ele alınmıştır. Tezin ana amacı; depremlere dair algı ve tepkilerin altında yatan sosyal bilişsel süreçleri, sistemin algılanan haklılığını güçlendirmenin dolaylı ve dolaylı olmayan yolları olarak kadercilik ve sistemi meşrulaştırma ve de depremlere hazırlık üzerine odaklanarak araştırmaktır. Bu amaç doğrultusunda, ÖU ve ST'nin deprem maruziyeti kontrol edildikten sonra kadercilik, sistemi meşrulaştırma ve deprem hazırlığını nasıl etkilediği ve de bu etkinin ÖU ve ST'nin genel ve spesifik (afetle ilgili) seviyelerinde nasıl farklılaştığının incelendiği bir deneysel çalışma yürütülmüştür.

Tez kapsamında deneysel çalışmayı önceleyen biri nitel diğeri nicel olmak üzere iki çalışma daha yapılmıştır. İlk çalışmada, genel kadercilik algıları araştırılmış ve deneysel çalışmada kullanılmak üzere kaderci inanış yatkınlığında bireysel farklılıkları yansıtacak geçerli ve güvenilir bir ölçüm aracının geliştirildiği nicel çalışmanın temeli nitel olarak ortaya konulmuştur. İlk çalışmada ayrıca Türkiye'de ARY'ye dair sistem algıları anlaşılmaya çalışılmıştır. Buradan elde edilen nitel bulgular ışığında, deneysel çalışmada kullanılan sistemi meşrulaştırmayla ilgili ölçüm araçlarının (hem manipülasyonlarda, hem de bağımlı değişken ölçümlerinde) içeriği oluşturulmuştur.

5.1. Bulgulara Genel Bakış

5.1.1. ÖU Ana Etkisi

ÖU ana etkisi, sistemi meşrulaştırmanın dehşet yönetimi işlevine ilişkin olarak araştırılmıştır. Bu amaçla deneysel çalışmada iki araştırma sorusu ele alınmıştır. İlk olarak, kişilere olası bir deprem yaşadıklarını hatırlatmanın tipik ÖU olan kişilere ölümlerini hatırlatmayla aynı işleve sahip olup olmadığı araştırılmıştır. Manipülasyon kontrolü için yapılan analizler, manipülasyonun sadece ölüm koşulu için etkili olduğunu, deprem koşulu içinse etkili olmadığını göstermiştir. Buna göre, depremi hatırlatma ÖU işlevi görmemiştir. Böyle bir sonucun elde edilmesi, depremin aynı zamanda *ölmeme* ihtimalini (enkazsan sağ kurtulma) barındırmasıyla açıklanabilir. Dolayısıyla, depremi hatırlatmanın %100 ÖU işlevine sahip olmadığı sonucuna varılabilir.

İkinci olarak, ölüm veya olası bir deprem deneyimi hatırlatılarak yapılan ÖU'nun kadercilik, sistemi meşrulaştırma ve deprem hazırlığını nasıl etkilediği araştırılmıştır. Bu amaçla yapılan hipotez testi analizlerine göre, ÖU sistemi meşrulaştırma ve kadercilik değişkenlerinde bir artışa ya da deprem hazırlığı ile ilgili değişkenlerde bir düşüşe yol açmamıştır. Bu sonuçlar sadece bir kadercilik değişkeni için geçerli değildir. Deprem kaderciliği değişkeninde gözlemlenen anlamlı ÖU ana etkisine göre, deprem maruziyeti kontrol edildikten sonra, deprem koşulundaki katılımcılar kontrol grubundakilere göre daha yüksek düzeyde deprem kaderciliği puanları almıştır. Deprem riskine ilişkin kaderci düşünmenin Türk, Japon ve Amerikalı katılımcılarda görüldüğü ama özellikle Türk katılımcılarda bunun ön plana çıktığı bilinmektedir (Joffe ve ark., 2013). Dolayısıyla, deprem hatırlatıldıktan sonra bu riske ilişkin kaderci düşünmenin artması, depremin ölümü hatırlatmasındansa depremi hatırlatmanın *hazırlama etkisi*yle açıklanabilir.

Deneysel çalışmada, ölüm ile kontrol grupları arasında hiçbir değişken için anlamlı bir tipik ÖU etkisi gözlemlenmemiştir. Çalışma hipotezlerinin desteklenmediği bu bulgular, yöntemsel olarak ÖU manipülasyonu ile bağımlı değişken ölçümleri arasında geçen süreyle açıklanabilir. DYK'nın ÖU hipotezi üzerine 164 dergide rapor edilen 277 deneyin sonuçlarıyla yapılan meta-analiz çalışmasında, ÖU'nun kültürel dünya görüşü ve benlik saygısı temelli değişkenler üzerindeki etkisinin orta derecede (r = .35) olduğu bulunmuştur. Manipülasyon ile bağımlı değişken arasındaki süre arttıkça da (ki bu ölüm düşüncelerinin bilinç düzeyinden uzaklaşmasını ama hala ulaşılabilir olmasını sağlayacaktır) bu etkinin daha da arttığı bulunmuştur. Deneysel çalışmada bu amaca hizmet edecek oyalayıcı (zaman geçirici) bir görev ya da ölçüm kullanılmaması, tipik ÖU etkisinin anlamlı bulunmamasında rol oynamış olabilir. Ayrıca, bağımlı değişkenlerde tipik ÖU etkisinin gözlenmemiş olması kültürel faktörlerle de açıklanabilir. Martin ve Van den Bos (2014), Hristiyanlara kıyasla Müslümanların ölüme daha kabullenici yaklaşmasına dikkat çekerek Müslümanların ÖU'ya daha az savunmacı tepkiler verdiğini gösteren çalışma bulgularının DYK'nın kültürel farklılıklara hassas olduğunu belirtmektedir (örn., Van den Bos ve ark., 2012).

5.1.2. ST Ana Etkisi

ST ana etkisi, sistemi meşrulaştırmanın bağlamsal yapısına ilişkin araştırılmıştır. Bu amaçla deneysel çalışmada iki araştırma sorusu ele alınmıştır. İlk olarak, afetle ilgili ST'nin genel ST gibi sistemi meşru görme ihtiyacını arttırma işlevine sahip olup olmadığı araştırılmıştır. Manipülasyon kontrolü için yapılan analizler, ST manipülasyonunun genel ve afetle ilgili sistemleri (sırasıyla ülke ve ARY) meşrulaştırma ihtiyacını aktifleştirmede başarısız olduğunu göstermiştir. İkinci olarak, genel veya afetle ilgili olmak üzere iki şekilde verilen ST'nin çalışmanın bağımlı değişkenleri olan kadercilik, sistemi meşrulaştırma ve deprem hazırlığını nasıl etkilediği araştırılmıştır. Bu amaçla yapılan hipotez testi analizlerine göre, ST sistemi meşrulaştırma ve kadercilik değişkenlerinde bir artışa ya da deprem hazırlığı ile ilgili değişkenlerde bir düşüşe yol açmamıştır. Manipülasyonun başarılı olmamış olması göz önünde bulundurulduğunda, bu bulgular şaşırtıcı değildir.

Deneysel çalışmanın örnekleminin kronik olarak düşük sistemi meşrulaştırma profiline sahip katılımcılardan oluşması sonuçların yorumlanmasında önemli olabilir. Şöyle ki, SMK çalışmalarında gözlemlenen ST etkisindeki birey – ortam etkileşimine göre (ST aracılığıyla geçici olarak meşrulaştırma ihtiyacının arttırılması ya da aktifleştirilmesinin, kronik olarak sistemi meşru görmeyenler ya da daha az meşru görenler üzerinde, kronik olarak yüksek düzeyde sistemi meşru görenlere kıyasla daha güçlü etki yaratacağı; Jost ve ark., 2015; örn., Mallet ve ark., 2011; van der Toorn ve ark., 2014), kişilerin kronik sistemi meşrulaştırma düzeyleri sistemin farklı yollarla desteklenmesinde ya da savunulmasında rol oynamaktadır (Jost ve ark., 2015). Yapılan çalışmalar düşük düzeyde kronik meşrulaştırma motivasyonuna sahip kişilerin ST sonrası sistemi dolaylı, üstü kapalı yollarla savunduğunu, yüksek düzeyde kronik meşrulaştırma motivasyonuna sahip kişilerin ise daha direkt, açık yollarla savunduğunu göstermiştir (bkz., Cutright ve ark., 2011). Deneysel çalışma örnekleminin düşük düzeyde kronik meşrulaştırma eğilimine sahip bir katılımcı profili olduğu göz önünde bulundurulduğunda, anlamlı bir ST ana etkisi elde edilmesi beklenebilirdi. Ancak, bağımlı değişkenler açısından tehdit koşulları ile kontrol grubu arasında anlamlı bir fark gözlenmemiştir.

5.1.3. ÖU ve ST Etkileşim Etkisi

Deneysel çalışmanın son araştırma sorusu kapsamında incelenen ÖU ve ST etkileşim etkisi, yapılan varyans analizlerinde kadercilik, sistemi meşrulaştırma ve deprem hazırlığı bağımlı değişken gruplarının hiçbirinde anlamlı bulunmamıştır. Genel olarak bakıldığında ne ÖU ve ST ana etkileri, ne de etkileşimleri hipotezleri destekleyecek şekilde anlamlı bulunmamıştır. Bunun bir sebebi, çalışma konusunun SMK ve DYK'nın çoğunlukla çalışıldığı ve hipotezlerini destekler nitelikte bulguların elde edildiği alan olan grup bağlamı içermemesi olabilir. Dolayısıyla, çalışma hipotezlerinin depremler bağlamında ama aynı zamanda grup dinamikleri içeren konular çerçevesinde test edilmesiyle ÖU ve ST etkilerine ilişkin anlamlı bulgular elde edilebilir.

ÖU ve ST etkileşiminin, demprem maruziyeti kontrol edildikten sonra, sistem tipine göre farklılık gösterip göstermediği ayrıca incelenmiştir. Bunlardan başlıcası, 3 (ÖU) X 3 (ST) X 2 (Sistem Tipi) faktörlü, son faktörde tekrarlayan karışık desenli tek yönlü varyans analizi sonuçlarında marjinal olarak anlamlı bulunan üçlü etkileşim etkisidir. Buna göre, ölüm koşulundaki katılımcılar ARY sistemini genel ST'de, afetle ilgili ST'ye kıyasla, daha fazla meşrulaştırmıştır (iki tip meşrulaştırma puanı birleşik). Diğer bir deyişle, ölümün hatırlatılması iki sosyal sistemin uyumsuzluğu (ST ile sistem tipinin farklı sosyal sistemlerle ilgili olması – ARY sisteminin genel ST'ye maruz kaldıktan sonra değerlendirilmesi) ile eşleştiğinde meşrulaştırma düzeylerinde artış gözlenmiştir. Ayrıca, *kontrol* ÖU ve *afetle ilgili* ST ikilisi dışındaki tüm ikili koşullarda ARY sistemi genel sisteme kıyasla daha fazla meşrulaştırılmıştır. Bu bulgular, Wakslak ve arkadaşlarının (2011) deneysel çalışmalarında gözlemlediği *yayılan rasyonalizasyon* etkisiyle (meşrulaştırmanın ST sonrası direkt olarak tehdit edilen sistemden tehdit edilmemiş diğer seviyelerdeki sistemlere yayılması) tutarlı olmamakla beraber, deneysel çalışmanın "etkisiz" ST manipülasyonu göz önünde bulundurulduğunda yayılım etkisinin gözlenmemesi şaşırtıcı değildir. ARY sisteminin genel sisteme kıyasla daha fazla meşrulaştırılması, katılımcıların sisteme aşinalık düzeyleriyle de açıklanabilir. Ülkenin sosyal, politik ve ekonomik koşulları, ARY faaliyetlerine göre katılımcılarca daha bilinir ve sistematik olarak daha fazla gündemlerinde olabilir. ARY'ye yönelik bu düşük aşinalık, bir sistem olarak daha rahat meşrulaştırılmasında rol oynamış olabilir.

5.2. Katkılar ve Pratik Çıkarımlar

Bu tez, gerek kuramsal gerekse de uygulamalı olarak çeşitli açılardan sosyal psikoloji yazınına katkılar sunmaktadır. Birincisi, bu araştırma, afet yazını ile ana akım sosyal psikoloji arasında kuramsal bir köprü oluşturmuş ve çalışma konusuyla ilgili görgül bulgular sağlamıştır. İkincisi, bu tezde kadercilik sistemi meşrulaştırmanın dolaylı bir yolu olarak ve afet bağlamında ele alınmıştır. Bununla birlikte, sistemi meşrulaştırma depreme ilişkin kaderci inanışlar ve deprem hazırlığı ile ilgili çeşitli değişkenlerle beraber araştırılmıştır. Üçüncüsü, ARY bu çalışmada SMK yaklaşımıyla genel ülke sisteminin bir alt sistemi olarak ele alınmıştır. Bu iki sistem arasındaki dinamik ilişkinin bireyler üzerindeki motivasyonel yansımalarını anlamak, ARY'de gitgide önemi artan katılımcı yaklaşımın (ARY'nin sadece devlet sorumluluğunda değil, vatandaşların da hazırlıklı olma açısından faal bir rol oynadığı ve sorumluluk üstlendiği bir paydaş ortamı olması) güçlendirilmesine ışık tutabilir. Son olarak, bu tezde kaderci inanış yatkınlığında bireysel farklılıkları yansıtan geçerli ve güvenilir bir ölçüm aracı geliştirilmiştir.

5.3. Sınırlılıklar ve Gelecek Çalışmalar için Öneriler

Tez bulgularını değerlendirirken yöntemsel ve bağlamsal bazı sınırlılıklar göz önünde bulundurulmalıdır. Yöntemsel olarak göz önünde bulundurulması gereken sınırlılık, manipülasyonların etkililiği ile ilgilidir. Deneysel çalışmada özellikle ST manipülasyonunun meşrulaştırma motivasyonunu aktifleştirmede ve/veya arttırmada başarılı olmaması, bulgularla ilgili kesin sonuçlara varılamamasına sebep olmuştur. Bu noktada, deneysel manipülasyonların daha güçlü yapılmasıyla (örn., deneysel koşullar için yazılı yerine görsel içerik kullanılması, ARY için belirli bir afet olayına odaklanan içerik kullanılması, vb.) ya da deneyin bu çalışmadaki gibi online olarak değil de laboratuvar ortamında yapılmasıyla farklı sonuçlar elde edilip edilmeyeceğine gelecek çalışmalarda bakılması önemli olacaktır. Ayrıca, deneysel çalışmanın örneklemi genel sosyodemografik özellikler açısından temsili bir profile sahip olsa da, örneklem yüksek deprem algısı ve fiili deprem riski ile karakterize değildir. Dolayısıyla, bu çalışmanın deprem geçmişi olan yerleşimlerden örneklemlerle tekrarlanması afet bağlamında ve dehşet yönetimi açısından sistemi meşrulaştırma süreçlerini daha iyi anlamak adına faydalı olacaktır.

Bağlamsal olarak göz önünde bulundurulması gereken sınırlılık ise, deneysel çalışma verisinin toplandığı Ekim 2016'yı önceleyen yaklaşık iki yıllık yakın dönemde öne çıkan sosyopolitik bağlamla ilgilidir. Genel olarak bakıldığında bulgular, ülkede son iki yıldır süregelen sosyopolitik bağlam çerçevesinde değerlendirilebilir. Şöyle ki, bu süreçte genel sistemin (ülkedeki sosyal, politik ve ekonomik koşullar) terör saldırıları ve darbe girişimi sebebiyle tehdit altında olması ve bunların sonucunda meydana gelen ölümler sebebiyle olayların doğal ölüm hatırlatıcıları olması, ÖU ve ST manipülasyonlarının zayıf kalarak etkili olmamasında ve dolayısıyla ÖU ve ST etkilerinin anlamlı bulunmamasında etkili olmuş olabilir. Dolayısıyla, gelecek çalışmalarda hipotezlerin istikrarlı ve düzenli sosyopolitik koşullara sahip ve de insanların ülkeyi ilgilendiren sistem problemlerine ve ölümlü olaylara sistematik olarak maruz kalmadığı ülkelerde (örn., Japonya, Yeni Zelanda) test edilmesi önem teşkil etmektedir.

Yazının bahsedilen yöntemsel ve bağlamsal sınırlılıkların giderileceği gelecek çalışmalarla güçlendirilmesi önemli bir ihtiyaç olarak öne çıkmaktadır. Buna ek olarak, sistemi meşrulaştırmanın farklı yollarına odaklanıldığı (farklı afetlerde, farklı seviyelerde, farklı konularda) ve de deneysel desenin ÖU ve ST açısından farklı özelliklerdeki afetler (örn., deprem, sel, maden kazaları, vb.) ve ARY düzenleri (yerel yönetim, merkezi yönetim, sivil toplum kuruluşları, vb.) için uyarlandığı çalışmalar ilgili yazın için önemli araştırma kulvarları oluşturabilir. Ayrıca, araştırma konusunun gerek kültürel, gerekse çoklu afet yaklaşımlarıyla ele alınması yazına zenginlik katacaktır.

APPENDIX H. Curriculum Vitae

PERSONAL INFORMATION

Surname, Name: Doğulu, Canay
Nationality: Turkish (TC)
Date and Place of Birth: 27 June 1987, Ankara
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E-mail: canay.dogulu@metu.edu.tr, canaydogulu@gmail.com

EDUCATION

Degree	**Institution**	**Year of Graduation**
PhD	METU Department of Psychology *(CGPA: 3.94/4.00)*	2017 (expected)
MSc	METU Department of Psychology *(CGPA: 4.00/4.00)*	2012
BSc	METU Department of Psychology *(CGPA: 3.81/4.00)*	2010
	Prepatory School, Department of Basic English *(Satisfactory)*	2006
High School	TED Polatlı College, Ankara *(CGPA: 5.00/5.00)*	2005

WORK EXPERIENCE

January 2016 – *present*

Researcher in the **Challenging RISK** Project (EPSRC reference: EP/K022377/1)
Particularly involved in a case study which focuses on preparedness to earthquakes and home fires in İzmir, Turkey
Working together with **Prof. Dr. Helene Joffe** (Co-Investigator) and **Dr. Gabriela Perez-Fuentes Ruiz** (Research Associate) at University College London, UK and **Dr. Ervin Gül** (Researcher), Izmir

July 2016 – February 2017	The Scientific and Technological Research Council of Turkey (TUBITAK) – Project Assistant *"The Relationship between Individualism-Collectivism and Structural Characteristics of Language"* (Project No. 115K312) Project Coordinator: **Assoc. Prof. Dr. İrem Uz** (TOBB University of Economics and Technology)
May – July 2016 *(summer semester)*	Lecturer (part-time) – PSY 200 "Critical Thinking and Academic Writing in Psychology" (2 credits) TOBB University of Economics and Technology Department of Psychology
April 2014 – April 2016	Researcher in the EU-FP7 project **TACTIC** *"Tools, Methods and Training for Communities and Society to Better Prepare for a Crisis"* *(2014-2016; FP7-SEC-2013-1, Grant Agreement No. 608058)* Particularly involved in a case study which focuses on preparedness to earthquakes in Kaynaşlı, Turkey Worked together with **Prof. Dr. A. Nuray Karancı** (Project Coordinator), **Asst. Prof. Dr. Gözde Ikizer** (Researcher), and **Şerife Yılmaz** (Researcher) at METU
November 2012 – September 2015	Researcher in the EU-FP7 project **emBRACE** *"Building Resilience Amongst Communities in Europe"* *(2011-2015; FP7-ENV-2011-1; Grant Agreement No. 283201)* Particularly involved in a case study which focuses on community resilience to earthquakes in Van and Adapazarı/Sakarya, Turkey Worked together with **Prof. Dr. A. Nuray Karancı** (Project Coordinator) and **Asst. Prof. Dr. Gözde Ikizer** (Researcher) at METU
January – October 2012	The Scientific and Technological Research Council of Turkey (TUBITAK) Project Assistant *"An Investigation of the Effects of Death Anxiety on Attitudes towards Diet Pills according to Terror Management Theory"* (Project No. 111K555) Project Coordinator: **Assoc. Prof. Dr. Özlem Bozo** (METU)
May – November 2011	Managing Director of Çocukça İşler Kindergarten, Oran/Ankara
November 2010 – October 2012	Observer and Interviewer for the project "**Road Safety in 10 Countries (RS10)**"

	Seat-belt and child seat usage and speeding measures in Afyon and Ankara Joint Project with Johns Hopkins Bloomberg School of Public Health, International Injury Research Unit Project Coordinator: **Assoc. Prof. Dr. Türker Özkan** (METU)
August 2009 – April 2011	METU Department of Music and Fine Arts Part-time student assistant
August 2009	Ufuk University Faculty of Medicine, Dr. Rıdvan Ege Hospital Department of Psychiatry Summer Intern
July 2009	METU Department of Music and Fine Arts Assistant for the Practical Symposium “Bauhaus Impact: Point, Line, Space, and …"
April – June 2009	METU 10th Art Festival Part-time student assistant
July 2008	Hacettepe University Department of Psychology Cognitive Psychology Application Laboratory Summer Intern
April – June 2006	METU School of Foreign Languages Department of Basic English Self-Access Centre Part-time student assistant

FOREIGN LANGUAGES

Advanced English

AWARDS AND HONORS

TÜBİTAK 2224-A International Scientific Meetings Fellowship Program, July 2014 (2.120,00 TL)

Ranked 5th among Psychology BSc Graduates of 2010 at Middle East Technical University (METU)

High Honor student in Middle East Technical University (METU) for 7 semesters between the academic years 2006–2010

ACADEMIC ROLES

Reviewer March 2016 – *present*
International Journal of Disaster Risk Reduction
indexed in SCI-E; Impact Factor: 1.242

PUBLICATIONS

1. Articles in International Peer-Reviewed Journals

Doğulu, C., Karanci, A. N., & Ikizer, G. (2016). How do survivors perceive community resilience? The case of the 2011 earthquakes in Van, Turkey. *International Journal of Disaster Risk Reduction, 16,* 108–114. doi: 10.1016/j.ijdrr.2016.02.006

Ikizer, G., Karanci, A. N., & **Doğulu, C.** (2016). Exploring factors associated with psychological resilience among earthquake survivors from Turkey. *Journal of Loss and Trauma*, *21*(5), 384–398. doi: 10.1080/15325024.2015.1108794

İkizer, G., Karancı, A. N., & **Doğulu, C.** (2016). How does impact of objective and subjective disaster exposure relate to the three clusters of posttraumatic stress symptoms? *Anatolian Journal of Psychiatry* [Anadolu Psikiyatri Dergisi]. *17*(3), 209–213. doi: 10.5455/apd.201001

Klein, R. A., Vianello, M., Hasselman, F., …, **Doğulu, C.**, ..., Nosek, B. A. (2015). *Many labs 2: Investigating variation in replicability across sample and setting*. Manuscript in preparation. Retrieved from http://projectimplicit. net/nosek/ML2protocol.pdf

2. Articles in National Peer-Reviewed Journals

Ceylan, S., **Doğulu, C.**, & Akbaş, G. (2016). Namus adına kadına yönelik şiddete dair sosyal temsiller: Karma yöntemli bir çalışma [Social representations of honor-based violence against women: A mixed methods study]. *Türk Psikoloji Yazıları* [Turkish Psychological Articles], *19*(Özel Sayı), 50–60.

Doğulu, C., & Sakallı Uğurlu, N. (2015). Dehşet Yönetimi Kuramı üzerine bir derleme [A review of Terror Management Theory]. *Türk Psikoloji Yazıları* [Turkish Psychological Articles], *18*(35), 33–47.

3. Books and Chapters in Books

Doğulu, C. , Karanci, A. N., & İkizer, G. (2016). *Van depreminde toplumsal dayanıklılık [Community resilience in Van earthquake]*. Submitted book chapter.

4. Others (Project Reports - selected)

Karanci, A. N., **Doğulu, C.**, Yılmaz, Ş., & İkizer, G. (2015). *Short Report on Workshop 2, Case Study Earthquakes in Turkey* [Deliverable 7.2]. Ankara, Turkey: Middle East Technical University for the TACTIC Project.

Karanci, A. N., **Doğulu, C.**, Yılmaz, Ş., & Bayraktar, H. (2015). *Short Report on Workshop 1, Case Study Earthquakes in Turkey* [Deliverable 7.1]. Ankara, Turkey: Middle East Technical University for the TACTIC Project.

Karanci, A. N., Ikizer, G., & **Doğulu, C.** (2015). *emBRACE Work Package 4 Report: Archetypes of personal attributes and cognition for psycho-social resilience from narratives* [Deliverable 4.1]. Ankara, Turkey: Middle East Technical University for the emBRACE Project.

Karanci, A. N., **Doğulu, C.**, Ikizer, G., & Ozceylan-Aubrecht, D. (2014). *emBRACE Work Package 5 Case Study Report: Earthquakes in Turkey* [Deliverable 5.3]. Ankara, Turkey: Middle East Technical University for the emBRACE Project.

Begg, C., Müller, A., Kuhlicke, C., Hagen, K., Shreve, C., **Doğulu, C.**, & Walczykiewicz, T. (2014). TACTIC Krakow Workshop Minutes. Leipzig, Germany: Helmholtz Centre for Environmental Research UFZ, Trilateral Research and Consulting LLP, Northumbria University, Middle East Technical University, and Institute of Meteorology and Water Management IMGW-PIB for the TACTIC Project.

Karanci, A. N., Ikizer, G., **Doğulu, C.**, Jülich, S., & Kruse, S. (2013). *emBRACE Work Package 6 Report: Participatory assessment workshops in the case study areas: Documentation of the second stakeholder workshop.* Ankara, Turkey: Middle East Technical University and Swiss Federal Research Institute WSL for the emBRACE Project.

5. Theses

Doğulu, C. (in progress). *A terror management perspective to system justification in disaster context: The case of earthquakes in Turkey* (Unpublished doctoral dissertation). Middle East Technical University, Ankara, Turkey.

Doğulu, C. (2012). *System justification and terror management: Mortality salience as a moderator of system-justifying tendencies in gender context* (Unpublished master's thesis). Middle East Technical University, Ankara, Turkey.

PRESENTATIONS

1. Papers presented in International Conferences

Doğulu, C. (2015, July*). A Test of Deviance Regulation Theory in intergroup context: Intention to protest against gender inequality.* Paper presented at the 14th European Congress of Psychology, Milan, Italy.

Doğulu, C., Dalgar, I., & Solmazer, G. (2015, July*). Exploring national differences in civic engagement: A study of cultural dimensions.* Paper presented at the 14th European Congress of Psychology on July 7–10, 2015, Milan, Italy.

Ikizer, G., Karanci, A. N., & **Doğulu, C.** (2015, July*). What affects psychological resilience in earthquake survivors from Van, Turkey?* Paper presented at the 14th European Congress of Psychology, Milan, Italy.

Dogulu, N., & **Dogulu, C.** (2015, April) *Hydrology for everyone: Share your knowledge*. PICO presentation at the European Geosciences Union General

Assembly, Vienna, Austria [Geophysical Research Abstracts, Vol.17, EGU2015-2730].

Dogulu, C., Dilekler, I., & Bozo, O. (2014, July). *Adherence to medical regimen in type II diabetes patients: A Theory of Planned Behavior Perspective.* Paper presented at the 28th International Congress of Applied Psychology, Paris, France.

Ikizer, G., Karanci, A. N., & **Dogulu, C.** (2014, July). *Differential effects of objective and subjective exposure severity on PTSD symptom clusters among earthquake survivors from Turkey.* Paper presented at the 28th International Congress of Applied Psychology, Paris, France.

Ikizer, G., **Dogulu, C.**, & Karanci, A. N. (2014, July). *Psychological impacts of earthquakes and psychological resilience.* In A. N. Karanci (Chair), *Earthquakes: Psychosocial effects and risk perception.* Symposium presented at the 28th International Congress of Applied Psychology, Paris, France.

Dogulu, C., & Sakalli-Ugurlu, N. (2014, July). *System-justifying tendencies in gender context: The moderating role of gender and mortality salience.* Paper presented at the 28th International Congress of Applied Psychology, Paris, France.

Karancı, A. N., Köse, M. R., Parin, S., Özceylan, D., İkizer, D., & **Doğulu, C.** (2013, October). *Community resilience following the Van earthquakes: Preliminary findings from the emBRACE Project.* Paper presented at the 2013 International Van Earthquake Symposium, Van, Turkey.

Karancı, A. N., Köse, M. R., Parin, S., Jülich, S., İkizer, G., & **Doğulu, C.** (2013, October). *Participatory workshop on evaluation and implementation of community resilience indicators.* Workshop conducted at the 2013 International Van Earthquake Symposium, Van, Turkey.

2. Posters presented in International Conferences

Karancı, A. N., İkizer, G., & **Doğulu, C.** (2015, September). *Turkish earthquakes – Psychological resilience focus.* Poster presented at the emBRACE Project Conference, London, UK.

Ikizer, G., Karanci, A. N., & **Doğulu, C.** (2015, July*). Post-disaster adversity and psychological resilience: Does how people cope matter?* Poster presented at the 14th European Congress of Psychology, Milan, Italy.

Karanci, A. N., Ikizer, G., **Dogulu, C.**, & Ar, Y. (2013, July). *How do Turkish earthquake survivors perceive psychological impacts and psychological resilience?* Poster presented at the 13th European Congress of Psychology, Stockholm, Sweden.

3. Papers presented in National Conferences

Doğulu, C., & Sakallı Uğurlu, N. (2016, November). *Disaster risk management in Turkey as a system: A system justification perspective* [Bir sistem olarak

Türkiye'de afet risk yönetimi: Sistemi meşrulaştırma bakış açısı]. Paper presented at the 1st Social Psychology Congress, Ankara, Turkey.

Akbaş, G., Ceylan, S., **Doğulu, C.**, & Sakallı Uğurlu, N. (2016, November). *Understanding honor and honor-based violence: System justification theory* [Namus ve namus temelli şiddeti anlama: Sistemi meşrulaştırma kuramı]. Paper presented at the 1st Social Psychology Congress, Ankara, Turkey.

Doğulu, C., Akbaş, G., & Ceylan, S. (2016, September). S*ocial representations about honor-based violence against women: A mixed methods study* [Namus adına kadına yönelik şiddete dair sosyal temsiller: Karma yöntemli bir çalışma]. Paper presented at the 19th National Congress of Psychology, İzmir, Turkey.

Doğulu, C., Karanci, A. N., & Ikizer, G. (2016, September). *How do survivors perceive community resilience? The case of the 2011 Van earthquakes* [Afetzedeler toplumsal dayanıklılığı nasıl algılıyor? 2011 Van depremleri örneği]. Paper presented at the 19th National Congress of Psychology, İzmir, Turkey.

Akbaş, G., Ceylan, S., & **Doğulu, C.** (2016, April). *Turkey as an honor culture and violence against women* [Bir namus kültürü olarak Türkiye ve kadına yönelik şiddet]. Panel (with B. Türkoğlu as the moderator) presented at Yıldırım Beyazıt University Psychology Congress: Deneyim Oluşturma ve Aktarımı III, Milli Kütüphane, Ankara, Turkey.

Karancı, A. N., **Doğulu, C.**, Yılmaz, Ş., & İkizer, G. (2016, March). *Preparing communities to disasters: Organisational and public self-assessment and learning platform as part of the TACTIC Project* [Toplumları afetlere hazırlamak: TACTIC Projesi kapsamında kurumsal ve toplumsal öz-değerlendirme öğrenme platformu]. Paper presented at the 18th Round Table Meeting of Disaster Management Implementation and Research Center, Middle East Technical University, Ankara, Turkey.

Doğulu, C. (2014, April). *System justification in the context of 2011 Van earthquake: A terror management perspective* [2011 Van depremi bağlamında sistemi meşrulaştırma: Dehşet yönetimi bakış açısı]. Paper presented at the 2nd Social Sciences Doctorate Students Workshop "Studies on Turkey", Graduate School of Social Sciences, Middle East Technical University, Ankara, Turkey.

Doğulu, C., Karancı, A. N., İkizer, G., & Parin, S. (2014, January). *Indicators of community resilience to disasters* [Afetlere karşı toplumsal dayanıklılık göstergeleri]. Paper presented at the 16th Round Table Meeting of Disaster Management Implementation and Research Center, Middle East Technical University, Ankara, Turkey.

4. Posters presented in National Conferences

Doğulu, C., & Sakallı Uğurlu, N. (2016, September). *Understanding general and disaster-specific fatalism: A social representations study* [Genel ve depremler özelinde kaderciliği anlamak: Bir sosyal temsil çalışması]. Poster presented at the 19th National Congress of Psychology, İzmir, Turkey.

Ikizer, G., Karanci, A. N., & **Doğulu, C.** (2016, September). *Social support and perception of psychological resilience among survivors* [Afet yaşayanlarda sosyal destek ve psikolojik dayanıklılık algısı]. Poster presented at the 19th National Congress of Psychology, İzmir, Turkey.

Karancı, A. N., **Doğulu, C.**, İkizer, G., & Bayraktar, H. (2015, January). *Tools, methods and training for communities and society to better prepare for a crisis: TACTIC Project* [TACTIC Projesi: Toplumların bir krize karşı daha iyi hazırlanması için araçlar, yöntemler ve eğitim]. Poster presented at the 17th Round Table Meeting of Disaster Management Implementation and Research Center, Middle East Technical University, Ankara, Turkey.

Doğulu, C. (2014, April). *System justification in gender context: A study of cultural differences at the national level* [Toplumsal cinsiyet bağlamında sistemi meşrulaştırma: Kültürel farklılıkların ülkeler seviyesinde incelenmesi]. Poster presented at the 18th National Congress of Psychology, Bursa, Turkey.

Karancı, A. N., İkizer, G., & **Doğulu, C.** (2013, January). *Community resilience to disasters: The emBRACE Project* [Afetlere karşı toplumsal dayanıklılık: emBRACE Projesi]. Poster presented at the 15th Round Table Meeting of Disaster Management Implementation and Research Center, Middle East Technical University, Ankara, Turkey.

APPENDIX I. Tez Fotokopisi İzin Formu

ENSTİTÜ

Fen Bilimleri Enstitüsü	
Sosyal Bilimler Enstitüsü	X
Uygulamalı Matematik Enstitüsü	
Enformatik Enstitüsü	
Deniz Bilimleri Enstitüsü	

YAZARIN

Soyadı : DOĞULU
Adı : CANAY
Bölümü : PSİKOLOJİ

TEZİN ADI (İngilizce) : A TERROR MANAGEMENT PERSPECTIVE TO SYSTEM JUSTIFICATION IN DISASTER CONTEXT: THE CASE OF EARTHQUAKES IN TURKEY

TEZİN TÜRÜ : Yüksek Lisans [ ] Doktora [X]

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. [X]

TEZİN KÜTÜPHANEYE TESLİM TARİHİ: