

MEDIATING ROLE OF EMOTION REGULATION IN AGE AND LIFE  
SATISFACTION/AFFECT RELATIONS: SOCIOEMOTIONAL SELECTIVITY  
THEORY PERSPECTIVE

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SELECTIVITY THEORY PERSPECTIVE**

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## **ABSTRACT**

### **MEDIATING ROLE OF EMOTION REGULATION IN AGE AND LIFE SATISFACTION/AFFECT RELATIONS: SOCIOEMOTIONAL SELECTIVITY THEORY PERSPECTIVE**

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The main purpose of the present dissertation was to investigate age-related differences in emotion regulation and subjective well-being by using Socioemotional Selectivity Theory as a theoretical framework. Moreover, the mediating role of cognitive emotion regulation strategies in the relation of age with affect and life satisfaction was aimed to be understood. Data were collected from 153 younger adults aged between 25 and 40 and 151 older adults aged between 65 and 80. The results of the study demonstrated that older participants had lower negative affect and higher life satisfaction than younger ones. Older participants had also lower scores on self-blame subscale and higher scores on positive refocusing subscale than younger participants. The findings of multiple mediation analyses revealed that of the cognitive emotion regulation strategies only positive refocusing mediated the relation between age groups and negative affect. Older participants had higher positive refocusing scores which was subsequently associated with lower negative affect. Furthermore, catastrophizing was positively associated with negative affect and refocus on planning was positively associated with positive affect. Results were discussed in the light of the literature and

the strengths and limitations of the present study, clinical implications, directions for future studies and personal experiences related to this study were also presented.

**Keywords:** Emotion Regulation, Positive Affect, Negative Affect, Life Satisfaction, Aging

## ÖZ

### YAŞ VE YAŞAM DOYUMU/DUYGU ARASINDAKİ İLİŞKİLERDE DUYGU DÜZENLEMESİNİN ARACI ROLÜ: SOSYO-DUYGUSAL SEÇİCİLİK TEORİSİ PERSPEKTİFİ

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Bu doktora tezinin temel amacı, Sosyo-Duygusal Seçicilik Teorisi çerçevesinde duygu düzenlemesi ve öznel iyi oluş halindeki yaşa bağlı farklılıkları incelemektir. Ayrıca, bilişsel duygu düzenleme stratejilerinin, yaş ile duygu durumu ve yaşam doyumu arasındaki ilişkilerdeki aracı rolünün anlaşılması amaçlanmıştır. Çalışmanın verileri 25 ve 40 yaşları arasındaki 153 genç yetişkin ve 65 ve 80 yaşları arasındaki 151 yaşlı yetişkinden toplanmıştır. Çalışmanın sonuçları yaşlı katılımcıların genç katılımcılara göre daha düşük negatif duygu durumuna ve daha yüksek yaşam doyumuna sahip olduğunu göstermiştir. Yaşlı katılımcılar ayrıca genç katılımcılara göre kendini suçlama alt ölçeğinde daha düşük ve pozitif yeniden odaklanma alt ölçeğinde daha yüksek puanlara sahiptirler. Çoklu aracı değişken analizleri sadece bilişsel duygu düzenleme stratejisi olan pozitif yeniden odaklanmanın yaş grubu ve negatif duygu durumu arasındaki ilişkiye aracılık ettiğini ortaya çıkarmıştır. Yaşlı katılımcılar daha yüksek pozitif yeniden odaklanma puanına sahiptir ve bu da sonrasında daha düşük negatif duygu durumu ile ilişkilidir. Ayrıca, yüksek felaketleştirme negatif duygu durumu ile pozitif yönde ve plana yeniden odaklanma pozitif duygu durumu ile negatif

yönde ilişkilidir. Sonuçlar alanyazın ışığında tartışılmıştır ve çalışmanın güçlü yönleri ve sınırlılıkları, klinik uygulama alanları, gelecekteki araştırmalar için öneriler ve çalışma ile ilgili kişisel deneyimler sunulmuştur.

**Anahtar Kelimeler:** Duygu Düzenleme, Pozitif Duygu Durum, Negatif Duygu Durum, Yaşam Doyumu, Yaşlılık

*To my family*

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## CHAPTER I

### INTRODUCTION

Decline in fertility rates and increase in life expectancy lead to growing of the proportion of older people throughout the world (United Nations [UN], 2017). For the first time in world history, the number of people aged 65 years and above was revealed to surpass the number of children aged under five in 2018. People aged 65 years and over comprised approximately 9% of the global population in 2019, which is expected to reach 12% in 2030 and 16% in 2050 (UN, 2019). In Turkey, the proportion of older people in total population is estimated as 8.8% in 2018, which is projected to be 10.2% in 2023 and 12.9% in 2030 (Turkish Statistical Institute [TÜİK], 2018). Thus, it can be suggested that this growing number of older people all around the world also increases the need for studies on aging and the old age. The general focus of the present study was to examine emotions in old age and to compare young and older adults' experiences and regulation of emotions. Firstly, the overview of the definition and functions of emotions will be presented in the following sections. After that, the existing literature about age-related differences in emotional experiences, the theoretical explanations underlying them, and the factors associated with emotion regulation will be reviewed.

#### 1.1. Emotions

Emotions can be explained as biologically based and episodic patterns of physiology, perception, action, and experience which arise from certain social and physical challenges (Keltner & Gross, 1999). They have a crucial role in a large variety of human processes, such as mental health, memory, illness, cognition and intrapsychic dynamics (Levenson, Carstensen, Friesen, & Ekman, 1991), and they feature in the

establishment and regulation of interpersonal relationships (Ekman, 1992). They serve the functions of evaluating the stimulus, monitoring (Moors, 2010), and motivating adaptive responding to situations (Salmela, 2014). The functions, regulation, and activation of emotions have recently received considerable attention in many different areas of psychology (Izard, 2010).

In the literature, the beneficial effects of positive emotions in the face of stress (Ong, Bergeman, Bisconti, & Wallace, 2006), in aftermath of crises (Fredrickson, Tugade, Waugh, & Larkin, 2003), and during conjugal bereavement process (Ong, Bergeman, & Bisconti, 2004) were demonstrated. Positive emotions were found to predict improvement in emotional well-being (Fredrickson & Joiner, 2002). They were related to increase in life satisfaction (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009) and experience of meaning in life (King, Hicks, Krull, & Del Gaiso, 2006). Furthermore, shared experiences of positive emotions have an important role in forming friendships, family bonds, and alliances (Fredrickson, 1998). On the other hand, negative emotions also play an important role in motivating individuals to avoid misfortune by means of escaping, attacking or preventing the damage (Nesse & Ellsworth, 2009).

Many literature findings also provided evidence for the protective role of positive emotions in physical health (Cohen, Doyle, Turner, Alper, & Skoner, 2003; Stellar et al., 2015; Richman et al., 2005; Davidson, Mostofsky, & Whang, 2010; Middleton & Byrd, 1996; Moskowitz, EpeI, & Acree, 2008; Cohen, Alper, Doyle, Treanor, & Turner, 2006; Sin, Moskowitz, & Whooley, 2015). For example, the results of a 2-year longitudinal study conducted by Ostir, Markides, Black, and Goodwin (2000) indicated that higher positive affect among older people was related to faster walking speeds and lower incidence of activities of daily living (ADL) disability. Ostir, Ottenbacher, and Markides (2004) also indicated that by increasing the positive affect among older people, the risk of frailty declined. Furthermore, the significant association between positive emotion and lower blood-pressure was revealed, which suggested that positive emotions can protect against cardiovascular diseases (Ostir, Berges, Markides, & Ottenbacher, 2006). On the other hand, Chipperfield, Perry, and

Wiener (2003) suggested that the effects of negative emotions on older individuals' health were more prominent compared to the effects of positive emotions. There were significant associations between a variety of negative emotions and poor health. For example, although the chronic health conditions were found to be related to many of discrete negative emotions, such as fear, sadness, regret, and frustration; the significant association was not revealed between chronic health conditions and the frequency of positive emotions except for relief (Chipperfield et al., 2003). Some literature findings also supported the significant association of negative emotional states with poor health (e.g., Todaro et al., 2003; Kuiper & Harris, 2009) and harmful health habits (Anton & Miller, 2005). Thus, the significant link between emotions and individuals' health have been well-documented in the literature.

To conclude, both positive and negative emotions have an important role in many aspects of people's lives, such as health and relationships. A variety of affective states are experienced by people throughout life. However, the frequency and intensity of them may change across the lifespan (Grühn, Kotter-Grühn, & Röcke, 2010). In the following section, the age-related differences in emotional experiences will be discussed.

### **1.1.1. Age-related Differences in Emotional Experiences**

Examining emotions in old age offers an opportunity to observe the last stages of the life-long emotional development. The literature findings provided persuasive evidence indicating that emotions continue to have a fundamental role in old age (Levenson et al., 1991). Older individuals experience the entire array of emotions (Carstensen et al., 2000). According to findings of a study conducted by Charles (2005), greater emotion heterogeneity, i.e., the experience of simultaneous emotions, was reported by older people compared to younger ones. As people age, greater emotional control was expressed (Gross, Carstensen, Skorpen, Tsai, & Hsu, 1997; Carstensen, Pasupathi, Mayr, & Nesselroade, 2000; Lawton, Kleban, Rajagopal, & Dean, 1992) and there was a reduction in the lability of emotional experiences (Carstensen et al., 2011). Contrary to these findings, a limited number of studies demonstrated a deterioration in some

emotion domains with age. For example, individuals' ability to recognize some emotions declined at older ages (Khawar, Malik, Maqsood, Yasmin, & Habib, 2013; Mill, Allik, Realo, & Valk, 2009). In the study by Ma, Li, Niu, Yu, and Yang (2013), older people aged between 61 and 88 years were found to be slower in recognizing sad-face compared to younger people aged between 18 and 28 years.

Although old age is frequently seen as full of losses and sadness (Carstensen et al., 2011), many researchers have suggested that, with age, overall emotional well-being may improve or remain unchanged (e.g., Carstensen et al., 2011; Mroczek & Kolarz, 1998). Literature findings indicated that aging was related to decrease in the experience of negative emotions (Gross et al., 1997; Löckenhoff, Costa, & Lane, 2008). For example, the findings of a study conducted with people aged between 72 and 99 years demonstrated that positive discrete emotions, such as happiness, gratitude, and hope, were more likely to be experienced than negative discrete emotions, such as anger, frustration, and sadness (Chipperfield et al., 2003). In old age, there is also an increase in the preference for positive emotional material (Carstensen & Mikels, 2005), which enhances emotional well-being of older individuals. Neiss, Leigland, Carlson, and Janowsky (2009) examined the physiological reactions to emotional pictures and the researchers revealed that positive pictures were rated as more arousing by older people aged between 65 and 85 years compared to neutral or negative ones.

The age related differences in emotional experiences have been addressed by many researchers. For example, Birditt and Fingerhman (2003) investigated the emotional reactions to interpersonal problems among people aged between 13 and 99 years. More intense aversive responses were reported by younger people compared to older ones. Similarly, Charles and Carstensen (2008) indicated that younger adults aged between 18 and 40 years expressed more negative emotionality and reported higher levels of anger in response to aversive situations than older adults aged between 63 and 86 years. These literature findings suggested that younger people may give more intense emotional reactions to negative situations compared to older ones. Parallel to this line of research, the amygdala responses of older people to negative information were

found to be selectively diminished, which may indicate one of the neural mechanisms underlying age-related changes in emotion processing (Mather et al., 2004). This diminished reactivity to negative stimuli in old age was supported by other studies, too (Levenson, Carstensen, & Gottman, 1994; Kisley, Wood, & Burrows, 2007).

To summarize, emotions maintain its importance in later life, and with age, there is an improvement in some emotion domains. In the light of the literature findings mentioned above, it can be stated that older and younger individuals differ from each other in terms of emotional experiences and older individuals are more likely to focus on positive emotions. The following section will present some theoretical explanations related to these age-related differences in emotional experiences.

## **1.2. Theoretical Explanations for Age Differences in Emotional Experiences**

The psychological mechanisms underlying the age differences in emotional experiences were suggested in Carstensen's Socioemotional Selectivity Theory (SST) (Neiss et al., 2009). This theory explains that social behavior is motivated by knowledge and emotion related goals throughout life (Carstensen, Isaacowitz, & Charles, 1999). The fluctuation is observed in the salience of specific goals according to their place in the life cycle. Over the life course, emotion regulation comes into prominence, whereas information gathering becomes to decrease (Carstensen, 1995).

SST asserts that individuals' priorities, selections of goals and preferences change with their perception of time (Hicks, Trent, Davis, & King, 2012). They try to prepare themselves in the face of long and unknown future when they perceive time as expensive (Carstensen, Fung, & Charles, 2003). They are motivated by future oriented-goals (Reed & Carstensen, 2012) and allocate considerable resources for gathering information, expanding horizons, and acquiring new skills (Carstensen et al., 2003; Sims, Hogan, & Carstensen, 2015). Thus, younger people are more likely to pursue goals which are helpful for successful adaptation in the future (Carstensen et al., 2000). However, with age, motivational changes occur and the mood-enhancement goals are activated. Immediate needs, such as emotional experiences, become more

important than the long-term gains when people perceive the future as limited (Carstensen, 1995). Present-oriented goals of meaning and emotional satisfaction come into prominence in restricted time horizons (Reed & Carstensen, 2012). Carstensen et al. (1999) suggested that when individuals relieve of their concerns about the future, the experiences occurring in the moment come to the forefront. Thus, older people turn their attention to the present and pursue goals which are satisfied by emotional states (Carstensen et al., 2003). In line with this information, the study conducted by Penningroth and Scott (2012) revealed that, while older adults had more goals related to the present, emotions and social selection, younger adults had more goals focused on increasing knowledge and gaining novel experiences. The increase in the relative salience of emotions with age was supported by Carstensen and Turk-Charles's (1994) study indicating that older people processed the emotional material more deeply compared to nonemotional material. Furthermore, SST states that selective processes are important in this improvement of affect trajectories (Scheibe & Carstensen, 2010). Developmental psychologists also explain such processes as selection (Sims et al., 2015).

This theory predicts that, in old age, social choices are made according to the potential for emotional rewards (Lang & Carstensen, 1994). There is an increase in attention and preference for rich interaction as a result of limited future. People try to increase the potential for positive affect by limiting their social partners in old age (Carstensen, 1995). They attach particular importance to the experience of meaningful social relationships and discard their unpleasant and superficial social ties, which enhances social satisfaction (Carstensen et al., 2003; Carstensen et al., 1999; Löckenhoff & Carstensen, 2004). Thus, older individuals' goals shape their social environment and relationships (Sims et al., 2015), which help them to avoid negative emotional experiences and optimize positive ones (Carstensen et al., 1999). They are more likely to choose social partners who are familiar to them (Carstensen et al., 1999), and they have emotionally close and tighter social networks (Carstensen et al., 2003). The maintenance of close emotional relationships in later life was indicated by Lang and Carstensen (1994) as an example for this assumption. Furthermore, some studies demonstrated that older individuals experienced fewer tensions in their interpersonal

relations (Birditt, Fingerman, & Almeida, 2005) and they reported lower number of daily stressors compared to younger ones (Stawski, Sliwinski, Almeida, & Smyth, 2008). In the study conducted by Lansford, Sherman, and Antonucci (1998), older participants were also found to be more satisfied with their social networks compared to younger ones. Thus, to maximize their emotional payoffs, aging individuals selectively construct their cognitive and social world (Carstensen et al., 2003).

Carstensen's SST (1999) and Erikson's (1963) psychosocial development theory share a common interest for the perception of time in old age, although they considered aging from different perspectives (Cheng, Chan, & Phillips, 2004). These developmental theories put emphasis on individuals' management of their goals in different life phases in order to fulfill the necessity of developmental tasks (Chu, Grünh, & Holland, 2018). Thus, both theories suggested that a change in individuals' needs and goals is observed according to age and developmental stage (Cheng et al., 2004).

In this regard, Carstensen and Mikels (2005) suggested the term of "positivity effect", which refers to the age-related shifts in overall ratio of positive to negative material which is remembered or attended to. In other words, in middle and old ages, positive material becomes to be increasingly favored (Scheibe & Carstensen, 2010; Carstensen & Mikels, 2005). In the study conducted by Livingstone and Isaacowitz (2015), the influence of age and motivation in situation selection and modification was investigated by using SST as a theoretical basis. Older participants were found to favor positive material over negative ones and they skipped greater number of negative material compared to younger participants (Livingstone & Isaacowitz, 2015). Furthermore, Barber, Opitz, Martins, Sakaki, and Mather (2016) reported that thinking about a limited time horizon was related to enhanced positivity in participants' recall. The findings of another study examining age-related gaze preferences also indicated that older adults fixated less at the most negative areas of the images compared to young adults (Isaacowitz & Choi, 2011). Momentarily experiencing positive emotions are important in explaining some of the known positivity effects (Ong, Mroczek, & Riffin, 2011). Related to this, the broaden and build theory suggests that people's momentary thought-action repertoires enlarge with

the help of some positive emotions, and people's emotional well-being can increase over time as a result of this broadening of mindsets (Fredrickson, 2004).

Although older individuals can obtain important advantages for their psychosocial and physical health by pursuing present-oriented goals, prioritizing emotional well-being may not be the optimal choice for some life problems (Löckenhoff & Carstensen, 2004). Related to this, the harmful consequences of the motivational changes in old age have also been addressed by some researchers in the literature. Scheibe and Carstensen (2010) stated that older people's learning and decision making abilities may diminish because of focusing more on positive than negative information. Furthermore, age-related decreases in information-gathering goals may affect health related information seeking and lack of information may lead to problems (Löckenhoff & Carstensen, 2004). For example, it was revealed that a decrease was observed in the likelihood of searching out a second opinion about surgery and consulting three or more doctors with age (Petrisek, Laliberte, Allen, & Mor, 1997). On the other hand, younger people were found to be more likely to seek detailed information about their illness and treatment compared to older people (Cassileth, Zupkis, Sutton-Smith, & March, 1980).

Although chronological age is inherently linked with the future time perspective, age cannot be considered as the only factor that affects individuals' time perspective (Löckenhoff & Carstensen, 2004). For example, besides examining SST for natural aging process, Sullivan-Singh, Stanton, and Low (2015) aimed to investigate a limited time perspective because of a medical diagnosis. The findings of this study indicated that greater preference for the limited time perspective goals was observed among women with metastatic breast cancer in comparison to women without a cancer diagnosis. This suggested that life goals can be selected according to limited time perspective because of a medical diagnosis or the span of a lifetime (Sullivan-Singh et al., 2015). The findings of another study also indicated an association between closeness to death because of AIDS symptomatology and an increase in importance of emotional dimensions of social contacts (Carstensen & Fredrickson, 1998). Furthermore, a common motivational mechanism underlying changes in time

perspective can be observed in the effects of various life events, such as job relocation or graduation. According to the SST, time can be perceived as limited by individuals experiencing these life events and emotional goals can be prioritized under these contexts (Carstensen et al., 2003).

A limited time perspective can also be observed in examining the use of the coping strategies. Emotional meaning comes to the forefront for people experiencing the time as more limited. Hence, when handling stress, there may be an increase in the use of strategies that focus on emotions. (Carstensen et al., 2003). For example, although emotion focused coping was revealed to be employed more by cancer patients who appraised their illness as less controllable, problem-focused coping strategies were utilized more by patients with non-terminal diseases (Kausar & Akram, 1998).

To conclude, it seems that individuals' time perspective, which can be affected by age, medical illness, or some life events, plays a crucial role in various processes such as information gathering, health-related decision making, management of goals, and coping. It is also closely related to individuals' emotional experiences. As people age, they attach increasing value on emotionally meaningful aspects of their life (Carstensen & Mikels, 2005). Löckenhoff and Carstensen (2004) suggested that prioritizing emotional goals in old age can help to facilitate effective regulation of emotions. Thus, the concept of emotion regulation, which may have a role in the relation between age and emotional experiences will be examined in the following section.

### **1.3. Emotion Regulation**

Emotion regulation was defined as both intrinsic and extrinsic processes which observe, modify and evaluate the emotional reactions (Thompson, 1994). It may involve conscious or unconscious processes (Gross, 1998), which encompass the enhancement, maintenance or inhibition of emotional arousal. (Thompson, 1994). For example, although projection, memory distortions, selective attention processes and denial are among the unconscious cognitive processes, self-blame and catastrophizing

are the conscious cognitive processes to manage the emotions (Garnefski, Kraaij, & Spinhoven, 2001). Emotion regulation plays a crucial role in examining the levels of experienced and expressed emotion (Phillips, Henry, Hosie, & Milne, 2008). The growth of emotion regulation abilities is observed as a crucial part of emotional development. Individuals' emotional experiences may become to be used on purpose and self-controlled with the help of increase in self-regulation of emotions (Thompson, 1991).

Cognitive emotion regulation can be explained as the use of cognitive processes or cognitions in the management of emotionally arousing information (Garnefski et al., 2001; Thompson, 1991). Several cognitive emotion regulation strategies, such as acceptance and rumination, were distinguished (Garnefski & Kraaij, 2006; Garnefski et al., 2001). Rumination was defined as repetitive thinking about thoughts and emotions related to negative situations (Garnefski et al., 2001). Individuals using rumination as an emotion regulation strategy think about their problems time and again. It is associated with depression and leads to impairment in problem solving abilities, behaviors and social relationships (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). Catastrophizing is related to focusing on the frightful aspects of events or experiences. Self-blame was defined as individuals' thoughts about blaming themselves for their experiences (Garnefski et al., 2001). Individuals using the strategies of catastrophizing, rumination, or self-blame might be more likely to experience emotional problems compared to people using other emotion regulatory strategies (Garnefski & Kraaij, 2006). For example, these three strategies were positively associated with stress and anxiety (Martin & Dahlen, 2005). Another emotion regulatory strategy of acceptance can be explained as individuals' thoughts related to the acknowledgment of their experiences (Garnefski et al., 2001). Catastrophizing and acceptance were found to predict social functioning problems (Mihalca & Tarnavska, 2013). In the study by Martin and Dahlen (2005), although acceptance was revealed to be associated with stress and depression, it was also found to be positively related to adaptive anger control. These findings suggest that acceptance may have an adaptive role only in some circumstances (Martin & Dahlen, 2005). The strategy of blaming others was also explained as individuals' thoughts

related to laying the blame on someone for their experiences (Garnefski et al., 2001). Some studies demonstrated that other-blame was positively related to psychological distress (Garnefski, Baan, & Kraaij, 2005) and anxiety (Garnefski & Kraaij, 2018).

Positive reappraisal was explained as an adaptive process in which individuals assign a positive and beneficial meaning to their experience in the way of personal growth (Garnefski et al., 2001; Garland, Gaylord, & Fredrickson, 2011). The findings of some studies have demonstrated that positive reappraisal might be a healthy strategy which facilitated individuals' health and well-being (Shiota & Levenson, 2012; Shiota, 2006; Moskowitz, Hult, Bussolari, & Acree, 2009). For example, Kraaij, Pruymboom and Garnefski (2002) revealed in their study that positive reappraisal had a significant negative association with depressive symptoms. The other cognitive emotion regulation strategy of refocus on planning was defined as individuals' thoughts about how to deal with negative situations (Garnefski et al., 2001). Balzarotti, Biassoni, Villani, Prunas, and Velotti (2014) revealed in their study that there was a significant positive association of refocus on planning and positive reappraisal with both psychological and subjective well-being. Positive refocusing was defined as concentrating on thoughts related to pleasant and cheerful issues rather than thoughts related to the actual experience (Garnefski et al., 2001). The findings of a study conducted by Extremera and Ray (2014) indicated that positive refocusing was an adaptive strategy which was positively related to physical and mental health. The inverse relationship between positive refocusing and depression was also revealed in Kral, Yetim, Özge and Aydın's (2017) study. Moreover, putting into perspective was defined as de-emphasizing the severity of events (Garnefski et al., 2001). Martin and Dahlen (2005) reported in their study that putting into perspective had a significant negative relationship with depression and anxiety. According to the abovementioned findings, it can be suggested that rumination, catastrophizing, self-blame, and blaming others are more likely to be considered as maladaptive emotion regulation strategies, whereas positive reappraisal, refocus on planning, positive refocusing and putting into perspective are more likely to be considered as adaptive strategies. Moreover, acceptance subscale, which can be considered as an adaptive in some situations, needs further exploration.

A variety of emotion regulatory strategies are utilized by individuals (Yeung, Wong, & Lok, 2011). Urry and Gross (2010) explained that higher well-being in old age may be explained by older individuals' emotion regulation processes which are selected and optimized in order to compensate for resource losses and benefit from resource gains. Some studies in the literature, which were conducted with observational, experience or self-report sampling methods, supported the theoretical assumption indicating that emotion regulation improves with age (Carstensen et al., 1999). The findings of a recent study by Schirda, Valentine, Aldao, and Prakash (2016) revealed that older people aged between 60 and 80 years implemented maladaptive emotion regulation strategies less frequently compared to younger people aged between 18 and 30 years. The association of age with more adaptive emotion regulation pattern was also supported by Hay and Diehl's (2011) study. The results of another study indicated that younger participants aged between 17 and 37 years had more difficulty in regulating emotions and controlling impulsive behaviors compared to older participants aged between 61 and 81 years (Orgeta, 2009).

The age related differences in discrete emotion regulation strategies have also been examined by many researchers. In Hofer, Burkhard, and Allemand's (2015) study, it was found that suppression, an emotion regulation strategy, was used more by older adults aged between 62 and 87 years compared to younger adults aged between 18 and 28 years. However, a significant difference was not revealed in the use of rumination and distraction between the two groups. The greater use of suppression by older adults was also confirmed in the study by Brummer, Stopa, and Bucks (2013). Schirda et al. (2016) reported that acceptance was utilized to a greater extent by older people than younger ones. Furthermore, Shiota and Levenson (2009) revealed that as people age, there was an increase in the ability of implementing positive reappraisal. The researchers suggested that in terms of engaging in positives sides of the negative events, older people offered great performance. Similarly, the findings of a study by Lohani and Isaacowitz (2014) indicated that older people were more successful in using positive reappraisal strategy when regulating their responses to negative situations. In the study conducted by Blanchard-Fields and Coats (2008), older people aged between 60 and 84 years were also found to implement more passive and less

proactive emotion-regulation strategies in response to interpersonal problems compared to younger people aged between 19 and 60 years. Contradictory to this finding, Blanchard-Fields, Stein, and Watson (2004) did not reveal a difference between young and older adults' preference for passive emotion regulation strategies in highly emotional situations.

A variety of factors that are assumed to be associated with emotion regulation strategies have also been addressed in the literature. For example, some researchers emphasized the link between different cognitive processes and emotional regulation (Schmeichel, Volokhov, & Demaree, 2008; Richards & Gross, 2000). Scheibe and Carstensen (2010) suggested that older people with more cognitive resources may perform better in selectively attending to the positive stimuli. The findings of many studies also supported the significant association between discrete emotion regulation strategies and depression (Joormann & Gotlib, 2010; Garnefski & Kraaij, 2006; Garnefski, Teerds, Kraaij, Legerstee, & van den Kommer, 2004; Flynn, Hollenstein, & Mackey, 2010). Furthermore, the significant association of emotion regulation with some indicators of subjective well-being, such as life satisfaction (Schutte, Manes, & Malouff, 2009; McRae, Jacobs, Ray, John, & Gross, 2012) and positive and negative affect (Balzarotti et al., 2014; McRae et al., 2012), was also demonstrated in the limited number of studies. In the following section, the variables related to emotion regulation will be addressed.

### **1.3.1. The Association of Emotion Regulation with Life Satisfaction**

The concept of life satisfaction is one of the crucial aspects of aging well (Choudhary, 2015) and also among the important components of subjective well-being (SWB) (Vitterso, Biswas-Diener, & Diener, 2005). It is a judgmental process (Diener et al., 1985), which refers to global evaluations of individuals' lives (Diener, 1984). Both stable factors, such as general evaluations which are unlikely to change over time, and situational factors, such as individuals' mood, are important in this judgmental process (Vazquez, Duque, & Hervas, 2013). Life satisfaction receives a great deal of attention in medical and psychosocial studies (Chen & Crewe, 2009).

The literature findings demonstrated a significant association of life satisfaction with several factors. According to results of studies, in which the ages of participants approximately ranged between 60 and 90 years, life satisfaction was positively related to educational level (Melendez, Tomas, Oliver, & Navarro, 2008; Seligowski et al., 2012), financial satisfaction (Gautam, Saito, & Kai, 2008), religiosity (Park, Roh, & Yeo, 2011), instrumental support (Gautam et al., 2008), physical and leisure-time activities (Inal, Subasi, Ay, & Hayran, 2007), accessibility of health services (Li et al., 2015), physical health (Melendez et al., 2008; Seligowski et al., 2012), and family support (Kim & Sok, 2012). It was also found to be negatively associated with age (Melendez et al., 2008), functional disability (Tak & Laffrey, 2003), exposure to lifetime trauma (Krause, 2004), memory problems (Pinto & Neri, 2013), depressive symptoms (Li et al., 2015), and negative affect (Siedlecki, Tucker-Drob, Oishi, & Salthouse, 2008) in old age. The findings of studies conducted with younger people also indicated a significant positive association of life satisfaction with physical exercise (Grant, Wardle, & Steptoe, 2009), fluid ability (Siedlecki et al., 2008), social support (Fuhrer, Rintala, Hart, Clearman, & Young, 1992), general self-efficacy (Azizli, Atkinson, Baughman, & Giammarco, 2015), job satisfaction (Adams, King, & King, 1996), and happiness (Singh & Jha, 2008). Some literature findings also demonstrated a negative association of life satisfaction with depression (Zhang, Zhao, Lester, & Zhou, 2014; Koivumaa-Honkanen et al., 1996), suicidal ideation (Zhang et al., 2014), and neuroticism (Extremera & Fernandez-Berrocal, 2005).

Although the literature has provided plentiful information about the correlates of life satisfaction among young and older adults, only limited number of studies have specifically addressed its relation with emotion regulation strategies. The findings of a study carried out by Saxena, Dubey, and Pandey (2011) indicated a negative relation between difficulties in emotion regulation and life satisfaction among people aged between 16 and 38 years. Another study done by Haga, Kraft, and Corby (2009) revealed a positive association between cognitive reappraisal and life satisfaction. Furthermore, Schutte et al. (2009) conducted a study with people aged between 18 and 78 years and found a significant association of antecedent-focused emotion regulation with greater life satisfaction.

To conclude, it seems that life satisfaction is related to various physical, social, psychological, and cognitive factors among both young and older adults. There is, however, a need for further investigation of its association with emotion regulation. The following section will discuss the association of emotion regulation with positive and negative affect, which are other components of subjective well-being (Diener, Suh, & Oishi, 1997).

### **1.3.2. The Association of Emotion Regulation with Positive and Negative Affect**

Positive and negative affect were explained as the most general dimensions representing individuals' affective experiences (Terracciano, McCrae, & Costa, 2003). Individuals, who are high on positive affect, are more likely to be confident, energetic, enthusiastic, concentrated, engaged, optimist, and excited. On the other hand, individuals, who are low on positive affect, are more likely to be sad and lethargic (Watson, Clark, & Tellegen, 1988; Berry & Hansen, 1996; Lyubomirsky, King, & Diener, 2005). Furthermore, high negative affect is associated with a state of fear, guilt, nervousness, anger, and disgust, whereas low negative affect is related to a state of serenity and calmness (Watson et al., 1988).

In the literature, several factors that were related to positive and negative affect have been examined in detail. Positive affect was found to be positively associated with functional health (Kunzmann, 2008), social support (Dulin & Hill, 2003), social engagement (Watson, 1988; Kunzmann, 2008), forgiveness (Green, Decourville, & Sadava, 2012), and altruism (Dulin & Hill, 2003). It was also found to be negatively associated with neuroticism (Gutierrez, Jimenez, Hernandez, & Puente, 2005), anxiety (Spindler, Denollet, Kruse, & Pedersen, 2009), depressive symptoms (Hu & Gruber, 2008), and avoidance coping (Ben-Zur, 2009). Furthermore, negative affect was revealed to be positively related to neuroticism (Gutierrez et al., 2005), problems in cognitive functioning (Payne & Schnapp, 2014), and depression (Spindler et al., 2009). It was also revealed to be negatively related to age (Mroczek & Almeida, 2004), social functioning (Hirsch, Floyd, & Duberstein, 2012), and problem-focused coping (Ben-Zur, 2009).

Although the literature has provided profound information about the association of affect with various factors, the relation between emotion regulation and positive and negative affect have been addressed only in a few studies. Some studies demonstrated a negative association between cognitive reappraisal and negative affect (Gillanders, Wild, Deighan, & Gillanders, 2008; Egloff, Schmukle, Burns, & Schwerdtfeger, 2006). Balzarotti et al. (2014) reported that there was a strong association of positive affect with refocus on planning and positive reappraisal. Difficulties in emotion regulation was also positively associated with negative affect and negatively associated with positive affect (Saxena et al., 2011). Moreover, the emotion regulation strategy of distraction was found to predict individuals' positive affect (Quoidbach, Berry, Hansenne, & Mikolajczak, 2010). The results of another study conducted by Bradley et al. (2011) also indicated a positive association between emotion dysregulation and negative affect. Despite some evidence supporting the significant relation of affect with emotion regulation, there is a need for better understanding of this topic. Hence, the association of positive and negative affect with emotion regulation will be addressed within the scope of the present study, the aims and hypotheses of which will be given in the next section.

#### **1.4. The Present Study**

One of the general purposes of the present study was to examine the differences in the use of cognitive emotion regulation strategies among younger adults aged between 25 and 40 and older adults aged between 65 and 80. Although the literature provided considerable evidence for the significant age related differences in the use of emotion regulation strategies (e.g., Hofer et al., 2015; Shiota & Levenson, 2009), studies revealed contradictory findings for some strategies, such as acceptance. Thus, examining emotion regulation especially in the second half of life can be fruitful to observe age-related changes in domains of emotion (Gross et al., 1997) which is a cornerstone of subjective well-being (Mroczek, 2001). Furthermore, a great majority of studies on emotion regulation in Turkey, have been conducted only with adolescents or young adults (e.g., Öngen, 2010; Yıldız, 2017; Aka & Gencoz, 2014; Sünbül & Güneri, 2019; Vatan et al., 2014). Thus, this study would contribute to Turkish

literature by focusing on both young and older adult age groups. As mentioned previously, aging of the world's population became an important demographic event of today (Giacalone et al., 2014). Thus, conducting a study with older individuals and meeting their needs become more of an issue in psychology as a result of this demographic shift (Fisk & Rogers, 2002). Psychologists should focus on aging and the old age in order to understand the most effective clinical interventions for older individuals. Providing successful care and optimizing their well-being is important (Karel, Gatz, & Smyer, 2012).

The associations of emotion regulation with some indicators of subjective well-being, such as life satisfaction and positive and negative affect, were also aimed to be investigated in the present research. Only limited number of studies in the literature have specifically studied on these relations and the findings of these studies did not produce consistent results. Hence, the present study would be important in advancing our understanding on the link between emotion regulation and these factors. It would also be helpful to develop psychotherapeutic interventions for effective regulation of emotions which is crucial for many of the human functioning, such as mental health, coping with hardships, and interpersonal relationships (Carstensen et al., 2000). Furthermore, the mediator roles of cognitive emotion regulation strategies in relations of age with affect and life satisfaction was aimed to be examined by using SST as the theoretical framework. As mentioned previously, SST suggests a developmental trend in the alignment of emotion and information-related goals due to the fact that there are age-related differences in the anticipated future (Carstensen et al., 1999). More specifically, younger adults give priority to knowledge-related goals, whereas older adults are motivated by emotion-related goals (Carstensen et al., 2000). Limited time perspective in old age direct attention to the present, and present orientation involves goals related to enhancing emotional well-being. This may also help to alleviate psychopathology since some psychological disorders, e.g., anxiety disorders, are related to worries about the future (Carstensen et al., 1999). There are some literature findings providing evidence for a greater emphasis on emotions with age, which is related to better emotion regulation and more positive emotional experiences (Löckenhoff & Carstensen, 2004). However, there is little evidence supporting the

mediator role of emotion regulation strategies in the association between age and well-being. Thus, in the light of this theoretical basis, the present study would help to explore the mechanisms underlying age-related differences in affective experiences and individual's well-being.

Accordingly, the hypotheses of the present study will be as follows:

1. Older and younger people would differ from each other in terms of well-being indicators.
  - (1a) Older people would have significantly higher life satisfaction compared to younger people.
  - (1b) Older people would have significantly higher positive affect compared to younger people.
  - (1c) Older people would have significantly lower negative affect compared to younger people.
2. Older and younger people would differ from each other in terms of cognitive emotion regulation strategies.
  - (2a) Older people would have significantly higher scores on positive refocusing compared to younger people.
  - (2b) Older people would have significantly higher scores on positive reappraisal compared to younger people.
  - (2c) Older people would have significantly higher scores on refocus on planning compared to younger people.
  - (2d) Older people would have significantly higher scores on putting into perspective compared to younger people.
  - (2e) Older people would have significantly lower scores on self-blame compared to younger people.
  - (2f) Older people would have significantly lower scores on blaming others compared to younger people.
  - (2g) Older people would have significantly lower scores on catastrophizing compared to younger people.
  - (2h) Older people would have significantly lower scores on rumination compared to younger people.

(2i) Older people would have significantly lower scores on acceptance compared to younger people.

3. Cognitive emotion regulation strategies would be associated with well-being indicators.

(3a) Cognitive emotion regulation strategies would be associated with life satisfaction.

- i. People, who have higher scores on self-blame, would be more likely to have lower levels of life satisfaction.
- ii. People, who have higher scores on blaming others, would be more likely to have lower levels of life satisfaction.
- iii. People, who have higher scores on catastrophizing, would be more likely to have lower levels of life satisfaction.
- iv. People, who have higher scores on rumination, would be more likely to have lower levels of life satisfaction.
- v. People, who have higher scores on acceptance, would be more likely to have lower levels of life satisfaction.
- vi. People, who have higher scores on positive refocusing, would be more likely to have higher levels of life satisfaction.
- vii. People, who have higher scores on positive reappraisal, would be more likely to have higher levels of life satisfaction.
- viii. People, who have higher scores on refocus on planning, would be more likely to have higher levels of life satisfaction.
- ix. People, who have higher scores on putting into perspective, would be more likely to have higher levels of life satisfaction.

(3b) Cognitive emotion regulation strategies would be associated with positive affect.

- i. People, who have higher scores on self-blame, would be more likely to have lower levels of positive affect.
- ii. People, who have higher scores on blaming others, would be more likely to have lower levels of positive affect.
- iii. People, who have higher scores on catastrophizing, would be more likely to have lower levels of positive affect.

- iv. People, who have higher scores on rumination, would be more likely to have lower levels of positive affect.
- v. People, who have higher scores on acceptance, would be more likely to have lower levels of positive affect.
- vi. People, who have higher scores on positive refocusing, would be more likely to have higher levels of positive affect.
- vii. People, who have higher scores on positive reappraisal, would be more likely to have higher levels of positive affect.
- viii. People, who have higher scores on refocus on planning, would be more likely to have higher levels of positive affect.
- ix. People, who have higher scores on putting into perspective, would be more likely to have higher levels of positive affect.

(3c) Cognitive emotion regulation strategies would be associated with negative affect.

- i. People, who have higher scores on self-blame, would be more likely to have higher levels of negative affect.
- ii. People, who have higher scores on blaming others, would be more likely to have higher levels of negative affect.
- iii. People, who have higher scores on catastrophizing, would be more likely to have higher levels of negative affect.
- iv. People, who have higher scores on rumination, would be more likely to have higher levels of negative affect.
- v. People, who have higher scores on acceptance, would be more likely to have higher levels of negative affect.
- vi. People, who have higher scores on positive refocusing, would be more likely to have lower levels of negative affect.
- vii. People, who have higher scores on positive reappraisal, would be more likely to have lower levels of negative affect.
- viii. People, who have higher scores on refocus on planning, be more likely to have lower levels of negative affect.
- ix. People, who have higher scores on putting into perspective, would be more likely to have lower levels of negative affect.

4. Cognitive emotion regulation would mediate the relation between age and well-being indicators.
  - (4a) Cognitive emotion regulation strategies would mediate the relation between age and positive affect.
  - (4b) Cognitive emotion regulation strategies would mediate the relation between age and negative affect.
  - (4c) Cognitive emotion regulation strategies would mediate the relation between age and life satisfaction.

## CHAPTER 2

### METHOD

#### 2.1. Participants

The study consisted of 304 participants from different cities of Turkey. Of these participants, 153 (50.3%) were aged between 25 and 40 and 151 (49.7%) were aged between 65 and 80.

Of the 153 participants who were aged between 25 and 40, 54 (35.3%) of them were male and 99 (64.7%) of them were female. A great majority of the participants were graduated from university ( $n = 107$ , 69.9%), 15 of them (9.8%) had a master's degree, and 1 of them (0.7%) had a Ph.D. degree. Twenty-five (16.3%) participants were high school graduates, 2 (1.3%) participants were secondary school graduates, and 3 (2%) participants were primary school graduates. In terms of their marital status, 105 (68.6%) participants were married, 43 (28.1%) participants were single, 4 (2.6%) participants were divorced, and 1 (0.7%) participant was widow/widower. Of the participants, 85 (55.6%) had children. The number of children of participants ranged between 0 and 5 ( $M = .88$ ,  $SD = .93$ ). While most of the participants ( $n = 136$ , 88.9%) were employed, 14 (9.2%) of them were unemployed, and 3 (2%) of them were retired. In terms of their occupation, 17 (11.8%) of them were lawyers, 37 (25.7%) of them were bank employers, 17 (11.8%) of them were teachers, and 3 (2.1%) of them were housewives. The rest ( $n = 79$ , 51.6%) of the participants worked in other occupation areas. Most of the participants ( $n = 113$ , 73.9%) reported the residence where they spent the longest period of their lives as metropolis. Twenty-three (15%) participants reported their residence as city and 17 (11.1%) participants reported their residence as town. Majority of the participants ( $n = 121$ , 79.1%) perceived their income level as

middle, 25 (16.3%) of them perceived as low, and 7 (4.6%) of them perceived as high. In terms of their living arrangement, 75 participants (49%) were living with their spouse and child(ren), while 30 (19.6%) of them were living only with their spouse, and 13 (8.5%) of them were living alone. Ten (6.5%) participants were living with their relatives, 5 (3.3%) participants were living with their child(ren), and 20 (13.1%) participants were living with someone else. Furthermore, 91 (59.5%) participants stated that they want to live with their spouse and child(ren), 28 (18.3%) participants wanted to live only with their spouse, and 15 (9.8%) participants wanted to live alone. Five (3.3%) participants stated that they want to live only with their child(ren), 5 (3.3%) participants wanted to live with their relatives, and 9 (5.9%) participants wanted to live with someone else. 5 (3.3%) participants stated that they have at least one physical health problem, and 4 (2.6%) of them were receiving treatments for their problems. The rest ( $n = 148$ , 96.7%) of the participants did not report any physical health problem. Eight (5.2%) participants stated that they have at least one psychological health problem and 5 (3.3%) of them were receiving treatments for their problems. The rest ( $n = 145$ , 94.8%) of the participants did not state any psychological health problem. In terms of their health status, 24 (15.7%) participants perceived their health status as very good, 93 (60.8%) participants perceived as good, 35 (22.9%) participants perceived as average, and 1 (0.7%) participant perceived as poor (see Table 1).

Of the 151 participants who were aged between 65 and 80, 85 (56.3%) participants were male and 66 (43.7%) participants were female. In terms of education status, 41 (27.2%) participants were graduated from university, 15 (9.9%) of them had their master's degree, and 4 (2.6%) of them had a Ph.D. degree. Thirty (19.9%) participants were high school graduates, 16 (10.6%) participants were secondary school graduates, and 35 (23.2%) participants were primary school graduates. Moreover, 6 (4%) participants were literate and 4 (2.6%) participants were illiterate. Most of the participants were married ( $n = 123$ , 81.5%), 21 (13.9%) participants were widow/widower, 6 (4%) participants were divorced, and 1 (0.7%) participant was single. Of the participants, 147 (97.4%) had children. The number of children of participants ranged between 0 and 8 ( $M = 2.56$ ,  $SD = 1.33$ ). In terms of their working

status, a great majority of the participants were retired ( $n = 111$ , 73.5%), 29 (19.2%) participants were unemployed, and 11 (7.3%) participants were employed. In terms of their occupation, 26 (21.5%) of them were housewives, 20 (16.5%) of them were teachers, and 3 (2.5%) of them were farmers. The rest ( $n = 102$ , 67.5%) of the participants worked in different occupation types. Among the participants, 70 (46.4%) of them reported their residence where they spent the longest period of their lives as metropolis. Thirty (19.9%) of them reported their residence as city, 36 (23.8%) of them reported their residence as town, and 15 (9.9%) of them reported their residence as village. While most of the participants perceived their income level as middle ( $n = 114$ , 75.5%), 19 (12.6%) of them perceived as high, and 18 (11.9%) of them perceived as low. In terms of their living arrangement, 87 (57.6%) participants were living with their spouse, 36 (23.8%) participants were living with their spouse and child(ren), and 18 (11.9%) participants were living alone. Eight (5.3%) participants were living only with their child(ren), 1 (0.7%) participant was living with his/her close relatives, and 1 (0.7%) participant was living with someone else. Moreover, 82 (54.3%) participants stated that they want to live with their child(ren) and spouse, 49 (32.5%) participants wanted to live only with their spouse, and 12 (7.9%) participants wanted to live alone. Five (3.3%) participants stated that they want to live only with their child(ren), 1 (0.7%) participant wanted to live with his/her close relatives, and 2 (1.3%) participants wanted to live with someone else. Fifty-four (35.8%) participants stated that they have at least one physical health problem and 48 (31.6%) of them were receiving treatments for their problems. The rest ( $n = 97$ , 64.2%) of the participants did not report any physical health problem. Furthermore, 9 (6%) participants stated that they have at least one psychological health problem and 8 (5.3%) of them were receiving treatments for their problems. The rest ( $n = 142$ , 94%) of the participants did not state any psychological health problem. In terms of their health status, 69 (45.7%) participants perceived their health status as average, 63 (41.7%) participants perceived as good, and 7 (4.6%) participants perceived as very good. Moreover, 11 (7.3%) participants perceived their health status as poor and 1 (0.7%) participant perceived as very poor (see Table 1).

Table 1

*Demographic Characteristics of the Participants*

Variables	<i>Participants Aged Between 25 and 40</i>				<i>Participants Aged Between 65 and 80</i>			
	<i>N</i>	<i>%</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>%</i>	<i>M</i>	<i>SD</i>
Age			33.93	5.18			70.56	5.07
Gender								
Female	99	64.7			66	43.7		
Male	54	35.3			85	56.3		
Education								
Illiterate	0	0			4	2.6		
Literate	0	0			6	4		
Primary School	3	2			35	23.2		
Secondary School	2	1.3			16	10.6		
High School	25	16.3			30	19.9		
University	107	69.9			41	27.2		
Master	15	9.8			15	9.9		
Ph.D.	1	0.7			4	2.6		
Marital Status								
Married	105	68.6			123	81.5		
Single	43	28.1			1	0.7		
Divorced	4	2.6			6	4		
Widowed	1	0.7			21	13.9		
Having a child or not								
Yes	85	55.6			147	97.4		
No	68	44.4			4	2.6		
Number of Children			.88	.93			2.56	1.33
Working Status								
Working	136	88.9			11	7.3		
Not Working	14	9.2			29	19.2		
Retired	3	2			111	73.5		
Occupation								
Lawyer	17	11.8			1	0.8		
Housewife	3	2.1			26	21.5		
Bank Employer	37	25.7			3	2.5		
Teacher	17	11.8			20	16.5		
Other Job Areas	79	51.6			101	66.9		
Residence								
Metropolis	113	73.9			70	46.4		
City	23	15			30	19.9		
Town	17	11.1			36	23.8		
Village	0	0			15	9.9		
Income Level								
Low	25	16.3			18	11.9		
Middle	121	79.1			114	75.5		
High	7	4.6			19	12.6		

Table 1 (continued)

	<i>Participants Aged Between 25 and 40</i>				<i>Participants Aged Between 65 and 80</i>			
	<i>N</i>	<i>%</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>%</i>	<i>M</i>	<i>SD</i>
Living Arrangement								
Alone	13	8.5			18	11.9		
Spouse	30	19.6			87	57.6		
Spouse and Children	75	49			36	23.8		
Children	5	3.3			8	5.3		
Close Relatives	10	6.5			1	0.7		
Others	20	13.1			1	0.7		
Whom They Want to Live with								
Alone	15	9.8			12	7.9		
Spouse	28	18.3			49	32.5		
Spouse and Children	91	59.5			82	54.3		
Children	5	3.3			5	3.3		
Close Relatives	5	3.3			1	0.7		
Others	9	5.9			2	1.3		
Physical Health Problems								
Yes	5	3.3			54	35.8		
No	148	96.7			97	64.2		
Treatment for Physical Health Problems								
Yes	4	2.6			48	31.8		
No	149	97.4			103	68.2		
Psychological Health Problems								
Yes	8	5.2			9	6		
No	145	94.8			142	94		
Treatment for Psychological Health Problems								
Yes	5	3.3			8	5.3		
No	148	96.7			143	94.7		
Health Status								
Very Poor	0	0			1	0.7		
Poor	1	0.7			11	7.3		
Average	35	22.9			69	45.7		
Good	93	60.8			63	41.7		
Very Good	24	15.7			7	4.6		

## 2.2. Instruments

In the current study, a set of questionnaires was given to the participants. It included the demographic information form, Cognitive Emotion Regulation Questionnaire (CERQ), Positive and Negative Affect Schedule (PANAS) and Satisfaction with Life Scale (SWLS).

### **2.2.1. Demographic Information Form**

This form included questions about the demographic characteristics of the participants (i.e., age, gender, education level, employment status, occupation, marital status, number of children, living arrangement, whom they want to live with, income level, residence, physical and psychological health problems, treatment for health problems and perceived health status).

### **2.2.2. Cognitive Emotion Regulation Questionnaire (CERQ)**

The 36-item self-report questionnaire of CERQ was developed by Garnefski, Kraaij, and Spinhoven (2001) to measure nine cognitive strategies of emotion regulation which were named as self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing, and blaming others. The CERQ was used to evaluate individual's way of thinking after experiencing stressful events. Each subscale includes 4 items which are rated on a 5-point Likert type scale ranging from 1 (*almost never*) to 5 (*almost always*). The scoring for subscales is calculated by adding up these four items (Garnefski et al., 2001).

The Turkish adaptation of CERQ was conducted by Tuna and Bozo (2012). The scale was revealed to have good internal consistency reliabilities for the subscales, which were ranged between .72 and .83. The test-retest reliabilities were also reported to range between .50 and .70. In terms of criterion-related validity, self-blame, rumination, catastrophizing and blaming-others were associated with more psychological symptoms whereas positive reappraisal, positive refocusing, putting into perspective and refocus on planning were associated with lower levels of anxiety. Moreover, positive refocusing was associated with lower negative self-concept and less depression scores (Tuna & Bozo, 2012). In the present study, the internal consistency coefficients were found as .70 for self-blame, .67 for rumination, .77 for positive refocusing, .79 for refocus on planning, .78 for positive reappraisal, .57 for acceptance, .74 for putting into perspective, .76 for catastrophizing, and .74 for other-blame.

### **2.2.3. The Positive and Negative Affect Schedule (PANAS)**

PANAS was developed by Watson, Clark, and Tellegen (1988) to measure two main dimensions of mood. Positive affect (PA) is related to the experience of enthusiasm, alertness, and activeness, whereas negative affect (NA) is related to the experience of different aversive mood states, such as nervousness, disgust, contempt, and fear. It includes 10-items for both PA and NA subscales, which are rated on a 5-point scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). The scale was internally consistent with Cronbach's alphas ranging from .86 to .90 for PA and from .84 to .87 for NA. Moreover, the test-retest reliabilities ranged from .47 to .68 for PA and .39 to .71 for NA at an 8-week interval (Watson et al., 1988).

The Turkish adaptation of PANAS was conducted by Gençöz (2000). The Cronbach's alpha reliabilities were .86 for PA and .83 for NA. The test-retest reliabilities of Turkish version of the scale were also revealed as .54 for PA and .40 for NA. According to its validity analyses, PA subscale showed a negative correlation with Beck Depression Inventory ( $r = -.48, p < .001$ ) and Beck Anxiety Inventory ( $r = -.22, p < .005$ ), whereas NA subscale showed a positive correlation with Beck Depression Inventory ( $r = .51, p < .001$ ) and Beck Anxiety Inventory ( $r = .47, p < .001$ ) (Gençöz, 2000). In the present study, the internal consistency coefficients of PA and NA subscales were found as .88 and .83, respectively.

### **2.2.4. Satisfaction with Life Scale (SWLS)**

SWLS was developed by Diener, Emmons, Larsen, and Griffin (1985) to assess global life satisfaction. It consists of 5-items measured on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher scores on this scale indicate higher life satisfaction. The test-retest correlation of the scale was reported as .82 and the internal consistency coefficient was reported as .87 (Diener et al., 1985). The scale was adapted to Turkish by Durak, Senol-Durak, and Gencoz (2010). Three different samples, which were university students, correctional officers, and elderly adults, were used to examine the psychometric properties of SWLS. The internal consistency

coefficient of the scale was revealed as .81 in university students, .89 in elderly adults, and .82 in correctional officers. In terms of concurrent validity, SWLS was found to be significantly correlated with self-esteem ( $r = .40, p = .000$ ), monthly income ( $r = .13, p = .011$ ), perceived social support from family ( $r = .29, p = .000$ ), and depression ( $r = -.40, p = .000$ ) in a sample of university students. SWLS was also found to be significantly correlated with monthly income ( $r = .23, p = .002$ ), work stress ( $r = .34, p = .000$ ), burnout ( $r = -.39, p = .000$ ) and depression ( $r = -.30, p = .000$ ) in a sample of correctional officers. Moreover, SWLS was found to be significantly correlated with self-esteem ( $r = .20, p = .023$ ), monthly income ( $r = .29, p = .002$ ), late-life depression ( $r = -.39, p = .000$ ), and perceived current health status ( $r = .20, p = .027$ ) in a sample of elderly adults. In terms of discriminant validity, no significant correlation was found between SWLS and willingness to self-censor ( $r = -.08, p = .054$ ) (Durak et al., 2010). In the present study, the Cronbach's alpha coefficient of the scale was .84.

### **2.3. Procedure**

Firstly, the ethical approval was obtained from Middle East Technical University (METU) Human Subjects Ethics Committee. Participants were invited via face-to-face meetings or they were reached through their acquaintances. Participants, who agreed to participate to the study, were informed about the aims of the research and their right to withdrawn from the study at any time during the process. Then, they signed the informed consent form. To minimize nonresponse and maximize the quality of the data collected, the data were collected via face to face interviewing; the researcher read the items of the questionnaire to the participants and marked their responses. It took approximately 20 minutes to complete the questionnaire set for younger participants and approximately 25-30 minutes for older participants. Data were collected between July 2019 and April 2020.

### **2.4. Data Analysis**

Firstly, in order to examine the differences among the levels of demographic variables on the measures of the study, preliminary analyses were run through IBM SPSS

Statistics 24 software. Then, correlational analyses were carried out to investigate the linear associations between the variables, again using IBM SPSS Statistics 24 software. Lastly, mediation analyses with bootstrapping procedure were conducted by running process macro for SPSS (Hayes, 2018).

## **CHAPTER 3**

### **RESULTS**

#### **3.1. Preliminary Analyses**

In this section, descriptive characteristics of the study variables and differences among the levels of demographic variables in terms of study variables were presented. Moreover, Pearson correlation analyses were carried out to investigate the correlations among all variables used in the present study.

##### **3.1.1. Descriptive Characteristics of the Study Variables**

Descriptive characteristics (i.e., number of participants, mean scores, standard deviations and minimum and maximum scores) of the variables included in this study can be seen in Table 2.

##### **3.1.2. Differences among the Levels of Demographic Variables in terms of the Study Variables**

A series of independent samples *t*-test, univariate analysis of variance (ANOVA), and multivariate analysis of variance (MANOVA) were conducted to examine the differences among the levels of demographic variables (i.e., age group, gender, education, marital status, having a child or not, working status, residence, perceived income level, living arrangement, physical and psychological health status, treatment for health problems) in terms of study variables (i.e., cognitive emotion regulation strategies, positive affect, negative affect, and life satisfaction).

Table 2

*Descriptive Characteristics of the Study Variables*

Variables	<i>N</i>	<i>M</i>	<i>SD</i>	Min- Max
<b>Cognitive Emotion Regulation Questionnaire</b>				
Self blame	304	10.88	2.78	4 – 18
Acceptance	304	11.66	2.64	4 – 19
Rumination	304	13.59	2.78	6 – 20
Positive refocusing	304	13.07	2.95	4 – 20
Refocus on planning	304	14.87	2.88	6 – 20
Positive reappraisal	304	14.46	3.00	4 – 20
Putting into perspective	304	13.91	3.07	5 – 20
Catastrophizing	304	9.76	3.23	4 – 20
Blaming others	304	10.27	2.73	4 – 19
<b>Positive and Negative Affect Schedule</b>				
Positive Affect	304	32.63	7.58	10-50
Negative Affect	304	17.67	6.17	10-42
Satisfaction with Life	304	23.46	6.15	5-35

*Note.* *N* = Number of participants who filled out the scales measuring the study variables

### **3.1.2.1. Differences among the Levels of Demographic Variables in terms of Cognitive Emotion Regulation Strategies**

Several MANOVAs were conducted to examine the differences among the levels of demographic variables in terms of cognitive emotion regulation strategies (i.e., self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing, and blaming others). If one way MANOVA analyses were revealed to be significant, univariate analyses were performed to see detailed results. Bonferroni correction was calculated for nine dependent variables (.05/9) and new significance level was revealed as .006.

In order to investigate the differences among younger and older participants in terms of cognitive emotion regulation strategies, a one-way MANOVA was conducted and the result was found as significant [Multivariate  $F(9, 294) = 5.08, p < .001, \text{Wilks' } \lambda = .87, \text{partial } \eta^2 = .14$ ]. According to the results of univariate analyses, younger participants aged between 25 and 40 and older participants aged between 65 and 80 were significantly different from each other in terms of self-blame [ $F(1, 302) = 11.59, p < .006, \text{partial } \eta^2 = .04$ ]. Younger participants ( $m = 11.41, sd = 2.62$ ) had significantly higher self-blame scores than older participants ( $m = 10.34, sd = 2.84$ ) (hypothesis 2e was accepted). There was also a significant difference for positive refocusing [ $F(1, 302) = 8.72, p < .006, \text{partial } \eta^2 = .03$ ]. Older participants ( $m = 13.56, sd = 2.95$ ) had significantly higher positive refocusing scores than younger participants ( $m = 12.58, sd = 2.88$ ) (hypothesis 2a was accepted). However, there were not any significant differences among younger and older participants in terms of other cognitive emotion regulation strategies (see Table 3) (hypotheses 2a, 2b, 2c, 2d, 2f, 2g, 2h, and 2i were rejected).

Table 3

*Descriptive Statistics and MANOVA Results for Age Group*

	Age Group				One-way MANOVA			
	Younger		Older		<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
	<i>m</i>	<i>sd</i>	<i>m</i>	<i>sd</i>				
Self blame	11.41 <sup>a</sup>	2.62	10.34 <sup>b</sup>	2.84	1, 302	11.59	.04	.001
Acceptance	11.47	2.82	11.86	2.43	1, 302	1.67	.01	.198
Rumination	13.90	2.76	13.28	2.77	1, 302	3.71	.01	.055
Positive refocusing	12.58 <sup>a</sup>	2.88	13.56 <sup>b</sup>	2.95	1, 302	8.72	.03	.003
Refocus on planning	14.90	2.76	14.83	3.01	1, 302	.03	.00	.854
Positive reappraisal	14.50	3.02	14.42	3.00	1, 302	.05	.00	.818
Putting into perspective	14.03	2.93	13.79	3.21	1, 302	.46	.00	.500
Catastrophizing	9.92	3.18	9.61	3.28	1, 302	.68	.00	.410
Blaming others	9.99	2.62	10.55	2.81	1, 302	3.18	.01	.075

Note 1. Multivariate  $F(9, 294) = 5.08, p < .001; \text{Wilks' } \lambda = .87, \text{partial } \eta^2 = .14$ .

Note 2. The mean scores that do not share same superscript on the same row are significantly different from each other at least at  $p < .006$  level.

In order to examine the gender differences in terms of cognitive emotion regulation strategies, again a one-way MANOVA was performed and it was revealed as non-significant [Multivariate  $F(9, 294) = 1.88, p >.05$ , Wilks'  $\lambda = .95$ , partial  $\eta^2 = .05$ ].

Another one-way MANOVA was carried out to investigate the differences among the levels of working status in terms of cognitive emotion regulation strategies and the result was found as significant [Multivariate  $F(18, 586) = 3.00, p <.001$ , Wilks'  $\lambda = .84$ , partial  $\eta^2 = .08$ ]. There were significant differences for self-blame [ $F(2, 301) = 5.91, p <.006$ , partial  $\eta^2 = .04$ ] and positive refocusing [ $F(2, 301) = 9.33, p <.001$ , partial  $\eta^2 = .06$ ]. Working participants ( $m = 11.42, sd = 2.65$ ) had significantly higher scores on self-blame than retired participants ( $m = 10.25, sd = 2.83$ ). In addition, working participants ( $m = 12.37, sd = 2.80$ ) had significantly lower scores on positive refocusing than retired participants ( $m = 13.91, sd = 2.99$ ). Univariate analyses did not yield significant results for other cognitive emotion regulation strategies (see Table 4).

Table 4

*Descriptive Statistics and MANOVA Results for Working Status*

	Working Status						df	One-way MANOVA		
	Working		Not Working		Retired			F	$\eta^2$	p
	m	sd	m	sd	m	sd				
Self blame	11.42 <sup>a</sup>	2.65	10.67 <sup>ab</sup>	2.80	10.25 <sup>b</sup>	2.83	2, 301	5.91	.04	.003
Acceptance	11.54	2.69	11.14	2.96	12.02	2.41	2, 301	2.04	.01	.132
Rumination	13.82	2.76	13.37	2.60	13.39	2.85	2, 301	.93	.01	.396
Positive refocusing	12.37 <sup>a</sup>	2.80	13.21 <sup>ab</sup>	2.81	13.91 <sup>b</sup>	2.99	2, 301	9.33	.06	.000
Refocus on planning	14.70	2.72	14.23	3.22	15.32	2.91	2, 301	2.70	.02	.069
Positive reappraisal	14.31	2.99	14.09	3.05	14.80	3.00	2, 301	1.22	.01	.296
Putting into perspective	13.72	2.92	13.81	2.85	14.18	3.33	2, 301	.75	.01	.472
Catastrophizing	9.80	3.11	10.47	3.41	9.45	3.29	2, 301	1.58	.01	.208
Blaming others	10.12	2.56	10.44	2.69	10.40	2.95	2, 301	.42	.00	.658

Note 1. Multivariate  $F(18, 586) = 3.00, p <.001$ ; Wilks'  $\lambda = .84$ , partial  $\eta^2 = .08$ .

Note 2. The mean scores that do not share same superscript on the same row are significantly different from each other at least at  $p <.006$  level.

A one-way MANOVA was calculated to examine differences among the levels of education in terms of cognitive emotion regulation strategies and the result was revealed as non-significant [Multivariate  $F(63, 2058) = 1.19, p > .05$ , Pillai's Trace = .25, partial  $\eta^2 = .04$ ]. Moreover, there was not any significant cognitive emotion regulation differences among the levels of income [Multivariate  $F(18, 586) = .87, p > .05$ , Wilks'  $\lambda = .95$ , partial  $\eta^2 = .03$ ].

In order to investigate the differences between participants having children and those who did not have a child in terms of cognitive emotion regulation strategies, a one-way MANOVA was calculated. The result was significant [Multivariate  $F(9, 294) = 2.61, p < .01$ , Wilks'  $\lambda = .93$ , partial  $\eta^2 = .07$ ]. However, univariate analyses did not yield significant differences between participants having children and those who did not have a child in terms of cognitive emotion regulation strategies (see Table 5).

Table 5

*Descriptive Statistics and MANOVA Results for Having a Child or Not*

	Children				<i>df</i>	One-way MANOVA		
	Yes		No			<i>F</i>	$\eta^2$	<i>p</i>
	<i>m</i>	<i>sd</i>	<i>m</i>	<i>sd</i>				
Self blame	10.64	2.74	11.63	2.80	1, 302	7.00	.02	.009
Acceptance	11.72	2.59	11.49	2.79	1, 302	.43	.00	.512
Rumination	13.44	2.83	14.08	2.57	1, 302	2.97	.01	.086
Positive refocusing	13.31	2.92	12.29	2.94	1, 302	6.60	.02	.011
Refocus on planning	14.89	2.84	14.78	3.03	1, 302	.09	.00	.769
Positive reappraisal	14.49	2.91	14.38	3.31	1, 302	.08	.00	.774
Putting into perspective	13.97	3.06	13.71	3.12	1, 302	.40	.00	.529
Catastrophizing	9.86	3.12	9.44	3.56	1, 302	.92	.00	.338
Blaming others	10.32	2.74	10.11	2.70	1, 302	.32	.00	.573

*Note.* Multivariate  $F(9, 294) = 2.61, p < .01$ ; Wilks'  $\lambda = .93$ , partial  $\eta^2 = .07$ .

Furthermore, a one-way MANOVA was carried out to see the differences among the levels of marital status in terms of cognitive emotion regulation strategies and it was found as non-significant [Multivariate  $F(27, 853) = 1.47, p > .05$ , Wilks'  $\lambda = .88$ , partial

$\eta^2 = .04$ ]. Similarly, according to the results of one-way MANOVAs, there were not any significant residence [Multivariate  $F(27, 853) = .86, p > .05$ , Wilks'  $\lambda = .92$ , partial  $\eta^2 = .03$ ] or living arrangement [Multivariate  $F(45, 1300) = .97, p > .05$ , Wilks'  $\lambda = .86$ , partial  $\eta^2 = .03$ ] differences in terms of emotion regulation strategies.

A one-way MANOVA was performed to see the differences among participants having at least one physical health problem and those who did not have any physical health problem in terms of cognitive emotion regulation strategies. The result was significant [Multivariate  $F(9, 294) = 2.45, p < .05$ , Wilks'  $\lambda = .93$ , partial  $\eta^2 = .07$ ]. Univariate analyses indicated a significant differences for refocus on planning [ $F(1, 302) = 7.84, p < .006$ , partial  $\eta^2 = .03$ ]. The participants having at least one physical illness ( $m = 13.93, sd = 3.19$ ) had significantly lower refocus on planning scores than the participants who did not have any physical illness ( $m = 15.09, sd = 2.77$ ). There was not any significant result for other cognitive emotion regulation strategies (see Table 6).

Table 6

*Descriptive Statistics and MANOVA Results for Presence or Absence of Physical Health Problem*

	Physical Health Problem				One-way MANOVA			
	Present		Absent		<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
	<i>m</i>	<i>sd</i>	<i>m</i>	<i>sd</i>				
Self blame	10.75	2.93	10.91	2.75	1, 302	.16	.00	.692
Acceptance	12.34	2.32	11.50	2.69	1, 302	4.84	.02	.028
Rumination	13.73	2.96	13.56	2.74	1, 302	.18	.00	.674
Positive refocusing	12.31	2.82	13.25	2.96	1, 302	4.92	.02	.027
Refocus on planning	13.93 <sup>a</sup>	3.19	15.09 <sup>b</sup>	2.77	1, 302	7.84	.03	.005
Positive reappraisal	13.61	3.41	14.67	2.87	1, 302	6.01	.02	.015
Putting into perspective	13.54	3.86	14.00	2.85	1, 302	1.04	.00	.309
Catastrophizing	10.41	3.50	9.61	3.15	1, 302	2.93	.01	.088
Blaming others	10.81	2.87	10.14	2.68	1, 302	2.93	.01	.088

Note 1. Multivariate  $F(9, 294) = 2.45, p < .05$ ; Wilks'  $\lambda = .93$ , partial  $\eta^2 = .07$ .

Note 2. The mean scores that do not share same superscript on the same row are significantly different from each other at least at  $p < .006$  level.

Another one-way MANOVA was performed to see the differences among participants who received treatments for their physical illness and those who did not receive treatment in terms of cognitive emotion regulation strategies. The result was significant [Multivariate  $F(9, 294) = 2.22, p < .05$ , Wilks'  $\lambda = .94$ , partial  $\eta^2 = .06$ ]. There were significant differences for refocus on planning [ $F(1, 302) = 11.08, p < .006$ , partial  $\eta^2 = .04$ ] and positive reappraisal [ $F(1, 302) = 8.91, p < .006$ , partial  $\eta^2 = .03$ ]. Participants who did not receive any treatment ( $m = 15.11, sd = 2.76$ ) had higher scores on refocus on planning than participant who received treatments ( $m = 13.67, sd = 3.20$ ). Moreover, participants who did not receive any treatment ( $m = 14.69, sd = 2.90$ ) had higher scores on positive reappraisal than participant who received treatments ( $m = 13.35, sd = 3.27$ ) (see Table 7).

Table 7

*Descriptive Statistics and MANOVA Results for Having a Treatment or Not*

	Treatment		No Treatment		df	One-way MANOVA		
	<i>m</i>	<i>sd</i>	<i>m</i>	<i>sd</i>		<i>F</i>	$\eta^2$	<i>p</i>
Self blame	10.88	2.95	10.87	2.75	1, 302	.00	.00	.978
Acceptance	12.15	2.32	11.56	2.69	1, 302	2.17	.01	.142
Rumination	13.73	2.93	13.56	2.75	1, 302	.16	.00	.693
Positive refocusing	12.12	2.68	13.26	2.97	1, 302	6.62	.02	.011
Refocus on planning	13.67 <sup>a</sup>	3.20	15.11 <sup>b</sup>	2.76	1, 302	11.08	.04	.001
Positive reappraisal	13.35 <sup>a</sup>	3.27	14.69 <sup>b</sup>	2.90	1, 302	8.91	.03	.003
Putting into perspective	13.35	3.93	14.02	2.86	1, 302	2.11	.01	.147
Catastrophizing	10.33	3.45	9.65	3.17	1, 302	1.92	.01	.167
Blaming others	10.73	2.81	10.17	2.70	1, 302	1.80	.01	.181

Note 1. Multivariate  $F(9, 294) = 2.22, p < .05$ ; Wilks'  $\lambda = .94$ , partial  $\eta^2 = .06$ .

Note 2. The mean scores that do not share same superscript on the same row are significantly different from each other at least at  $p < .006$  level.

In order to investigate the differences between participants with and without psychological health problems on cognitive emotion regulation strategies, a one-way MANOVA was carried out and it was revealed as non-significant [Multivariate  $F(9,$

294) = 1.66,  $p > .05$ , Wilks'  $\lambda = .95$ , partial  $\eta^2 = .05$ ]. Lastly, a one-way MANOVA was performed to examine the differences between participants who received treatments for their psychological illness and those who did not receive treatment in terms of cognitive emotion regulation strategies and the result was revealed as nonsignificant [Multivariate  $F(9, 294) = 1.62$ ,  $p > .05$ , Wilks'  $\lambda = .95$ , partial  $\eta^2 = .05$ ].

### **3.1.2.2. Differences among the Levels of Demographic Variables in terms of Positive Affect**

Several independent samples  $t$ -tests and one-way between subjects ANOVAs were carried out to examine the differences among the levels of demographic variables in terms of positive affect.

An independent samples  $t$ -test was conducted to investigate the differences between participants with and without physical illness in terms of positive affect and the result was revealed as significant [ $t(74,95) = -3.69$ ,  $p < .001$ ]. Participants who reported at least one physical health problem ( $m = 28.88$ ,  $sd = 9.07$ ) received significantly lower scores on positive affect compared to participants who did not report any physical health problem ( $m = 33.53$ ,  $sd = 6.90$ ). Another independent samples  $t$ -test was performed to compare the participants having received treatment for their physical illness and those who did not have a treatment in terms of positive affect. The result was significant [ $t(63,68) = -3.81$ ,  $p < .001$ ] and indicated that participants who did not receive treatment ( $m = 33.50$ ,  $sd = 6.93$ ) had significantly higher positive affect compared to those who received treatment for their problems ( $m = 28.40$ ,  $sd = 9.12$ ).

In order to examine the differences between participants with and without psychological illness in terms of positive affect, another independent samples  $t$ -test was calculated and it was found as significant [ $t(302) = -2.15$ ,  $p < .05$ ]. Participants, who reported at least one psychological health problem ( $m = 28.82$ ,  $sd = 8.92$ ), had significantly lower scores on positive affect compared to participants who did not report any psychological condition ( $m = 32.86$ ,  $sd = 7.45$ ). The results of another independent samples  $t$ -test indicated significant differences between participants

having a treatment for their psychological problems and those who did not have a treatment in terms of positive affect [ $t(302) = -2.38, p < .05$ ]. Participants who did not have a treatment ( $m = 32.85, sd = 7.49$ ) had significantly higher scores on positive affect than those who had a treatment for their psychological health problems ( $m = 27.77, sd = 8.23$ ).

Independent samples *t*-tests' results were nonsignificant for age group [ $t(291,74) = 1.78, p > .05$ ] (hypothesis 1b was rejected), gender [ $t(302) = -.26, p > .05$ ] and having a child or not [ $t(302) = -.67, p > .05$ ] in terms of positive affect.

A one way between subjects ANOVA was carried out to examine positive affect differences among the levels of education and the result was significant [ $F(7, 296) = 4.22, p < .001$ ]. Tukey post hoc comparison revealed that the participants graduated from university ( $m = 33.34, sd = 6.54$ ) or master's program ( $m = 37.17, sd = 7.67$ ) had significantly higher levels of positive affect than those graduated from primary school ( $m = 28.76, sd = 9.12$ ). Moreover, participants with master's degree ( $m = 37.17, sd = 7.67$ ) had significantly higher levels of positive affect than the participants graduated from secondary school ( $m = 30.17, sd = 7.76$ ).

In order to examine positive affect differences between the levels of working status, one way between subjects ANOVA was conducted. The result was found as significant [ $F(2, 301) = 3.55, p < .05$ ] and Tukey post hoc comparison revealed that working participants ( $m = 33.59, sd = 7.02$ ) had significantly higher levels of positive affect than the participants who were not working ( $m = 30.19, sd = 8.02$ ).

Additionally, one way between subjects ANOVA was calculated to examine positive affect differences among residence categories and it was found as significant [ $F(3, 300) = 4.77, p < .01$ ]. Participants who spent the longest period of their lives in metropolis ( $m = 33.76, sd = 6.99$ ) had significantly higher levels of positive affect compared to participants who spent the longest period of their lives in town ( $m = 30.36, sd = 8.19$ ) or village ( $m = 28.33, sd = 8.42$ ).

In order to investigate the differences among the levels of perceived income in terms of positive affect, another one way between subjects ANOVA was calculated. The result was significant [ $F(2, 301) = 6.08, p < .01$ ]. According to Tukey post hoc comparison, participants who perceived their income level as low ( $m = 29.35, sd = 9.00$ ) had significantly lower positive affect scores than participants who perceived their income level as middle ( $m = 32.93, sd = 7.11$ ) and high ( $m = 35.35, sd = 7.72$ ). In addition, according to the results of one way ANOVAs, there were not significant differences among the levels of marital status [ $F(3, 300) = .26, p > .05$ ] and living arrangement [ $F(5, 298) = .47, p > .05$ ] in terms of positive affect (see Table 8).

### **3.1.2.3. Differences among the Levels of Demographic Variables in terms of Negative Affect**

A series of independent samples *t*-tests and one-way between subjects ANOVAs were conducted to investigate the differences among the levels of demographic variables in terms of negative affect.

An independent samples *t*-test revealed that younger and older participants significantly differed from each other in terms of negative affect [ $t(302) = 3.03, p < .01$ ]. That is to say, younger participants aged between 25 and 40 ( $m = 18.72, sd = 6.64$ ) had significantly higher scores on negative affect than older participants aged between 65 and 80 ( $m = 16.60, sd = 5.47$ ) (hypothesis 1c was accepted). However, independent samples *t*-test results were not significant for gender [ $t(302) = -1.08, p > .05$ ], having a child or not [ $t(302) = -1.20, p > .05$ ], physical health problems [ $t(302) = 1.69, p > .05$ ], treatment for physical health problems [ $t(302) = 1.42, p > .05$ ], psychological health problems [ $t(302) = .39, p > .05$ ], and treatment for psychological health problems [ $t(302) = .61, p > .05$ ].

One-way ANOVA was performed to investigate negative affect differences among the marital status levels and the result was significant [ $F(3, 300) = 5.68, p < .01$ ]. According to Tukey post hoc test, single ( $m = 20.02, sd = 7.46$ ) and widowed ( $m =$

21.00,  $sd = 7.35$ ) participants had significantly higher scores on negative affect than married participants ( $m = 16.92$ ,  $sd = 5.41$ ).

Another one-way ANOVA was performed to examine the differences among the levels of living arrangement in terms of negative affect and the analysis revealed a significant [ $F(5, 298) = 3.15$ ,  $p < .01$ ]. Tukey post hoc comparison indicated that participants living only with their children ( $m = 21.69$ ,  $sd = 8.88$ ) had significantly higher scores on negative affect than participants living with their spouses ( $m = 16.49$ ,  $sd = 5.51$ ). However, no significant differences were revealed between the levels of education [ $F(7, 296) = .87$ ,  $p > .05$ ], working status [ $F(2, 301) = 1.77$ ,  $p > .05$ ], residence [ $F(3, 300) = 1.24$ ,  $p > .05$ ], and income level [ $F(2, 301) = 2.89$ ,  $p > .05$ ] in terms of negative affect (see Table 8).

#### **3.1.2.4. Differences among the Levels of Demographic Variables in terms of Life Satisfaction**

Several independent samples  $t$ -tests and one-way between subjects ANOVAs were performed to investigate the differences among the levels of demographic variables in terms of life satisfaction.

Younger participants aged between 25 and 40 and older participants aged between 65 and 80 were compared on life satisfaction. The independent samples  $t$ -test yielded a significant [ $t(302) = -2.70$ ,  $p < .01$ ]. The results indicated that older participants ( $m = 24.41$ ,  $sd = 5.89$ ) had significantly higher life satisfaction compared to younger ones ( $m = 22.52$ ,  $sd = 6.27$ ) (hypothesis 1a was accepted).

Another independent samples  $t$ -test was run to compare the participants having children and those who did not have a child in terms of life satisfaction [ $t(302) = 2.50$ ,  $p < .05$ ]. According to the results, participants having children ( $m = 23.95$ ,  $sd = 5.93$ ) had significantly higher life satisfaction than participants who did not have a child ( $m = 21.89$ ,  $sd = .78$ ). However, independent samples  $t$ -test results were not significant for other demographic variables (i.e., gender [ $t(302) = -.96$ ,  $p > .05$ ], physical health

problems [ $t(302) = -1.88, p > .05$ ], psychological health problems [ $t(17,05) = -.30, p > .05$ ], treatment for physical health problems [ $t(302) = -1.89, p > .05$ ], and treatment for psychological health problems [ $t(302) = .00, p > .05$ ].

One-way ANOVA was performed to investigate differences among the levels of marital status in terms of life satisfaction and the analysis revealed a significant result [ $F(3, 300) = 4.89, p < .01$ ]. According to Tukey post hoc comparison, married participants ( $m = 24.07, sd = 6.00$ ) had significantly higher life satisfaction compared to single ones ( $m = 20.91, sd = 6.30$ ).

Another one-way ANOVA was run and results indicated that the levels of perceived income differed significantly on life satisfaction [ $F(2, 301) = 22.24, p < .001$ ]. More precisely, participants with high income level ( $m = 28.42, sd = 6.13$ ) had significantly higher life satisfaction than participants with middle ( $m = 23.71, sd = 5.41$ ) and low income levels ( $m = 19.09, sd = 7.25$ ). Moreover, participants with middle income level had significantly higher life satisfaction than those with low income levels.

Moreover, the results of one-way ANOVAs indicated that there were not significant differences between the levels of education [ $F(7, 296) = 1.73, p > .05$ ], working status [ $F(2, 301) = 1.48, p > .05$ ], residence [ $F(3, 300) = 1.70, p > .05$ ] and living arrangement [ $F(5, 298) = 1.87, p > .05$ ] in terms of life satisfaction (see Table 8).

Table 8. Differences among the Levels of Demographic Variables in terms of Study Variables

Variable	Positive Affect			Negative Affect			Life Satisfaction			
	M	SD	t	M	SD	t	M	SD	t	
Age Group			1.78			3.03**			-2.70**	
Younger	33.40	6.87		18.72 <sup>a</sup>	6.64		22.52 <sup>a</sup>	6.27		
Older	31.85	8.19		16.60 <sup>b</sup>	5.47		24.41 <sup>b</sup>	5.89		
Gender			-0.26			-1.08			-0.96	
Female	32.73	7.31		18.02	6.09		23.77	5.78		
Male	32.51	7.91		17.25	6.25		23.09	6.57		
Education			-			-			-	1.73
Illiterate	27.75 <sup>abc</sup>	12.53		22.50	4.65		24.25	5.12		
Literate	30.17 <sup>abc</sup>	8.38		20.17	7.36		21.67	8.43		
Primary School	28.76 <sup>a</sup>	9.12		17.47	5.82		22.87	5.96		
Secondary School	30.17 <sup>ab</sup>	7.76		15.83	4.96		21.50	6.69		
High School	32.04 <sup>abc</sup>	7.22		18.35	6.11		22.84	6.44		
University	33.34 <sup>bc</sup>	6.54		17.61	6.31		23.52	6.06		
Master	37.17 <sup>c</sup>	7.67		17.03	6.36		26.70	4.84		
Ph.D.	36.00 <sup>abc</sup>	4.95		17.00	6.12		22.20	6.94		
Marital Status			-			-			-	4.89**
Married	32.68	7.39		16.92 <sup>a</sup>	5.41		24.07 <sup>a</sup>	6.00		
Single	32.61	7.80		20.02 <sup>b</sup>	7.46		20.91 <sup>b</sup>	6.30		
Divorced	34.00	10.71		17.00 <sup>b</sup>	9.09		25.80 <sup>ab</sup>	5.43		
Widowed	31.55	7.94		21.00 <sup>b</sup>	7.35		21.23 <sup>ab</sup>	6.07		

Table 8 (continued)

Variable	Positive Affect			Negative Affect			Life Satisfaction		
	M	SD	t	M	SD	t	M	SD	t
Having a child or not			-67			-1.20			2.50*
Yes	32.47	7.63		17.43	5.81		23.95 <sup>a</sup>	5.93	
No	33.15	7.45		18.43	7.20		21.89 <sup>b</sup>	6.61	
Working Status									
Working	33.59 <sup>a</sup>	7.02		18.25	6.50		23.04	6.17	
Not Working	30.19 <sup>b</sup>	8.02		17.91	6.80		22.84	6.23	
Retired	32.32 <sup>ab</sup>	7.94		16.82	5.40		24.24	6.07	
Residence									
Metropolis	33.76 <sup>a</sup>	6.99		17.11	6.34		24.02	6.12	
City	32.23 <sup>ab</sup>	7.88		18.53	5.66		23.30	5.76	
Town	30.36 <sup>b</sup>	8.19		18.51	5.57		21.94	6.58	
Village	28.33 <sup>b</sup>	8.42		18.40	7.54		22.60	5.85	
Income Level									
Low	29.35 <sup>a</sup>	8.90		19.49	6.13		19.09 <sup>a</sup>	7.25	
Middle	32.93 <sup>b</sup>	7.11		17.51	5.87		23.71 <sup>b</sup>	5.41	
High	35.35 <sup>b</sup>	7.72		16.04	8.17		28.42 <sup>c</sup>	6.13	
									22.24**

Table 8 (continued)

Variable	Positive Affect			Negative Affect			Life Satisfaction					
	<i>M</i>	<i>SD</i>	<i>t</i>	<i>F</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>F</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>F</i>
Living Arrangement			–	.47			–	3.15**			–	1.87
Alone	32.87	9.73			19.84 <sup>ab</sup>	8.30			22.10	6.81		
Spouse	32.44	7.83			16.49 <sup>a</sup>	5.51			24.58	6.04		
Spouse and Children	32.93	6.91			17.47 <sup>ab</sup>	5.29			23.38	5.91		
Children	31.92	6.40			21.69 <sup>b</sup>	8.88			22.00	6.63		
Close Relatives	34.91	8.58			18.55 <sup>ab</sup>	6.22			21.73	5.76		
Others	31.00	6.47			19.14 <sup>ab</sup>	6.89			21.48	6.23		
Physical Health Problems			–3.69**	–			1.69	–			–1.88	–
Yes	28.88 <sup>a</sup>	9.07			18.88	6.01			22.12	6.70		
No	33.53 <sup>b</sup>	6.90			17.38	6.18			23.78	5.98		
Treatment for Physical Problems			–3.81**	–			1.42	–			–1.89	–
Yes	28.40 <sup>a</sup>	9.12			18.77	5.76			22.00	6.24		
No	33.50 <sup>b</sup>	6.93			17.44	6.24			23.76	6.10		
Psychological Health Problems			–2.15*	–			.39	–			–.30	–
Yes	28.82 <sup>a</sup>	8.92			18.24	6.49			22.88	8.17		
No	32.86 <sup>b</sup>	7.45			17.63	6.16			23.49	6.03		
Treatment for Psychological Problems			–2.38*	–			.61	–			.00	–
Yes	27.77 <sup>a</sup>	8.23			18.69	7.06			23.46	7.34		
No	32.85 <sup>b</sup>	7.49			17.62	6.13			23.46	6.11		

Note 1. \* $p < .05$ , \*\* $p < .01$

Note 2. Means that do not share the same superscript are significantly different from each other at least at  $p < .05$

### **3.1.3. Correlational Analyses among the Study Variables**

#### **3.1.3.1. Correlational Analyses among the Study Variables for Younger Participants**

Pearson correlation analyses were carried out to investigate the linear associations among the variables of study for younger participants aged between 25 and 40. The results are presented in Table 9.

Of the subscales of Cognitive Emotion Regulation Questionnaire, self-blame was positively correlated with acceptance ( $r = .54, p < .01$ ), rumination ( $r = .52, p < .01$ ), catastrophizing ( $r = .25, p < .01$ ), and blaming others ( $r = .21, p < .05$ ). Acceptance was positively correlated with rumination ( $r = .41, p < .01$ ) and catastrophizing ( $r = .18, p < .05$ ).

Rumination was positively correlated with refocus on planning ( $r = .45, p < .01$ ), positive reappraisal ( $r = .41, p < .01$ ), and putting into perspective ( $r = .33, p < .01$ ). Moreover, positive refocusing was positively correlated with refocus on planning ( $r = .56, p < .01$ ), positive reappraisal ( $r = .65, p < .01$ ), putting into perspective ( $r = .47, p < .01$ ), whereas negatively correlated with catastrophizing ( $r = -.21, p < .01$ ) and blaming others ( $r = -.20, p < .05$ ).

Refocus on planning was positively correlated with positive reappraisal ( $r = .79, p < .01$ ) and putting into perspective ( $r = .43, p < .01$ ), whereas negatively correlated with catastrophizing ( $r = -.24, p < .01$ ). There was a positive correlation between positive reappraisal and putting into perspective ( $r = .63, p < .01$ ). This subscale of Cognitive Emotion Regulation Questionnaire was negatively correlated with catastrophizing ( $r = -.27, p < .01$ ). Putting into perspective was negatively correlated with catastrophizing ( $r = -.25, p < .01$ ); and catastrophizing was positively correlated with blaming others ( $r = .46, p < .01$ ).

Positive affect was positively correlated with positive refocusing ( $r = .33, p < .01$ ), refocus on planning ( $r = .35, p < .01$ ), and positive reappraisal ( $r = .33, p < .01$ ). Negative affect was positively correlated with catastrophizing ( $r = .24, p < .01$ ) and blaming others ( $r = .16, p < .05$ ), whereas negatively correlated with positive refocusing ( $r = -.17, p < .05$ ). Life satisfaction was positively correlated with positive affect ( $r = .36, p < .01$ ), whereas negatively correlated with catastrophizing ( $r = -.17, p < .05$ ) and negative affect ( $r = -.21, p < .01$ ).

Table 9

*Correlations among the Study Variables for Younger Participants*

	1	2	3	4	5	6	7	8	9	10	11	12
1. Self-Blame												
	(.68)											
2. Acceptance	.54**											
	(.68)											
3. Rumination	.52**	.41**										
	(.68)	(.68)										
4. Positive Refocusing	-.11	.04	.14									
	(.76)	(.76)	(.76)									
5. Refocus on Planning	.01	.03	.45**	.56**								
	(.76)	(.76)	(.76)	(.76)								
6. Positive Reappraisal	.01	.07	.41**	.65**	.79**							
	(.80)	(.80)	(.80)	(.80)	(.80)							
7. Putting into Perspective	.07	.14	.33**	.47**	.43**	.63**						
	(.74)	(.74)	(.74)	(.74)	(.74)	(.74)						
8. Catastrophizing	.25**	.18*	.01	-.21**	-.24**	-.27**	-.25**					
	(.76)	(.76)	(.76)	(.76)	(.76)	(.76)	(.76)					
9. Blaming Others	.21*	.13	.11	-.20*	-.16	-.15	-.07	.46**				
	(.74)	(.74)	(.74)	(.74)	(.74)	(.74)	(.74)	(.74)				
10. Positive Affect	-.04	-.10	.09	.33**	.35**	.33**	.11	-.09	-.11			
	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)			
11. Negative Affect	.08	.06	.03	-.17*	-.14	-.11	-.08	.24**	.16*	-.05		
	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)		
12. Life Satisfaction	.06	-.10	.02	.12	.08	.08	.09	-.17*	-.15	.36**	-.21**	
	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)	(.83)

Note 1. \* $p < .05$ , \*\* $p < .01$

Note 2. Scores within the parentheses indicate Cronbach's alpha coefficients of the variables for younger participants

### 3.1.3.2. Correlational Analyses among the Study Variables for Older Participants

Pearson correlation analyses were conducted in order to investigate the linear associations among the study variables for older participants aged between 65 and 80. The results are presented in Table 10.

Of the subscales of Cognitive Emotion Regulation Questionnaire, self-blame was positively correlated with acceptance ( $r = .43, p < .01$ ), rumination ( $r = .46, p < .01$ ), putting into perspective ( $r = .24, p < .01$ ), catastrophizing ( $r = .22, p < .01$ ), and blaming others ( $r = .27, p < .01$ ). Acceptance was positively correlated with rumination ( $r = .42, p < .01$ ), refocus on planning ( $r = .17, p < .05$ ), positive reappraisal ( $r = .16, p < .05$ ), putting into perspective ( $r = .21, p < .01$ ), and blaming others ( $r = .31, p < .01$ ). Moreover, rumination was positively correlated with refocus on planning ( $r = .44, p < .01$ ), positive reappraisal ( $r = .33, p < .01$ ), and putting into perspective ( $r = .35, p < .01$ ).

Positive refocusing was positively correlated with refocus on planning ( $r = .56, p < .01$ ), positive reappraisal ( $r = .65, p < .01$ ) and putting into perspective ( $r = .47, p < .01$ ), whereas negatively correlated with blaming others ( $r = -.25, p < .01$ ). Refocus on planning was positively correlated with positive reappraisal ( $r = .76, p < .01$ ) and putting into perspective ( $r = .57, p < .01$ ), whereas negatively correlated with catastrophizing ( $r = -.35, p < .01$ ). Furthermore, positive reappraisal was positively correlated with putting into perspective ( $r = .56, p < .01$ ), whereas negatively correlated with catastrophizing ( $r = -.28, p < .01$ ) and blaming others ( $r = -.19, p < .01$ ). Blaming others was also positively correlated with catastrophizing ( $r = .34, p < .01$ ) and putting into perspective ( $r = .18, p < .05$ ).

Positive affect was found to be positively correlated with positive refocusing ( $r = .39, p < .01$ ), refocus on planning ( $r = .52, p < .01$ ), putting into perspective ( $r = .44, p < .01$ ), positive reappraisal ( $r = .45, p < .01$ ) and rumination ( $r = .35, p < .01$ ). Negative affect was positively correlated with catastrophizing ( $r = .22, p < .01$ ) and blaming others ( $r = .22, p < .05$ ), whereas negatively correlated with positive refocusing ( $r = -$

.27,  $p < .01$ ), refocus on planning ( $r = -.23$ ,  $p < .01$ ), positive reappraisal ( $r = -.28$ ,  $p < .01$ ) and positive affect ( $r = -.17$ ,  $p < .05$ ). Moreover, life satisfaction was positively correlated with positive refocusing ( $r = .31$ ,  $p < .01$ ), refocus on planning ( $r = .19$ ,  $p < .05$ ), positive reappraisal ( $r = .29$ ,  $p < .01$ ), putting into perspective ( $r = .22$ ,  $p < .01$ ) and positive affect ( $r = .41$ ,  $p < .01$ ), whereas negatively correlated with negative affect ( $r = -.33$ ,  $p < .01$ ).

Table 10

*Correlations among the Study Variables for Older Participants*

	1	2	3	4	5	6	7	8	9	10	11	12
1. Self-Blame	(.69)											
2. Acceptance	.43**	(.43)										
3. Rumination	.46**	.42**	(.65)									
4. Positive Refocusing	-.10	-.04	.12	(.76)								
5. Refocus on Planning	.14	.17*	.44**	.53**	(.82)							
6. Positive Reappraisal	.04	.16*	.33**	.61**	.76**	(.76)						
7. Putting into Perspective	.24**	.21**	.35**	.36**	.57**	.56**	(.75)					
8. Catastrophizing	.22**	.06	.01	-.14	-.35**	-.28**	-.08	(.75)				
9. Blaming Others	.27**	.31**	.12	-.25**	-.05	-.19*	.18*	.34**	(.74)			
10. Positive Affect	.06	.15	.35**	.39**	.52**	.44**	.45**	-.12	.00	(.91)		
11. Negative Affect	.07	.05	-.11	-.27**	-.23**	-.28**	-.13	.22**	.22*	-.17*	(.82)	
12. Life Satisfaction	-.10	-.00	.03	.31**	.19*	.29**	.22**	-.12	-.07	.41**	-.33**	(.85)

Note 1. \* $p < .05$ , \*\* $p < .01$

Note 2. Scores within the parentheses indicate Cronbach's alpha coefficients of the variables for older participants

### **3.1.3.3. Comparing the Results of Correlation Analyses Run for Younger and Older Participants**

Considering cognitive emotion regulation strategies, self-blame was positively correlated with acceptance, rumination, catastrophizing and blaming others in both younger and older participants. However, the significant correlation between self-blame and putting into perspective was revealed only in older sample. There was a significant positive correlation between acceptance and rumination in both younger and older participants. Although acceptance was positively correlated with catastrophizing in younger participants, it was significantly correlated with refocus on planning, putting into perspective, positive reappraisal and blaming others in older participants. Furthermore, rumination was positively correlated with refocus on planning, positive reappraisal and putting into perspective in both younger and older participants.

In both younger and older participants, positive refocusing was positively correlated with refocus on planning, putting into perspective and positive reappraisal and negatively correlated with blaming others. However, the significant negative correlation between positive refocusing and catastrophizing was revealed only in younger participants. Refocus on planning was positively correlated with putting into perspective and positive reappraisal and negatively correlated with catastrophizing in both younger and older participants. Moreover, positive reappraisal was positively correlated with putting into perspective and negatively correlated with catastrophizing in both younger and older participants. However, the negative correlation between positive reappraisal and blaming others was revealed only in older participants. Lastly, putting into perspective was negatively correlated with catastrophizing in younger participants and positively correlated with blaming others in older participants.

Considering the well-being indicators, in both younger and older participants, positive affect was positively correlated with positive refocusing, refocus on planning and positive reappraisal. Although it was also positively correlated with putting into perspective and rumination in older participants, these correlations were not significant

in younger participants. Negative affect was positively correlated with catastrophizing and blaming others and negatively correlated with positive refocusing in both younger and older participants. It was also found to be negatively correlated with refocus on planning, positive reappraisal and positive affect in older participants. Furthermore, life satisfaction was positively correlated with positive affect and negatively correlated with negative affect in both younger and older participants. However, the significant positive correlation of life satisfaction with positive refocusing, refocus on planning, positive reappraisal and putting into perspective was revealed only in older participants.

### **3.2. Multiple Mediation Analyses**

In the present study, multiple mediation analyses were carried out to investigate the mediator role of cognitive emotion regulation strategies in the relation between age and affect/life satisfaction relations. Bootstrapping method with 5000 bootstrap samples was applied. The random resampling of data is produced with bootstrapping, the process of which is repeated thousands of time, and the bootstrap confidence intervals are obtained. Differently from the normal theory approach, bootstrapping does not require an assumption for the shape of the distribution of  $ab$  (Hayes, 2013; Kane & Ashbaugh, 2017).

#### **3.2.1. Mediating Role of Cognitive Emotion Regulation Strategies in the Age Group–Positive Affect Relation**

Multiple mediation analysis was performed to examine the mediator role of cognitive emotion regulation strategies in the relation between age group and positive affect. The results indicated that age group was indirectly related to positive affect through its association with positive refocusing. For the indirect effect of positive refocusing ( $a_4b_4 = .42$ ), a bias corrected confidence interval based on 5000 bootstrap samples was above zero (.048 to .908). However, after adding education, working status, residence, perceived income level and presence of a physical or psychological health problem as covariates to statistically control their effects, the indirect relation between age group

and positive affect through positive refocusing became nonsignificant (hypothesis 4a was rejected). Covariates were decided on based on the results of the analysis of variance. The summary of the results was presented in Tables 11 and 12. Higher positive refocusing was related to higher positive affect ( $b_4 = .36, p < .001$ ) (hypothesis 3b<sub>vi</sub> was accepted). Furthermore, higher refocus on planning was related to higher positive affect ( $b_5 = .69, p < .001$ ) (hypothesis 3b<sub>viii</sub> was accepted). Other cognitive emotion regulation strategies were not significantly associated with positive affect (hypotheses 3b<sub>i</sub>, 3b<sub>ii</sub>, 3b<sub>iii</sub>, 3b<sub>iv</sub>, 3b<sub>v</sub>, 3b<sub>vii</sub>, and 3b<sub>ix</sub> were rejected). Both the direct ( $c' = 2.06, p > .05$ ) and the total ( $c = .48, p > .05$ ) effects of age group on positive affect through nine mediators were nonsignificant. The results indicated that the model accounted for 32% of variance in positive affect [ $F(16, 287) = 8.46, p < .001$ ] (see Figure 1).

Table 11

*Summary of the Results for Model 1*

Independent Variable	Mediator	Dependent Variable	Mediation	Confidence Interval
Age Group	Self-blame	Positive Affect	No	Not Significant
Age Group	Acceptance	Positive Affect	No	Not Significant
Age Group	Rumination	Positive Affect	No	Not Significant
Age Group	Positive Refocusing	Positive Affect	No	Not Significant
Age Group	Refocus on Planning	Positive Affect	No	Not Significant
Age Group	Positive Reappraisal	Positive Affect	No	Not Significant
Age Group	Putting into Perspective	Positive Affect	No	Not Significant
Age Group	Catastrophizing	Positive Affect	No	Not Significant
Age Group	Blaming Others	Positive Affect	No	Not Significant

Table 12. *The Summary of the Mediation Analysis with Positive Affect*

	Antecedent			Consequent								
	Self-blame			Acceptance		Rumination		Positive Refocusing		Refocus on Planning		
	Coeff.	SE	p	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	p
Age Group	-.57	.60	.35	.25	.58	.67	.61	.14	.62	.93	.62	.09
Self-blame	-	-	-	-	-	-	-	-	-	-	-	-
Acceptance	-	-	-	-	-	-	-	-	-	-	-	-
Rumination	-	-	-	-	-	-	-	-	-	-	-	-
Positive	-	-	-	-	-	-	-	-	-	-	-	-
Refocusing	-	-	-	-	-	-	-	-	-	-	-	-
Refocus on	-	-	-	-	-	-	-	-	-	-	-	-
Planning	-	-	-	-	-	-	-	-	-	-	-	-
Positive	-	-	-	-	-	-	-	-	-	-	-	-
Reappraisal	-	-	-	-	-	-	-	-	-	-	-	-
Putting into	-	-	-	-	-	-	-	-	-	-	-	-
Perspective	-	-	-	-	-	-	-	-	-	-	-	-
Catastrophizing	-	-	-	-	-	-	-	-	-	-	-	-
Blaming Others	-	-	-	-	-	-	-	-	-	-	-	-
Income Level	-.39	.35	.27	-.02	.34	.95	.24	.50	.36	-.02	.36	.67
Working Status	-.28	.31	.38	.08	.30	.80	.25	.43	.32	1.20	.32	.00
Education	.11	.14	.44	.20	.13	.14	.25	.08	.14	.13	.14	.10
Residence	-.13	.19	.49	-.07	.19	.69	-.19	.20	.20	-.12	.20	.60
Physical Illness	-.51	.45	.26	-.91	.43	.04	-.78	.45	.46	1.78	.46	.01
Psychological Illness	-1.10	.70	.12	.69	.67	.31	-.95	.70	.71	-.21	.71	.43
Constant	14.98	1.80	.00	11.09	1.73	.00	15.86	1.81	1.85	8.91	1.85	.00
	$R^2 = .06$			$R^2 = .03$			$R^2 = .05$			$R^2 = .12$		
	$F(7,296) = 2.68,$			$F(7,296) = 1.39,$			$F(7,296) = 2.10$			$F(7,296) = 5.78,$		
	$p = .01$			$p = .21$			$p = .04$			$p = .00$		
										$R^2 = .09$		
										$F(7,296) = 4.03,$		
										$p = .00$		

Table 12 (continued)

Antecedent	Consequent														
	Positive Reappraisal			Putting into Perspective			Catastrophizing			Blaming Others			Positive Affect		
	Coeff.	SE	p	Coeff.	SE	p	Coeff.	SE	p	Coeff.	SE	p	Coeff.	SE	p
Age Group	-.88	.65	.18	-1.55	.67	.02	-.72	.71	.31	1.11	.60	.07	2.06	1.47	.16
Self-blame	-	-	-	-	-	-	-	-	-	-	-	-	-.07	.18	.68
Acceptance	-	-	-	-	-	-	-	-	-	-	-	-	-.16	.17	.34
Rumination	-	-	-	-	-	-	-	-	-	-	-	-	.20	.18	.27
Positive	-	-	-	-	-	-	-	-	-	-	-	-	.36	.17	.04
Refocusing	-	-	-	-	-	-	-	-	-	-	-	-	.69	.22	.00
Refocus on Planning	-	-	-	-	-	-	-	-	-	-	-	-	-.01	.23	.95
Positive Reappraisal	-	-	-	-	-	-	-	-	-	-	-	-	.31	.16	.05
Putting into Perspective	-	-	-	-	-	-	-	-	-	-	-	-	.19	.14	.16
Catastrophizing	-	-	-	-	-	-	-	-	-	-	-	-	-.04	.16	.78
Blaming Others	.01	.38	.97	-.44	.39	.27	-.18	.42	.66	-.19	.35	.59	1.85	.84	.03
Income Level	.93	.34	.01	1.12	.35	.00	-.10	.37	.79	-.39	.31	.21	-1.33	.77	.08
Working Status	.12	.15	.42	-.00	.15	.99	-.16	.16	.32	.02	.14	.90	.92	.33	.01
Education	-.17	.21	.43	-.33	.22	.12	.18	.23	.42	-.16	.19	.42	-.33	.46	.48
Residence	1.17	.49	.02	.46	.50	.36	-.93	.53	.08	-.55	.45	.22	1.88	1.11	.09
Physical Illness	.44	.75	.56	-.29	.77	.71	-.75	.82	.36	-.21	.70	.77	2.93	1.67	.08
Psychological Illness	10.84	1.95	.00	14.83	2.00	.00	14.10	2.12	.00	12.02	1.80	.00	-3.97	5.39	.46
Constant	$R^2 = .06$			$R^2 = .05$			$R^2 = .03$			$R^2 = .02$			$R^2 = .32$		
	$F(7,296) = 2.51,$			$F(7,296) = 2.20,$			$F(7,296) = 1.46$			$F(7,296) = .99,$			$F(16,287) = 8.46,$		
	$p = .02$			$p = .03$			$p = .18$			$p = .44$			$p = .00$		

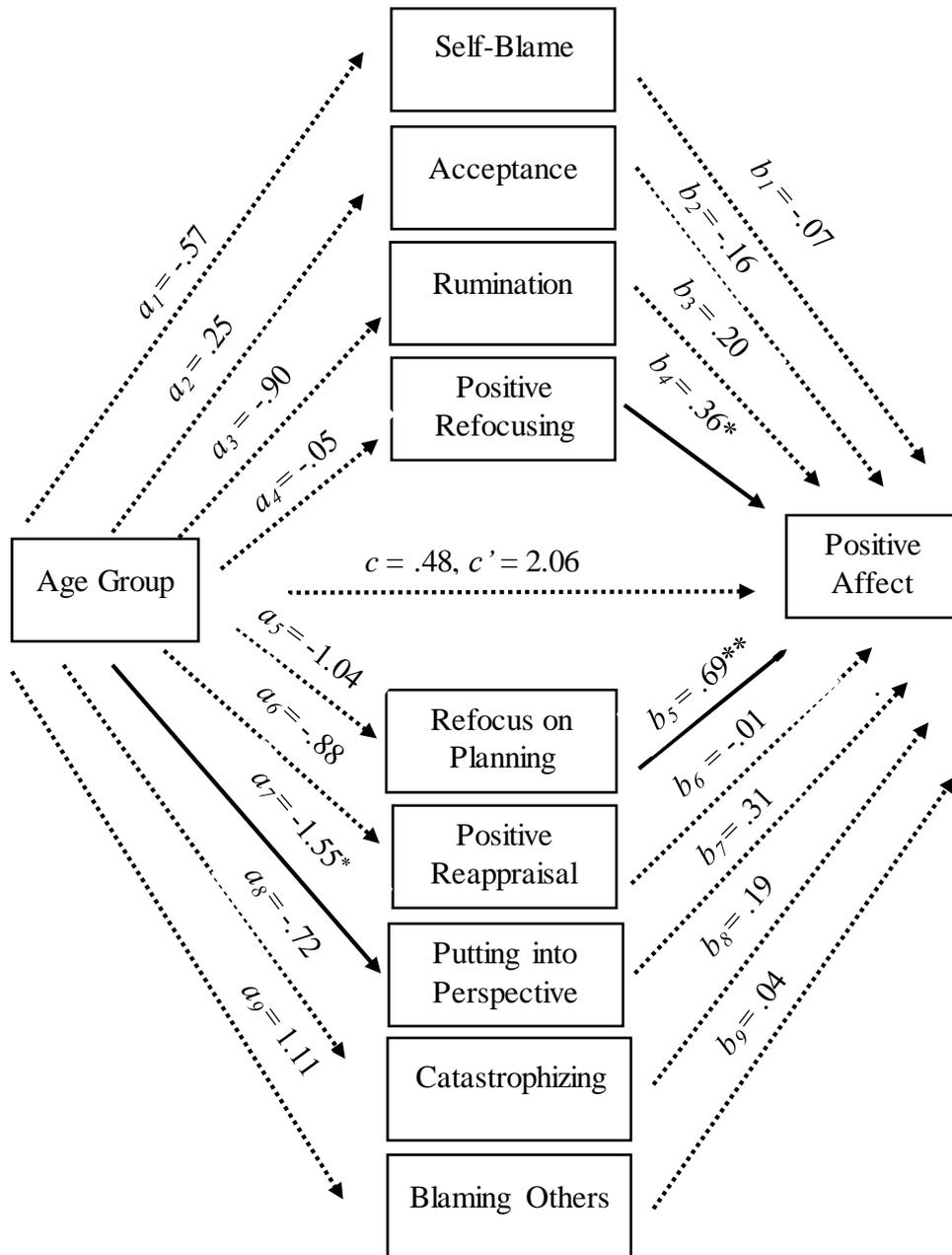


Figure 1. Multiple mediation model (Model 1) using the mediating role of cognitive emotion regulation strategies in the relation between age group and positive affect

Note 1. \* $p < .05$ , \*\* $p < .01$

Note 2. Dashed lines indicate non-significant paths

Note 3. Covariates were not included to prevent visual clutter

### 3.2.2. Mediating Role of Cognitive Emotion Regulation Strategies in the Age Group–Negative Affect Relation

In order to examine the mediator role of cognitive emotion regulation strategies in the relation between age group and negative affect, another multiple mediation analysis was carried out. Marital status and living arrangement were included as covariates in order to control their effects. Covariates were decided on based on the results of the analysis of variance. The mediation analysis with and without covariates produced similar results. According to the findings, positive refocusing mediated age group–negative affect relation. In other words, age group was indirectly related to negative affect through its relation with positive refocusing. For the indirect effect of positive refocusing ( $a_4b_4 = -.35$ ), a bias corrected confidence interval based on 5000 bootstrap samples did not include zero (-.8189 to -.0044) (see Table 13). Older participants reported higher scores on positive refocusing ( $a_4 = 1.04, p < .01$ ) and higher positive refocusing was subsequently related to lower negative affect ( $b_4 = -.33, p < .05$ ) (hypothesis 3c<sub>vi</sub> was accepted). Higher catastrophizing was also related to higher negative affect ( $b_8 = .29, p < .05$ ) (hypothesis 3c<sub>iii</sub> was accepted). Other cognitive emotion regulation strategies were not significantly associated with negative affect (hypotheses 3c<sub>i</sub>, 3c<sub>ii</sub>, 3c<sub>iv</sub>, 3c<sub>v</sub>, 3c<sub>vii</sub>, 3c<sub>viii</sub>, and 3c<sub>ix</sub> were rejected). Furthermore, both the direct ( $c' = -2.05, p < .01$ ) and the total ( $c = -2.41, p < .01$ ) effects of age group on negative affect through all nine mediators were significant. According to the results, the model explained 15% of the variance in negative affect [ $F(12, 291) = 4.38, p < .001$ ] (see Figure 2). The summary of the result was presented in Tables 14 and 15.

Table 13

#### *Bootstrap Results for Model 2*

	Unstandardized		%95 Bias Corrected		Standardized	
	Coefficients		Confidence Intervals		Coefficients	
Indirect Effect	B	Standard Error	Lower	Upper	$\beta$	Standard Error
Positive Refocusing	-.35*	.21	-.8189	-.0044	-.06*	.03

Note. \* $p < .05$

Table 14

*Summary of the Results for Model 2*

Independent Variable	Mediator	Dependent Variable	Mediation	Confidence Interval
Age Group	Self-blame	Negative Affect	No	Not Significant
Age Group	Acceptance	Negative Affect	No	Not Significant
Age Group	Rumination	Negative Affect	No	Not Significant
Age Group	Positive Refocusing	Negative Affect	Yes	Significant
Age Group	Refocus on Planning	Negative Affect	No	Not Significant
Age Group	Positive Reappraisal	Negative Affect	No	Not Significant
Age Group	Putting into Perspective	Negative Affect	No	Not Significant
Age Group	Catastrophizing	Negative Affect	No	Not Significant
Age Group	Blaming Others	Negative Affect	No	Not Significant

Table 15. The Summary of the Mediation Analysis with Negative Affect

	Antecedent			Consequent											
	Self-blame Coeff.	SE	p	Acceptance Coeff.	SE	p	Rumination Coeff.	SE	p	Positive Refocusing Coeff.	SE	p	Refocus on Planning Coeff.	SE	p
Age Group	-1.06	.34	.00	.43	.33	.19	-.40	.34	.24	1.04	.36	.00	.36	.35	.31
Self-blame	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acceptance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rumination	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Positive	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refocusing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refocus on	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Planning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Positive	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reappraisal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Putting into	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perspective	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Catatrophizing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blaming Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Marital Status	.10	.18	.58	.02	.18	.93	-.17	.19	.35	-.15	.20	.43	-.42	.19	.03
Living	.02	.14	.89	.05	.13	.73	.20	.14	.16	.03	.15	.86	.39	.14	.01
Arrangement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Constant	11.21	.53	.00	11.30	.51	.00	13.50	.53	.00	12.70	.56	.00	14.23	.55	.00
	$R^2 = .04$			$R^2 = .01$			$R^2 = .02$			$R^2 = .03$			$R^2 = .04$		
	$F(3,300) = 3.96,$			$F(3,300) = .60,$			$F(3,300) = 2.11$			$F(3,300) = 3.10,$			$F(3,300) = 3.71,$		
	$p = .01$			$p = .62$			$p = .10$			$p = .03$			$p = .01$		

Table 15 (continued)

Antecedent	Consequent														
	Positive Reappraisal			Putting into Perspective			Catastrophizing			Blaming Others			Negative Affect		
	Coeff.	SE	p	Coeff.	SE	p	Coeff.	SE	p	Coeff.	SE	p	Coeff.	SE	p
Age Group	.17	.37	.64	-.22	.38	.56	-.55	.40	.17	.55	.34	.10	-2.05	.77	.01
Self-blame	-	-	-	-	-	-	-	-	-	-	-	-	.01	.16	.96
Acceptance	-	-	-	-	-	-	-	-	-	-	-	-	.08	.15	.59
Rumination	-	-	-	-	-	-	-	-	-	-	-	-	-.06	.16	.71
Positive	-	-	-	-	-	-	-	-	-	-	-	-	-.33	.15	.03
Refocusing	-	-	-	-	-	-	-	-	-	-	-	-	-.05	.20	.79
Refocus on Planning	-	-	-	-	-	-	-	-	-	-	-	-	.08	.21	.71
Positive	-	-	-	-	-	-	-	-	-	-	-	-	-.06	.14	.68
Reappraisal	-	-	-	-	-	-	-	-	-	-	-	-	.29	.12	.02
Putting into Perspective	-	-	-	-	-	-	-	-	-	-	-	-	.16	.14	.26
Catastrophizing	-	-	-	-	-	-	-	-	-	-	-	-	.34	.18	.06
Blaming Others	-.44	.20	.03	.13	.21	.54	.25	.22	.25	.34	.18	.06	1.33	.40	.00
Marital Status	.20	.15	.18	.04	.15	.81	-.23	.16	.16	.05	.14	.70	.00	.30	.99
Living Arrangement	14.46	.58	.00	13.74	.59	.00	10.30	.62	.00	9.36	.52	.00	16.92	3.04	.00
Constant	$R^2 = .02$ $F(3,300) = 2.04,$ $p = .11$			$R^2 = .00$ $F(3,300) = .31,$ $p = .82$			$R^2 = .01$ $F(3,300) = 1.21$ $p = .30$			$R^2 = .02$ $F(3,300) = 2.37,$ $p = .07$			$R^2 = .15$ $F(12,291) = 4.38,$ $p = .00$		

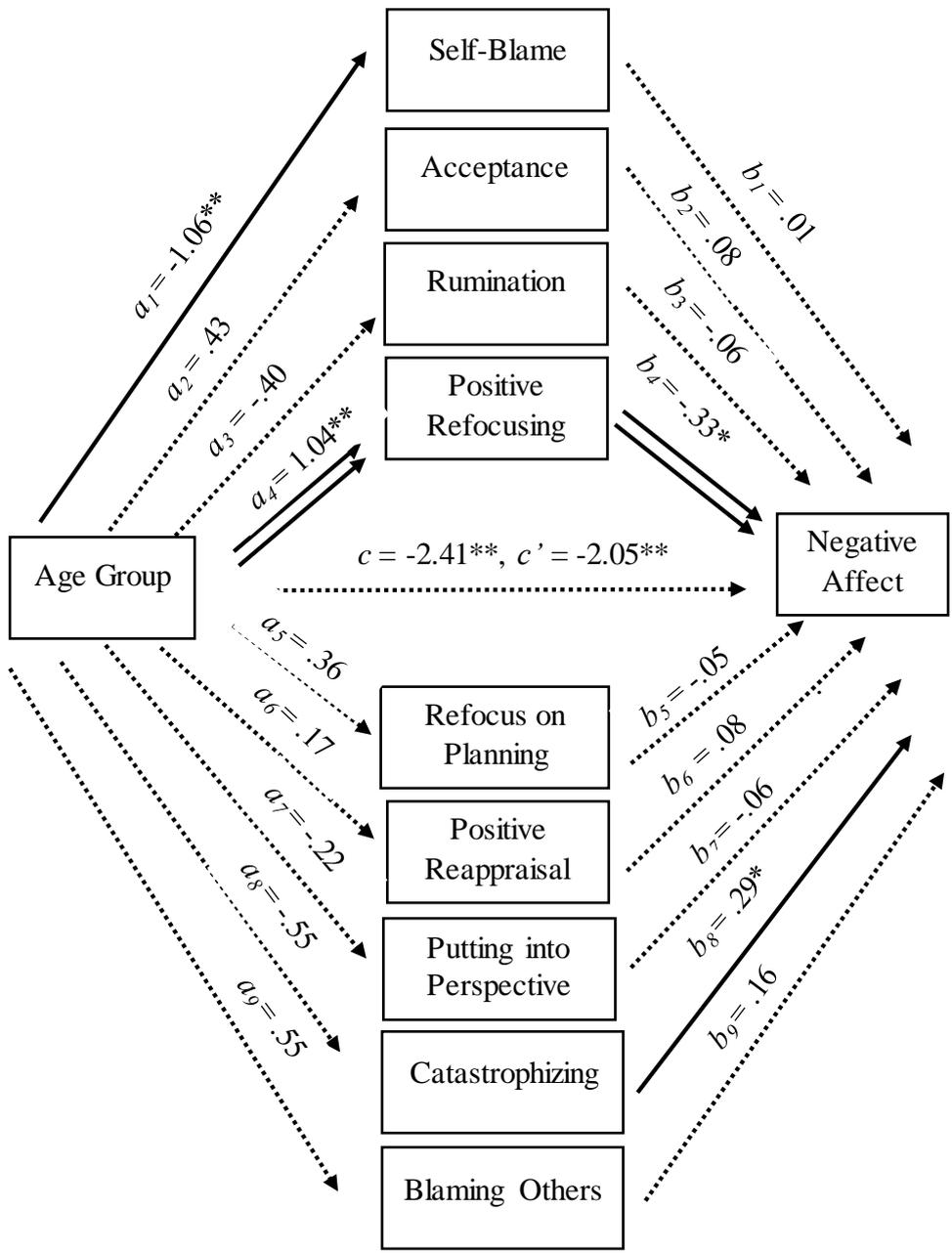


Figure 2. Multiple mediation model (Model 2) using the mediating role of cognitive emotion regulation strategies in the relation between age group and negative affect

Note 1.  $*p < .05$ ,  $**p < .01$

Note 2. Double lines indicate mediation

Note 3. Dashed lines indicate non-significant paths

Note 4. Covariates were not included to prevent visual clutter

### 3.2.3. Mediating Role of Cognitive Emotion Regulation Strategies in the Age Group – Life Satisfaction Relation

A multiple mediation analysis was conducted to investigate the mediator role of cognitive emotion regulation strategies in the relation between age group and life satisfaction. Perceived income level, having a child or not and marital status were included as covariates which were decided on based on the results of the analysis of variance. The results of the analysis with and without covariates produced similar findings. The summary of the results was presented in Tables 16 and 17. Both the direct ( $c' = 1.04, p > .05$ ) and the total ( $c = 1.01, p > .05$ ) effects of age group on life satisfaction through nine cognitive emotion regulation strategies were nonsignificant. Moreover, higher positive refocusing was related to higher life satisfaction ( $b_4 = .30, p < .05$ ) (hypothesis 3a<sub>vi</sub> was accepted). Other cognitive emotion regulation strategies were not significantly associated with life satisfaction (hypotheses 3a<sub>i</sub>, 3a<sub>ii</sub>, 3a<sub>iii</sub>, 3a<sub>iv</sub>, 3a<sub>v</sub>, 3a<sub>vii</sub>, 3a<sub>viii</sub>, and 3a<sub>ix</sub> were rejected). There was not any significant indirect relation between age group and life satisfaction (hypothesis 4c was rejected). The results indicated that the model explained 21 % of variance in life satisfaction [ $F(13, 290) = 6.21, p < .01$ ] (see Figure 3).

Table 16

#### *Summary of the Results for Model 3*

Independent Variable	Mediator	Dependent Variable	Mediation	Confidence Interval
Age Group	Self-blame	Life Satisfaction	No	Not Significant
Age Group	Acceptance	Life Satisfaction	No	Not Significant
Age Group	Rumination	Life Satisfaction	No	Not Significant
Age Group	Positive Refocusing	Life Satisfaction	No	Not Significant
Age Group	Refocus on Planning	Life Satisfaction	No	Not Significant
Age Group	Positive Reappraisal	Life Satisfaction	No	Not Significant
Age Group	Putting into Perspective	Life Satisfaction	No	Not Significant
Age Group	Catastrophizing	Life Satisfaction	No	Not Significant
Age Group	Blaming Others	Life Satisfaction	No	Not Significant

Table 17. The Summary of the Mediation Analysis with Life Satisfaction

	Antecedent			Consequent											
	Self-blame		SE	Acceptance		Rumination		Positive Refocusing		Refocus on Planning					
	Coeff.	SE	p	Coeff.	SE	p	Coeff.	SE	p	Coeff.	SE	p			
Age Group	-.84	.37	.03	.36	.36	.31	-.43	.38	.25	.74	.40	.06	-.07	.39	.86
Self-blame	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acceptance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rumination	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Positive	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refocusing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refocus on	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Planning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Positive	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reappraisal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Putting into	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perspective	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Catastrophizing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blaming Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Income Level	-.32	.34	.35	.08	.33	.81	.32	.34	.35	.24	.36	.51	.38	.36	.30
Marital Status	.03	.19	.89	.05	.13	.73	-.16	.19	.42	-.07	.20	.72	-.32	.20	.11
Children	.47	.44	.28	.03	.18	.86	.47	.44	.29	-.55	.46	.24	-.03	.46	.95
Constant	11.76	.77	.00	11.29	.74	.00	13.30	.78	.00	12.46	.82	.00	14.64	.81	.00
	$R^2 = .04$			$R^2 = .01$			$R^2 = .02$			$R^2 = .04$			$R^2 = .02$		
	$F(4,299) = 3.46,$			$F(4,299) = .43,$			$F(4,299) = 1.59$			$F(4,299) = 2.76,$			$F(4,299) = 1.18,$		
	$p = .01$			$p = .79$			$p = .18$			$p = .03$			$p = .32$		

Table 17 (continued)

	Consequent														
	Positive Reappraisal			Putting into Perspective			Catastrophizing			Blaming Others			Life Satisfaction		
	Coeff.	SE	p	Coeff.	SE	p	Coeff.	SE	p	Coeff.	SE	p	Coeff.	SE	p
Age Group	-.04	.41	.92	-.49	.42	.24	-.68	.44	.12	.50	.37	.18	1.04	.79	.19
Self-blame	-	-	-	-	-	-	-	-	-	-	-	-	.23	.15	.14
Acceptance	-	-	-	-	-	-	-	-	-	-	-	-	-.21	.14	.15
Rumination	-	-	-	-	-	-	-	-	-	-	-	-	-.10	.16	.52
Positive	-	-	-	-	-	-	-	-	-	-	-	-	.30	.15	.04
Refocusing	-	-	-	-	-	-	-	-	-	-	-	-	-.20	.19	.28
Refocus on	-	-	-	-	-	-	-	-	-	-	-	-	-.20	.19	.28
Planning	-	-	-	-	-	-	-	-	-	-	-	-	.11	.20	.57
Positive	-	-	-	-	-	-	-	-	-	-	-	-	.11	.20	.57
Reappraisal	-	-	-	-	-	-	-	-	-	-	-	-	.25	.14	.07
Putting into	-	-	-	-	-	-	-	-	-	-	-	-	.25	.14	.07
Perspective	-	-	-	-	-	-	-	-	-	-	-	-	.25	.14	.07
Catastrophizing	-	-	-	-	-	-	-	-	-	-	-	-	-.17	.12	.14
Blaming Others	-	-	-	-	-	-	-	-	-	-	-	-	-.07	.14	.62
Income Level	.15	.37	.69	-.25	.38	.52	-.42	.40	.29	-.04	.34	.90	4.39	.70	.00
Marital Status	-.40	.21	.06	.17	.21	.43	.26	.22	.24	.35	.19	.07	-.51	.40	.20
Children	-.00	.48	.99	-.62	.49	.21	-.92	.51	.07	-.03	.43	.94	-.91	.90	.32
Constant	14.76	.84	.00	14.54	.86	.00	10.77	.90	.00	9.62	.76	.00	13.02	3.18	.00
	$R^2 = .01$			$R^2 = .01$			$R^2 = .02$			$R^2 = .02$			$R^2 = .22$		
	$F(4,299) = 1.11,$			$F(4,299) = .74,$			$F(4,299) = 1.56$			$F(4,299) = 1.74,$			$F(13,290) = 6.21,$		
	$p = .35$			$p = .57$			$p = .19$			$p = .14$			$p = .00$		

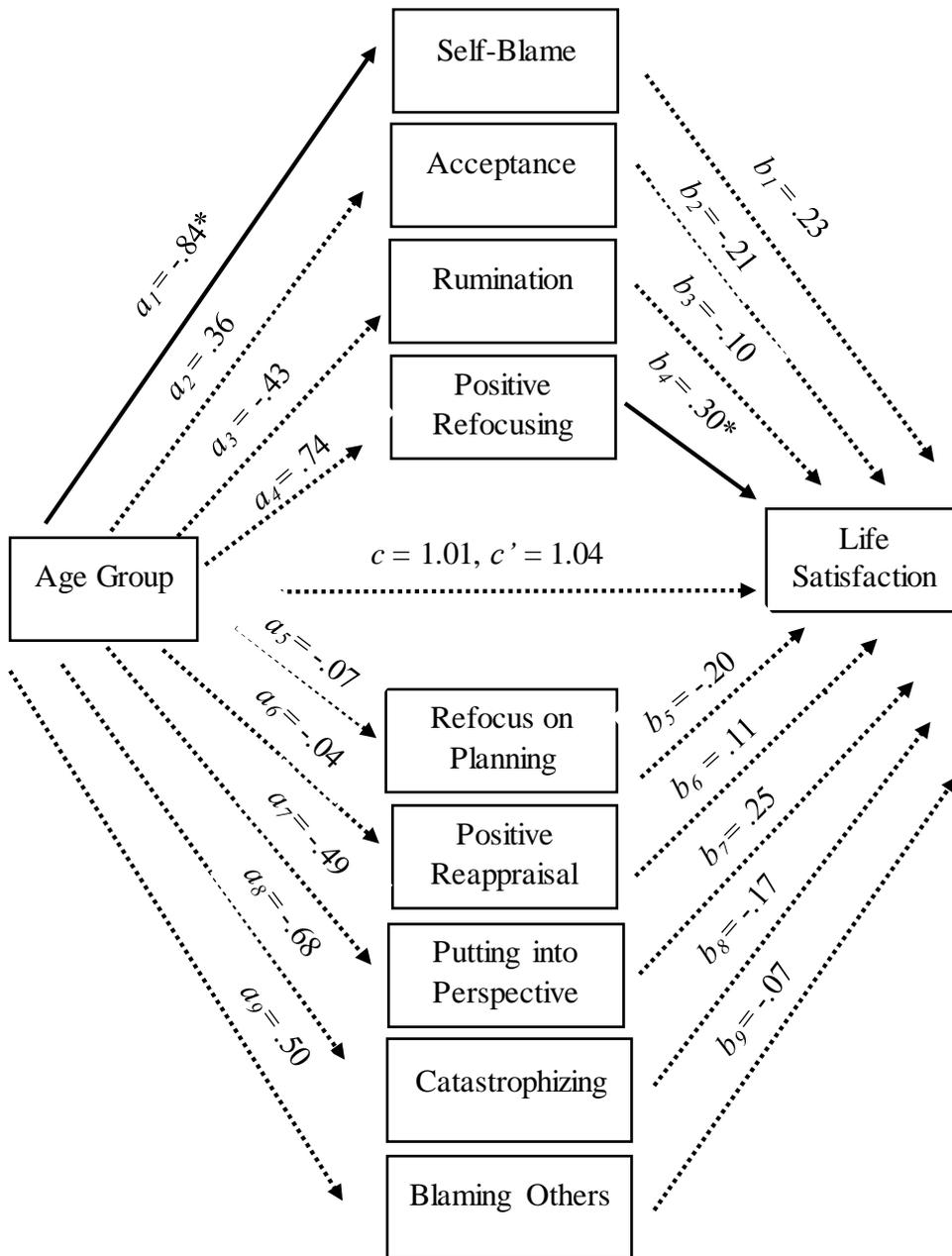


Figure 3. Multiple mediation model (Model 3) using the mediating role of cognitive emotion regulation strategies in the relation between age group and life satisfaction

Note 1.  $*p < .05$ ,  $**p < .01$

Note 2. Dashed lines indicate non-significant paths

Note 3. Covariates were not included to prevent visual clutter

## **CHAPTER 4**

### **DISCUSSION**

The aim of the present study was to examine age-related differences in emotion regulation and subjective well-being and the indirect role of cognitive emotion regulation strategies in the relation between age and well-being indicators. In line with this purpose, firstly, differences among the levels of demographic variables in terms of the study variables were examined. Then, correlation analyses were performed separately for both younger and older participants to investigate the linear associations among the study variables. Lastly, mediation analyses were conducted to examine the mediating role of cognitive emotion regulation strategies in the relations of age group with positive and negative affect and life satisfaction.

This section presents the discussion of the both preliminary and main findings of the present study; as well as the strengths, clinical implications and limitations of the study, directions for future studies, personal experiences related to the study, and the conclusion of the results.

#### **4.1. Differences among the Levels of Demographic Variables in terms of the Study Variables**

##### **4.1.1. Differences among Younger and Older Participants in terms of the Study Variables**

In the present study, younger participants had higher scores on self-blame and lower scores on positive refocusing than older ones. This finding was in parallel with previous studies suggesting that maladaptive emotion regulation strategies were used less frequently by older adults than younger ones and age was positively related to adaptive emotion regulation (e.g., Schirda et al., 2016; Hay & Diehl, 2011).

In the study of Phillips et al. (2008), older adults were found more effective in implementing positive refocusing to diminish their experiences of negative emotions than younger adults. Furthermore, Garnefski and Kraaij (2006) reported that elderly people aged between 66 and 97 had higher scores on positive refocusing and lower scores on self-blame compared to adult population aged between 18 and 65.

Regarding these findings, Socioemotional Selectivity Theory (SST) asserted that perceived constraints on time led to motivational changes in old age. Increased investment in emotion-related goals activates more automatic and effortful strategies which demand better emotion regulation (Carstensen et al., 2003). Thus, emotion regulation becomes to be prioritized as people age and protects older individuals' well-being (Carstensen & Mikels, 2005; Löckenhoff & Carstensen, 2004). Livingstone and Isaacowitz (2015) also suggested that, compared to younger ones, older people avoided more negative material in regulating their emotions and gave preference to positive material over negative ones. This positivity effect in old age contributes the effective emotion regulation (Löckenhoff & Carstensen, 2004).

In the present study, younger participants were found to have higher levels of negative affect than older participants. This finding is consistent with the literature (Mroczek & Almeida, 2004; Thomsen, Mehlsen, Viidik, Sommerlund, & Zachariae, 2005; Brose, Schmiedek, Lövdén, & Lindenberger, 2011; Windsor & Anstey, 2010). Some longitudinal studies also showed a decrease in negative affect with age (e.g. Turk Charles, Reynolds, & Gatz, 2001). Brose et al. (2011) suggested that the link between negative affect and intrusive thoughts gets weaker with normal aging, which might be beneficial for older adults' affective well-being. Furthermore, Urry and Gross (2010) suggested that enhanced emotion regulation in old age might be related to decreased negative affect.

Furthermore, older participants were found to have higher life satisfaction than younger ones. In this regard, some studies reported an increase in life satisfaction with age (e.g., Angelini, Cavapozzi, Corazzini, & Paccagnella, 2012; Gana, Bailly, Saada, Joulain, & Alaphilippe, 2013). Considering this finding of the present study,

Carstensen et al. (2003) suggested that older individuals actively respond to the aging process by shaping their environments, improving their emotional well-being and maximizing their life satisfaction. For example, they are more likely to have small, emotionally close and well-known social networks compared to younger individuals, which have beneficial effects on their subjective well-being (Carstensen et al., 2003).

#### **4.1.2. Differences among the Levels of Education in terms of the Study Variables**

In the present study, participants graduated from university or master's program had significantly higher scores on positive affect compared to those graduated from primary school. Moreover, participants graduated from master's program had significantly higher scores on positive affect compared to those graduated from secondary school. Parallel to these findings, in the study by Turk Charles et al. (2001), a significant relation was revealed between years of education and positive affect. Dang and Sukontamarn (2020) also revealed that a higher level of education might have an important role in improving the subjective well-being.

Education has an important role in having a job and coping with economic hardship. Higher levels of education provide accumulated skills, behaviors, and knowledge. Furthermore, the process of learning helps individuals to build motivation and confidence and to develop abilities which are needed to overcome problems (Ross & Mirowsky, 2010). Thus, educated individuals can accomplish their goals and adapt to the changing world more easily (Agrawal et al., 2011). Educated individuals are also more likely to engage in healthy behaviors, which may improve their subjective well-being (Ilies, Yao, Curseu, & Liang, 2018).

#### **4.1.3. Differences among the Levels of Marital Status in terms of the Study Variables**

In the present study, single and widowed participants had higher levels of negative affect than married participants. In addition, married participants had significantly higher levels of life satisfaction than the single ones. These findings of the present

study are in line with the results of many previous studies (Bailey & Snyder, 2007; Kouivumaa-Honkanen et al., 2000; Post, de Witte, van Asbeck, van Dijk, & Schrijvers, 1998; Agrawal et al., 2011; Haring-Hidore, Stock, Okun, & Witter, 1985).

Marriage has beneficial effects for individuals' emotional well-being (Simon, 2002) and mental health (Gove, Style, & Hughes, 1990). There was a significant positive relation between overall happiness and marriage (Waite & Lehrer, 2003). When considering the reasons for this link between marriage and well-being, Musick and Bumpass (2012) explained that marriage provided a source of companionship, intimacy, and day-to-day interaction. Married individuals have larger networks of kin and friends and they accumulate a shared history which is important for self-definition and well-being (Musick & Bumpass, 2012). Furthermore, emotional support from partners had a direct effect on married individuals' subjective well-being (Venkatraman, 1995).

#### **4.1.4. Differences among Participants Having a Child or Not in terms of the Study Variables**

In the present study, participants having children had higher life satisfaction than participants who did not have a child. Similar to this finding, previous studies in the literature reported a significant positive association of parenting with well-being, happiness, and meaning in life (e.g., Aassve, Goisis, & Sironi, 2012; Nelson, Kushlev, English, Dunn, & Lyubomirsky, 2012). The significant effect of parenting on psychological well-being continues for a life time (Umberson, Pudrovska, & Reczek, 2010). Parents gain emotional benefits from the relationship with their children, which affects their well-being (Nomaguchi, 2012). For example, children provide excitement, pleasure, and fun for their parents (Pollmann-Schult, 2014). Furthermore, having a child is important for stimulating personal growth (Nomaguchi & Milkie, 2020) and enhancing the social identity of their parents (Pollmann-Schult, 2014).

However, there are also some contradictory findings in the literature. On the one hand, having a child brings joy and pleasure in life, but on the other hand, raising children is

challenging and stressful for parents (Nelson et al., 2014). Evenson and Simon (2005) revealed in their study that higher levels of depression was observed among parents compared to nonparents. Regarding this finding, parents frequently experience the emotions of worry, anger, and anxiety, which may lead to decrease in their well-being (Nelson, Kushlev, & Lyubomirsky, 2014). Umberson and Gove (1989) also indicated that many other factors, such as the ages of children or marital status of parents, might play a critical role in the relation between parenthood and well-being. For example, in the study by Nomaguchi (2012), parents with preschool children were found to have higher levels of psychological well-being compared to parents with adolescent children. Angeles (2009) also indicated that although the effect of having children on life satisfaction was positive for married individuals, this effect was not significant for individuals who were separated.

To conclude, having a child may have long-term positive consequences for some people and may be a source of profound stressor for others. In order to better understand the link between parenthood and well-being, many other factors, such as gender, living arrangement, and parent-child relationship, should be considered. (Umberson et al., 2010).

#### **4.1.5. Differences among the Levels of Working Status in terms of the Study Variables**

In the present study, working participants had higher scores on self-blame and lower scores on positive refocusing than retired participants. Regarding this finding, most of the working participants were in the young age group and most of the retired participants were in the older age group. According to the SST, older individuals are more likely to perceive the future as more limited than younger ones, which affects the selection and pursuit of their goals. Emotional experiences and goals become to be more important than information-related goals in old age. This investment in emotionally meaningful goals increases the focus on emotion regulation and improves older individuals' abilities (Carstensen et al., 1999). Thus, it can be suggested that the

ages of working and retired participants might have a role in the relation between working status and cognitive emotion regulation abilities.

Working participants had also higher levels of positive affect than participants who were not working. Similar to this finding, the significant positive relation between positive affect and working status was revealed in the study by Agrawal et al. (2011). Moreover, Modini et al. (2016) reported in their meta-review that having a job improved subjective well-being, increased resources for coping with stressors, and had beneficial effects on individuals' mental health (Modini et al. 2016). In other respects, being unemployed was also found to have negative effects on individual's well-being (Kapteyn, Lee, Tassot, Vonkova, & Zamarro, 2015). For example, a review conducted by Warr, Jackson, and Banks (1988) indicated that higher levels of anxiety and depression and lower levels of self-esteem were observed among unemployed people compared to employed ones. There was also a significant association between unemployment and higher prevalence of distress (Fukuda & Hiyoshi, 2012).

#### **4.1.6. Differences among the Levels of Residence in terms of the Study Variables**

Participants who spent the longest period of their lives in metropolis had higher levels of positive affect than participants who spent the longest period of their lives in town or village. In this regard, Tobiasz-Adamczyk and Zawisza (2017) suggested that compared to people living in small settlements, those living in urban areas, such as metropolis, had higher levels of social participation which improved their well-being. Furthermore, a large variety of goods and services are provided in metropolitan areas, which leads to increase in positive emotions (Blaauw & Pretorius, 2013).

There are, however, contradictory findings in the literature related to the relation between residence and well-being. In the study by Morrison and Weckroth (2017), the subjective well-being of individuals living in metropolis were revealed to be lower than those living in smaller settlements. Considering these mixed results, Mair and Thivierge-Rikard (2010) suggested that social ties should be taken into consideration when examining the link between residence and subjective well-being. For example,

the interaction between residence and the characteristics of social ties might lead to different well-being results.

#### **4.1.7. Differences among the Levels of Perceived Income in terms of the Study Variables**

In the present study, participants who perceived their income level as low had lower levels of positive affect than participants who perceived their income level as middle or high. Parallel to this finding, the significant positive relation between income and subjective well-being was reported in some previous studies (e.g., Agrawal et al., 2011; Hampton, 2004). Furthermore, participants who perceived their income level as high reported higher life satisfaction than participants who perceived their income level as middle or low. In addition, participants with middle income level had higher life satisfaction than those with low income level. These findings of the present study are also consistent with the results of previous studies (e.g., Zhang & Yu, 1998; Shi, Joyce, Wall, Orpana, & Bancej, 2019). For example, Pinqart and Sørensen (2000) reported a significant association of higher income with greater life satisfaction in their meta-analysis.

Regarding these findings, individuals with high income may protect themselves from negative consequences of stressors (Pinqart & Sørensen, 2000) and they may be more likely to attain their goals in life (Tüm kaya, 2011). There was a significant positive relation of higher income with purpose in life and personal growth (Kaplan, Shema, & Leite, 2008). Both basic and idiosyncratic needs are fulfilled with money, thus income has a strong effect on individuals' life satisfaction (Cheung & Lucas, 2016). On the other side, experiencing economic difficulties leads to a decline in mastery and self-esteem, and thus, negatively affects individuals' psychological well-being (Pearlin, Menaghan, Lieberman, & Mullan, 1981).

#### **4.1.8. Differences among the Levels of Living Arrangement in terms of the Study Variables**

In the present study, participants living only with their children had higher scores on negative affect than participants living with their spouse. In the literature, some previous studies highlighted the beneficial effects of living with spouse on psychological well-being. Joutsenniemi, Martelin, Martikainen, Pirkola, and Koskinen (2006) reported that the higher odds for psychiatric disorders and psychological distress were observed among individuals living with other than their partners compared to those living with their partners. Similarly, according to the findings of a study conducted by Kim, Hong, and Kim (2014), older individuals living with their spouse had higher subjective well-being and family relation satisfaction than those living with other than their spouse.

Related to these findings, Kooshiar, Yahaya, Hamid, Abu Samah, and Sedaghat Jou (2012) indicated that living with spouse had stronger positive effect on social support than living with children. Social support was also found to indirectly enhance the association between living arrangement and well-being (Kooshiar et al., 2012). Furthermore, in the study by Wang, Chen, and Han (2014), living with spouse was reported to make more contribution to emotional well-being of individuals compared to living with children.

#### **4.1.9. Differences among Participants Having a Physical Illness or not in terms of the Study Variables**

Participants having at least one physical illness had lower scores on refocus on planning than participants who did not have any physical illness. As stated before, refocus on planning was defined as thinking related to how to overcome negative situations and what to do (Garnefski et al., 2001). Similar to this finding of the present study, Bahremand, Alikhani, Zakiei, Janjani, and Aghaei (2015) indicated that cardiac patients had lower scores on adaptive cognitive emotion regulation strategies than healthy individuals. Rey and Extremera (2015) also reported a significant positive

relation between physical health status and refocus on planning. Furthermore, Li et al. (2015) revealed in their study that patients with a cancer used the strategy of refocus on planning less frequently compared to healthy individuals.

The type and severity of illnesses might have a role in the link between physical health and the emotion regulation strategy of refocus on planning. In the present study, most of the participants had chronic health problems which required higher number of medications and clinical appointments, medical regimen and changes in lifestyle and aspirations (Turner & Kelly, 2000; Gallacher, May, Montori, & Mair, 2011). All of them led to the experience of protracted distress and psychological problems (Turner & Kelly, 2000) and might have impaired individuals' ability of refocus on planning.

Participants who reported at least one physical illness had lower scores on positive affect compared to participants who did not report any physical illness. Parallel to this finding of the present study, many previous studies indicated that physical health problems negatively affected individuals' subjective well-being (Tobiasz-Adamczyk & Zawisza, 2017; Tambs, 2004; Kunzmann, Little, & Smith, 2000; Angelini et al., 2012). For example, according to the results of a study by Cho, Martin, and Poon (2015), there was a direct negative effect of physical health impairment on positive affect. Considering these findings, Lipowski (1983) suggested that physical illnesses might lead to the feelings of grief, anxiety, anger, and depression, which might decrease positive affect of individuals. Kendig, Browning, and Young (2000) also revealed in their study that decreased capacities in remaining independent mediated the relation between physical illness and positive affect. Furthermore, social engagement might also have an indirect role in the relation between health and well-being. Huxhold, Fiori, and Windsor (2013) reported that there was a positive relation between functional health and social engagement, which was also positively associated with subjective well-being.

#### **4.1.10. Differences among Participants Receiving a Physical Treatment or not in terms of the Study Variables**

Participants who did not receive any treatment for their physical health problems had higher scores on refocus on planning and positive reappraisal than participants who were receiving treatments. As mentioned above, most of the participants had chronic health problems, the managements of which demand substantial effort (Heckman, Mathew, & Carpenter, 2015). Treatments of these illnesses might be burdensome and lead to negative consequences such as reduced well-being and low productivity (Sav et al., 2013). Thus, participants receiving treatments might have had difficulty in assigning positive meanings to their experiences and might have not focused on how to overcome negative events.

Participants who did not receive treatments were found to have higher positive affect compared to those who were receiving treatments for their physical health problems. Regarding this finding, receiving treatment might lead to troublesome side effects and deterioration in some biological capacities and might generate negative feelings, such as anxiety, anger, and fear. It might also lead to reduced employment and financial difficulties (Demain et al., 2015; Gallacher et al., 2011; Sav et al., 2013). For example, Gibson et al. (2005) revealed in their study that cancer treatment led to overwhelming fatigue, emotional and physical pain, and a sense of frustration. Furthermore, in the study of Harb, Foster, and Dobler (2017), participants with chronic obstructive pulmonary disease reported a feeling of frustration related to the time-consuming nature of their treatments such as waiting in hospital and traveling to appointments. The severity of physical problems might also have a role in this finding. The treatment process of severe illnesses might be complicated and difficult for patients, and this can impair their subjective well-being. Thus, treatments for physical health problems might reduce the positive affect of participants.

#### **4.1.11. Differences among Participants Having a Psychological Illness or not in terms of the Study Variables**

In the current study, participants who reported at least one psychological health problem had significantly lower positive affect compared to those who did not report any psychological health problem. This finding is in parallel with previous results (e.g., Lombardo, Jones, Wang, Shen, & Goldner, 2018; Puvill, Lindenberg, de Craen, Slaets, & Westendorp, 2016). Psychological problems might lead to social impairments and dysfunctions (Hecht & Wittchen, 1988). Individuals with psychological problems also contend with prejudice and stereotypes related to misperceptions about their illnesses (Corrigan & Watson, 2002). Labeling individuals as mentally ill might lead to a desire for social distance (Angermeyer, & Matschinger, 2003), decreased self-worth, and demoralization (Hinshaw & Stier, 2008). In addition, psychological health problems were closely related to unemployment and lower education, which might also impair subjective well-being (Suvisaari et al., 2009). Thus, the absence of psychological health problems is crucial for a positive sense of well-being (Greenspoon & Saklofske, 2001).

#### **4.1.12. Differences among Participants Receiving a Psychological Treatment or not in terms of the Study Variables**

In the present study, participants who did not receive treatments had higher scores on positive affect than those who were receiving treatments for their psychological health problems. Regarding this finding, in the study by Bystedt, Rozental, Andersson, Boettcher, and Carlbring (2014), one of the negative effects of psychological treatments were reported as the loss of time for work and social activities. Furthermore, psychological treatments might produce strong temporary feelings of discomfort and anxiety in some people (Bystedt et al., 2014). These might have reduced the positive affect of individuals who received treatments for their psychological problems.

## 4.2. Correlational Analyses among the Study Variables

Self-blame was found to be positively correlated with acceptance, rumination, catastrophizing, and blaming others in both younger and older participants. This finding is in parallel with the results of previous studies (e.g., Garnefski et al., 2001; Tuna & Bozo, 2012; Garnefski, Kraaij, & van Etten, 2005; Omran, 2011; Garnefski et al., 2002). However, there was also a significant positive correlation between self-blame and putting into perspective in older sample. Similar to this finding, Kraaij et al. (2002) also reported a significant positive correlation between these two cognitive emotion regulation strategies among older people aged between 67 and 97. Self-blame, which was more likely to be considered as a maladaptive emotion regulation strategy, was closely associated with stress, anxiety, and depression (Martin & Dahlen, 2005; Garnefski et al., 2002). On the other hand, putting into perspective was positively related to both psychological and subjective well-being (Balzarotti et al., 2014). Thus, the positive correlation between self-blame and putting into perspective in older participants was one of the unexpected findings of the present study, which might be affected by other factors such as personality.

There was a significant positive correlation between acceptance and rumination in both younger and older participants, which was consistent with the literature (e.g., Garnefski, van Rood, de Roos, & Kraaij, 2017; Feliu-Soler et al., 2017; Omran, 2011; Garnefski & Kraaij, 2018; Öngen, 2010). Although acceptance was also positively correlated with catastrophizing in younger participants, it was positively correlated with refocus on planning, putting into perspective, positive reappraisal and blaming others in older participants. The reliability of this subscale was revealed as very low in older participants, which might have a role in these findings of the present study. The psychometric properties of the Turkish version of this scale was examined using a sample of university students (Tuna & Bozo, 2012), which might have affected the results of the present study. Thus, future studies are suggested to establish the reliability and validity of the CERQ for older individuals before hypothesis testing. There are also mixed findings in the literature related to the acceptance subscale, understanding of which might be improved with further investigation (Tuna & Bozo,

2012). Martin and Dahlen (2005) suggested that acceptance might have an adaptive role only in some situations since the items on this subscale might also represent hopelessness. For example, acceptance subscale has some items related to thoughts about resignation which may lead to the experience of a sense of helplessness (Jermann, Linden, d'Acremont, & Zermatten, 2006). Furthermore, individuals' mood under consideration might affect the results related to this subscale (Martin & Dahlen, 2005). Thus, further examination is necessary to clarify the age-related differences in the use of acceptance and the adaptive and maladaptive functions of this strategy.

Rumination was also positively correlated with refocus on planning, positive reappraisal, and putting into perspective. This finding of the present study, which was in line with the results of previous studies (e.g., Garnefski et al., 2002; Chamizo-Nieto, Rey, & Sanchez-Alvarez, 2020; Garnefski et al., 2001), was same for both younger and older participants. Furthermore, positive refocusing was positively correlated with refocus on planning, putting into perspective, and positive reappraisal, and negatively correlated with blaming others in both younger and older participants. This finding is also consistent with previous results (Garnefski, Hossain, & Kraaij, 2017; Mihalca & Tarnavska, 2013; Garnefski et al., 2001). However, a significant negative correlation between positive refocusing and catastrophizing was revealed only in younger participants. Similar to this finding, Kraaij et al. (2002) also did not reveal a significant correlation between these two cognitive emotion regulation strategies among older individuals. Although catastrophizing was related to psychological and subjective well-being among younger individuals (Omran, 2011; Balzarotti et al., 2014), it was also closely associated with the health-related factors such as somatic complaints and physical health status (Extremera & Rey, 2014; Garnefski et al., 2017), which became more prominent as people age. Thus, this strategy might be related to physical well-being in old age and might not directly linked to positive refocusing, which was more likely to be associated with subjective well-being (Balzarotti et al., 2014).

In the present study, refocus on planning was also positively correlated with putting into perspective and positive reappraisal, and negatively correlated with catastrophizing in both younger and older participants. Many previous findings also

indicated a significant positive correlation of refocus on planning with positive reappraisal and putting into perspective (Garnefski et al., 2001; Omran, 2011; Öngen, 2010; Garnefski et al., 2002). However, there are contradictory findings in the literature related to the correlation between refocus on planning and catastrophizing. Although some previous studies did not reveal a significant correlation (e.g., Balzarotti et al., 2014; Martin & Dahlen, 2005; Omran, 2011), other studies reported a positive correlation between these two cognitive emotion regulation strategies (e.g., Mihalca & Tarnavska, 2013; Garnefski et al., 2017; Garnefski et al., 2002; Extremera & Rey, 2014; Garnefski et al., 2005). Thus, further research is needed to clarify the relation between these strategies. Other factors, such as demographic characteristics of the sample, might affect this relation.

Positive reappraisal was also positively correlated with putting into perspective and negatively correlated with catastrophizing in both younger and older participants, which was in line with previous findings (e.g., Garnefski et al., 2017; Omran, 2011; Rey & Extremera, 2015; Stikkelbroek, Bodden, Kleinjan, Reijnders, & van Baar, 2016). However, the negative correlation between positive reappraisal and blaming others was revealed only in older participants, which might be explained by the link between stressful experiences and emotion regulation. Regarding this finding, aging process brings multiple loss experiences in its wake (Reker, 1997). Furthermore, older individuals attach more importance to their social relationships than younger ones (Löckenhoff & Carstensen, 2004); and thus, may experience more relational stress. These loss experiences and relational stress in old age were revealed to be associated with the use of blaming others (Schroevers, Kraaij, & Garnefski, 2007). There was also an inverse relation between positive reappraisal and stress (Martin & Dahlen, 2005) which was not related to the strategy of blaming others in young adults (Miklosi, Martos, Szabo, Kocsis-Bogar, & Forintos, 2014). Thus, stress might have a role in the link between positive reappraisal and blaming others in older participants.

Considering the well-being indicators, in both younger and older participants, positive affect was positively correlated with positive refocusing, refocus on planning, and positive reappraisal. This finding was in parallel with the results of a previous study

indicating that positive affect was only significantly related to adaptive cognitive emotion regulation strategies (Castro, Soares, Pereira, & Macedo, 2017). Positive affect was also revealed to be positively correlated with putting into perspective and rumination only in older participants. The positive correlation between rumination and positive affect was an unexpected finding of the present study, since rumination was related to depression, anxiety, and psychological distress in many previous studies (e.g., Garnefski & Kraaij, 2006; Martin & Dahlen, 2005; Garnefski et al., 2005; Garnefski & Kraaij, 2018). However, when considering the items of the rumination subscale, this finding of the present study is sensible. Rumination subscale include items focusing on emotions (Garnefski et al., 2001). As explained before, SST suggested that the approach of endings in old age is related to greater emphasis of present-orientation, emotional meaning, and feeling states, which is subsequently beneficial for emotional well-being (Carstensen et al., 1999). Thus, older individuals' increased attention to emotions (Carstensen, 1995) might be correlated with enhanced positive affect.

Negative affect was positively correlated with catastrophizing and blaming others, and negatively correlated with positive refocusing in both younger and older participants. This finding of the present study is in line with the literature (e.g., Castro et al., 2017). It was also found to be negatively correlated with refocus on planning and positive reappraisal only in older participants. Positive reappraisal, which was inversely related to negative emotions, might be more likely to be effectively used with the help of individuals' life experiences, and therefore, come into prominence as people age (Shiota & Levenson, 2009; Gross & John, 2003). Furthermore, refocus on planning was closely related to purpose in life and personal growth (Balzarotti et al., 2014), which significantly contributed to the enhanced well-being of older individuals (Musich, Wang, Kraemer, Hawkins, & Wicker, 2018; Worrall et al., 2020; Yeung & Breheny, 2019). For example, purpose in life was negatively associated with negative affect among people aged between 61 and 91 (Ju, Shin, Kim, Hyun, & Park, 2013). Thus, personal growth and purpose in life might mediate the relation between refocus on planning and negative affect among older participants. In addition, the negative correlation between positive affect and negative affect was observed only in older

participants. In this regard, Scott, Sliwinski, Mogle, and Almeida (2014) indicated that younger individuals were more likely to experience mixed emotional states, the frequency of which was especially greater during stressful situations. Thus, positive and negative affect might be independent among younger individuals. However, the link between age and mixed emotions requires further examination since there are contradictory findings in the literature regarding this issue (e.g., Schneider & Stone, 2015; Löckenhoff et al., 2008).

Furthermore, life satisfaction was positively correlated with positive affect and negatively correlated with negative affect in both younger and older participants. Thus, as participants' life satisfaction increased, their positive affect tended to increase and negative affect tended to decrease. However, the significant positive correlation of life satisfaction with positive refocusing, refocus on planning, positive reappraisal and putting into perspective was revealed only in older participants. Considering this finding, limited future time horizon in old age leads to a greater emphasis on feeling states and emotion regulation, which is also closely related to a desire for deriving satisfaction from life. However, when time is perceived as open-ended, the pursuit of information takes precedence of emotion regulation (Löckenhoff & Carstensen, 2004; Carstensen et al., 1999; Carstensen et al., 2003). Thus, life satisfaction might be more likely to be significantly correlated with many of the cognitive emotion regulation strategies in older individuals.

#### **4.3. Mediating Role of Cognitive Emotion Regulation Strategies in the Relation between Age Groups and Well-Being Indicators**

In the present study, the cognitive emotion regulation strategy of positive refocusing mediated the relation between age groups and negative affect. Older participants had higher scores on positive refocusing which was subsequently related to lower negative affect. As mentioned previously, SST suggested that emotion and emotion-related goals prioritized in old age and this led to concomitant improvement in emotion regulation. More resources were allocated to emotion-related goals in order to soften negative emotional experiences. In other words, the theory emphasized that older

individuals were more likely to avoid negative emotional responses and optimize positive ones, which decreased their negative affect (Carstensen et al., 1999; Turk Charles et al., 2001).

To state more precisely, older individuals' restructuring of their goals (Turk Charles et al., 2001) is important for understanding the mechanisms underlying the link between age and negative affect. Sullivan-Singh et al. (2015) suggested that individuals' time perspectives influenced their goal selections which might have an effect on the subconscious processes by turning their attention to something (Carstensen et al., 2003). Thus, older individuals' emotionally gratifying goals might lead to biased memory and attention for positive materials which improved their emotion regulation (Carstensen & Mikels, 2005). For example, Phillips et al. (2008) reported that older individuals were more effective in focusing on the positive materials and following the positive refocus instructions. The enhanced emotion regulation in old age was also considered as the result of an age-related increase in selection. Accordingly, older individuals selectively build a cognitive world to increase their emotional payoffs rather than having detail-rich memory (Carstensen et al., 2003). They allocate more cognitive resources for emotionally gratifying information which also weakens the performance for negative ones (Turk Charles, Mather, & Carstensen, 2003). This emphasis on positive materials in old age also operates in support of emotional well-being (Carstensen & Mikels, 2005). During regulating emotions, focusing on the positive information is crucial for decreasing the sense of regret and increasing satisfaction with past experiences (Carstensen et al., 2003). Considering the cognitive emotion regulation strategies, Garnefski et al. (2001) defined positive refocusing as concentrating on positive and joyful issues in order to prevent thoughts about the actual experience. Thus, older individuals utilize positive refocusing to regulate their emotions, which subsequently reduces their negative affect. They attach particular importance to goals related to the emotional well-being and their cognitive processing act upon these goals (Reed & Carstensen, 2012).

Multiple mediation analyses did not produce significant results for the mediating role of emotion regulation in the relation of age with life satisfaction. This finding

suggested that cognitive emotion regulation strategies do not have an indirect role in the relation between age groups and life satisfaction. Other factors might have a role in these relation, and thus, further explorations are required. One possible reason for this nonsignificant result might be the fact that the concept of life satisfaction represents a judgment of one's life as a whole. A variety of factors, such as personality traits, cultural norms, life circumstances or situational factors, have an important influence on this judgment (Pavot & Diener, 2008). Thus, emotion regulation alone might not exert a significant influence on life satisfaction which can be represented by summation and combination of various factors (Pavot & Diener, 2008). Furthermore, after adding covariates, the significant indirect relation between age groups and positive affect through positive refocusing became nonsignificant. This finding indicated that compared to cognitive emotion regulation strategies, the effects of demographic variables, i.e., education, income, working status, and health problems, on individuals' positive affect were stronger. Many previous studies in the literature also supported a significant role of demographic variables in determining individuals' positive affect (e.g. Agrawal et al., 2011; Turk Charles et al., 2001). For example, there is a direct influence of income on well-being (Pinquart & Sörensen, 2000) since it is one of the crucial means to individuals' happiness (Tan, Kraus, Carpenter, & Adler, 2020). Furthermore, the important role of physical impairment on positive affect was supported in a previous study by Cho et al. (2015). Thus, in the present study, demographic variables might have explained a large percentage of variance in positive affect.

To summarize, multiple mediation analyses were conducted to examine the mediating roles of cognitive emotion regulation strategies in the relation between age groups and subjective well-being indicators. Positive refocusing significantly mediated only the relation between age and negative affect. This finding suggested that although thinking about positive issues after experiencing stressful events is important for reducing negative emotions, it did not have a significant effect on positive emotions or life satisfaction. Furthermore, other cognitive emotion regulation strategies did not significantly mediate the relation between age groups and well-being. In other words, they did not explain the age-related differences in subjective well-being.

Mediation analyses also revealed the effects of cognitive emotion regulation strategies on subjective well-being. For example, as expected, higher positive refocusing was related to higher levels of well-being. Parallel to this finding, Castro et al. (2017) indicated that positive refocusing contributed to the enhancement of positive affect. Many previous studies in the literature also revealed that positive refocusing was negatively related to stress, depression, and anxiety (Miklosi et al., 2014; Kulpa, Zietalewicz, Kosowicz, Stypula-Ciuba, & Ziolkowska, 2016; Martin & Dahlen, 2005; Garnefski & Kraaij, 2006; Omran, 2011; Öngen, 2010; Oftadehal, Mahmoodi-Kahriz, & Nami, 2012). In this regard, individuals who utilize positive refocusing to regulate their emotions, engage in pleasant and joyful thoughts (Garnefski et al., 2001). Thinking positively improves their ability to cope with stressors (Naseem & Khalid, 2010) and enhances their well-being (Taylor & Brown, 1988).

In the present study, higher catastrophizing was also related to higher negative affect. The effect of catastrophizing on negative affect was supported by previous findings in the literature. For example, in the study of Balzarotti et al. (2014), catastrophizing was revealed to increase the experience of negative affect. Furthermore, this emotion regulation strategy was revealed to predict the affective disorders, i.e., depression and anxiety, which were also closely linked to negative emotions (Martin & Dahlen, 2005; Oftadehal et al., 2012). The use of catastrophizing leads to exaggerated perceptions about the terror of events (Garnefski et al., 2001; Jenness et al., 2016), and thus, negatively associated with both psychological and subjective well-being (Balzarotti et al., 2014; Panahi et al., 2016).

Furthermore, in the present study, higher refocus on planning was related to higher positive affect. Consistent with this finding, in the study of Balzarotti et al. (2014), positive affect was predicted by refocus on planning, which was more likely to be considered as a cognitive aspect of action-focused coping (Garnefski et al., 2001). Planning and active coping were related to self-esteem, optimism, and hardiness (Carver, Scheier, & Weintraub, 1989), which might contribute to the subjective well-being. Thus, refocus on planning was regarded as one of the adaptive emotion

regulation strategies (Garnefski et al., 2001) and important for the enhancement of positive affect.

#### **4.4. Strengths and Implications**

In the present study, the mediating role of cognitive emotion regulation strategies in the relation between age and subjective well-being indicators was examined. The studies in literature investigating the links among age, emotion regulation, and well-being are scarce. Thus, this study contributed to the literature by focusing on the relations among these factors in both younger and older adults, which expanded our understanding on age-related differences in emotion regulation and subjective well-being.

Since many previous studies on emotion regulation and well-being were conducted only with university students or young adults (e.g., Quoidbach et al., 2010; Haga et al., 2009; Gross & John, 2003; Saxena et al., 2011), this study also contributed to the literature by comparing two different age groups (i.e., young adults aged between 25 and 40 and older adults aged between 65 and 80). Because of aging of the populations all around the world (Boz & Ozsari, 2019), studying especially with older people became more of an issue in clinical psychology. Including this age group in the present study can make an important contribution to the Turkish literature since similar demographic shift is also observed in Turkey (Gündüz et al., 2015; Özdeş, 2020). In addition, the data were collected from participants having different demographic characteristics, which is notable for the generalizability of the results.

The present study showed that positive refocusing mediated the relation between age groups and negative affect. Older participants had higher scores on positive refocusing which subsequently related to lower negative affect. Considering this finding, it can be suggested that psychotherapy practices with both young and older adults should focus on enhancing the ability of positive refocusing in regulating emotions, which might improve the subjective well-being. The development of effective intervention programs to help young adults turn their attention to positive and pleasant issues may

decrease their negative affect. Thus, instead of focusing on the negative aspects of young adults' actual experiences, psychotherapists are suggested to teach young adults more adaptive emotion regulation abilities during psychotherapy sessions. Furthermore, educating individuals about thinking on how to deal with negative events (Garnefski et al., 2001) may contribute to their well-being.

Furthermore, this study showed that some of the cognitive emotion regulation strategies were associated with subjective well-being indicators. For example, higher positive refocusing was related to higher life satisfaction, lower negative affect, and higher positive affect. Thus, in clinical interventions, working on the improvement of adaptive emotion regulation strategies and modifying ineffective ones (Gross, 1998) would be important. Berking et al. (2008) suggested that cognitive behavioral therapy is important for the enhancement of emotion-regulation skills. Also, the improvement of emotion regulation abilities can be considered as an important mechanism of change in some psychotherapy practices (Berking et al., 2008). For example, emotion regulation is one of the skills training components of dialectical behavior therapy for borderline personality disorder (Lynch, Trost, Salsman, & Linehan, 2007). Thus, working on the development of adaptive emotion regulation skills is one of the important components of many of the psychotherapeutic practices.

According to the literature, subjective well-being is important for health and longevity (Diener, 2017). Because of the increase in life expectancy and development of the effective treatments of diseases, enhancement of subjective well-being becomes particularly important (Steptoe, Deaton, & Stone, 2014). Moreover, Bartels, Cacioppo, van Beijsterveldt, and Boomsma (2013) indicated the importance of subjective well-being in the prevention of psychopathology. Thus, studying improvement of subjective well-being through effective emotion regulation strategies is important for individuals' subjective well-being as well as for their mental health.

The results of the present study supported the importance of thinking on positive issues in the improvement of subjective well-being. This might be especially helpful for older individuals during current COVID-19 pandemic. For example, older individuals might

be channeled to think that they are the most valuable members of our society and therefore they should stay at home during this process to protect their health. Moreover, they may be encouraged to think about their pleasant memories rather than being preoccupied with negative thoughts. And finally, younger individuals might be helped in directing their attention to positive and joyful matters to prevent thoughts on the terror of events (Garnefski et al., 2001).

#### **4.5. Limitations and Directions for Future Studies**

First, due to the cross-sectional nature of the present study, developmental changes in the use of emotion regulation strategies and the cause-effect relations among the study variables could not be investigated. In future studies, it is recommended to conduct studies with longitudinal designs. Second, future studies may collect data with qualitative methods to obtain a deeper understanding and more comprehensive information about the relations among the study variables. Third, the relation between emotion regulation and well-being was examined by a very limited number of studies in Turkey, which restricts the discussion of findings of the present study. Fourth, in younger and older samples, the distributions of some demographic variables, such as gender, were disproportionate. Thus, future studies should make a point of this issue. Fifth, using self-report measures was another limitation of the present study. For example, participants might have been willing to give socially desirable responses to self-report items (Holtgraves, 2004). Furthermore, non-self-report measures might provide broader information compared to self-report measures. Thus, additional methods, such as laboratory studies, are important for examining behavioral, physiological, and experiential components of the study variables (Sandvik, Diener, & Seidlitz, 1993). Furthermore, the researcher read the items of the questionnaires to the participants and then also marked their responses. This might also lead to socially desirable responding and might affect the results of the study. Sixth, in the present study, older and younger individuals' regulations of their emotions after experiencing stressful events were examined. Future studies are suggested to focus on the regulation of positive emotions which may reveal different findings. Moreover, future studies may include different study variables, such as the perception of time, in order to obtain

a deeper understanding about the relations among age, emotion regulation and well-being indicators. Lastly, the sample of the present study consisted of younger adults aged between 25 and 40 and older adults aged between 65 and 80. Future studies are suggested to include different age groups to obtain broader knowledge about age-related differences in emotion regulation.

#### **4.6. Personal Experiences Related to this Study**

The present study was conducted with participants of two different age groups. Studying especially with older participants provided an important experience for the researcher. Most of these participants were observed to be in need of explaining their previous experiences, emotions, and thoughts regarding the items of the questionnaires. They tried to answer the questions faithfully and sincerely and made an effort for expressing themselves well. However, conducting a study with this age group had also some difficulties. Although younger participants filled out the questionnaires without having a problem, some participants in the old age group were observed to get bored quickly and give up the completion of the questionnaires. Filling out the questionnaire set took much longer for older individuals who were more likely to have difficulty in answering the questions. Furthermore, it was observed that younger individuals were more willing to participate in the present study than older ones since they were well-versed in academic studies.

#### **4.7. Conclusion**

The present study aimed to investigate the age-related differences in emotion regulation, affect, and life satisfaction, and the mediating role of cognitive emotion regulation strategies in the relation between age groups and well-being. Older participants had higher scores on positive refocusing and lower scores on self-blame compared to younger ones. Older participants had also higher life satisfaction and lower negative affect than younger ones. Furthermore, the emotion regulation strategy of positive refocusing mediated age group-negative affect relation. Other cognitive emotion regulation strategies did not significantly mediate the relation between age

groups and subjective well-being; so different variables might have a role in explaining this relation.

All in all, the present study is important for having two different samples (i.e., younger and older adults) and making contributions to the literature by addressing the relations among age, emotion regulation, and subjective well-being. Although further research is needed, the findings of this study may be practical for clinical interventions with both younger and older adults. Interventions focusing on emotion regulation would especially be helpful for the improvement of individuals' well-being.

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## APPENDICES

### A. APPROVAL OF THE METU HUMAN SUBJECTS ETHICS COMMITTEE

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ  
APPLIED ETHICS RESEARCH CENTER



ORTA DOĞU TEKNİK ÜNİVERSİTESİ  
MIDDLE EAST TECHNICAL UNIVERSITY

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Sayı: 286208167

28 Haziran 2019

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (IAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof.Dr. Özlem Bozo ÖZEN

Danışmanlığını yaptığımız Gizem UZUN'un "Yaş ve Yaşam Doymu/duygu/sağlık sorumluluğu arasındaki ilişkilerde duygu düzenlemesinin aracı rolü: Sosyo-Duygusal Seçicilik Teorisi Perspektifi" başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve 283-ODTÜ-2019 protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız.

Prof. Dr. Tülin GENÇÖZ

Başkan

Prof. Dr. Tolga CAN

Üye

Doç.Dr. Pınar KAYGAN

Üye

Dr. Öğr. Üyesi Ali Emre TURGUT

Üye

Dr. Öğr. Üyesi Şerife SEVİNÇ

Üye

Dr. Öğr. Üyesi Müge GÜNDÜZ

Üye

Dr. Öğr. Üyesi Süreyya Özcan KABASAKAL

Üye

## B. INFORMED CONSENT FORM

### ARAŞTIRMAYA GÖNÜLLÜ KATILIM FORMU

Bu araştırma, Orta Doğu Teknik Üniversitesi Klinik Psikoloji Doktora Programı öğrencisi Gizem Uzun tarafından, Prof. Dr. Özlem Bozo Özen danışmanlığındaki doktora tezi kapsamında yürütülmektedir. Bu form sizi araştırma koşulları hakkında bilgilendirmek için hazırlanmıştır.

#### **Çalışmanın Amacı Nedir?**

Bu araştırmanın amacı çeşitli psikolojik değişkenler ve sağlık arasındaki ilişkileri incelemektir. Araştırma kapsamında Sağlıklı Yaşam Davranışları Ölçeğinin geçerlik ve güvenilirliğinin incelenmesi de amaçlanmaktadır.

#### **Bize Nasıl Yardımcı Olmanızı İsteyeceğiz?**

Araştırmaya katılmayı kabul ederseniz, sizden yaklaşık 30 dakika sürecek anketleri doldurmanız beklenmektedir. Araştırma sonuçlarının doğruluğu ve güvenilirliği açısından, tüm sorulara sizi en iyi yansıtacak şekilde samimi cevaplar vermeniz çok önemlidir.

#### **Sizden Topladığımız Bilgileri Nasıl Kullanacağız?**

Bu araştırmaya katılımınız tamamen gönüllülük temelinde olmalıdır. Anketlere vereceğiniz cevaplar tamamen gizli tutulacak ve araştırmacılar tarafından toplu halde değerlendirilecektir. Katılımcılardan elde edilecek bilgiler eğitim amaçlı olarak ve/veya bilimsel yayımlarda kullanılacaktır.

#### **Katılımınızla ilgili bilmeniz gerekenler:**

Anketler, genel olarak kişisel rahatsızlık verecek sorular içermemektedir. Ancak, katılımınız sırasında sorulardan ya da herhangi başka bir sebepten ötürü kendinizi rahatsız hissederseniz anketleri doldurma işini yarıda bırakabilirsiniz. Böyle bir durumda anketi tamamlamadığınızı, anketi uygulayan kişiye söylemeniz yeterli olacaktır.

**Arařtırmayla ilgili daha fazla bilgi almak isterseniz:**

Bu alıřmaya katıldıđınız iin řimdiden teřekkür ederiz. Bu alıřma ile ilgili daha fazla bilgi almak isterseniz ODTÜ Psikoloji Bölümü doktora öđrencisi Gizem Uzun (E-posta: [e171850@metu.edu.tr](mailto:e171850@metu.edu.tr)) ile iletiřim kurabilirsiniz.

*Yukarıdaki bilgileri okudum ve bu alıřmaya tamamen gönüllü olarak katılıyorum.* (Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

İsim Soyisim

Tarih

İmza

## C. DEMOGRAPHIC INFORMATION FORM

### DEMOGRAFİK BİLGİ FORMU

1. Yaşınız:
2. Cinsiyetiniz:
3. En son mezun olduğunuz okul:  
 Okur-yazar değil       Okur-yazar       İlkokul  
 Ortaokul       Lise       Üniversite  
 Yüksek Lisans       Doktora
4. Medeni durumunuz:  
 Evli       Bekâr       Boşanmış       Dul
5. Çocuğunuz var mı?  
 Evet       Hayır  
Evet ise kaç tane: \_\_\_\_\_
6. Çalışma durumunuz:  
 Çalışıyor       Çalışmıyor       Emekli
7. Mesleğiniz: \_\_\_\_\_
8. Yaşamınızın çoğunu geçirdiğiniz yer:  
 Büyükşehir       Şehir       İlçe       Köy
9. Gelir düzeyinizi nasıl değerlendirirsiniz?  
 Düşük       Orta       Yüksek
10. Kiminle yaşamaktasınız?  
 Yalnız       Eşinizle ve çocuklarınızla  
 Eşinizle       Çocuklarınızla  
 Yakın akrabalar       Diğer -----
11. Kiminle yaşamak isterdiniz?  
 Yalnız       Eşinizle ve çocuklarınızla  
 Eşinizle       Çocuklarınızla

Yakın akrabalar  Diğer -----

12. Herhangi bir fiziksel rahatsızlığınız var mı?

( ) Evet ( ) Hayır

Varsa belirtiniz: \_\_\_\_\_

13. Fiziksel rahatsızlığınız ile ilgili tedavi görüyor musunuz?

( ) Evet ( ) Hayır

14. Herhangi bir psikolojik rahatsızlığınız var mı?

( ) Evet ( ) Hayır

Varsa belirtiniz: \_\_\_\_\_

15. Psikolojik rahatsızlığınız ile ilgili tedavi görüyor musunuz?

( ) Evet ( ) Hayır

16. Sağlığınızı nasıl değerlendirirsiniz?

( ) Çok kötü ( ) Kötü ( ) Orta ( ) İyi ( ) Çok iyi

## D. COGNITIVE EMOTION REGULATION QUESTIONNAIRE

### Olaylarla nasıl başa çıkarsınız?

Herkes zaman zaman olumsuz ya da tatsız olaylarla karşılaşır ve herkes bu olaylara kendi yöntemiyle tepki verir. Lütfen aşağıdaki soruları cevaplayarak olumsuz ya da tatsız olaylar yaşadığımızda genel olarak ne düşündüğünüzü belirtiniz.

	(nerede)se hiçbir zaman	Nadiren	Bazen	Sık sık	(nerede)se her zaman
1. Suçlanacak kişinin ben olduğumu düşünürüm.	1	2	3	4	5
2. Olanları kabul etmek zorunda olduğumu düşünürüm.	1	2	3	4	5
3. Sık sık, yaşadığım olayla ilgili ne hissettiğim hakkında düşünürüm.	1	2	3	4	5
4. Yaşadığım şeyden daha güzel şeyler düşünürüm.	1	2	3	4	5
5. Yapabileceğim en iyisinin ne olduğunu düşünürüm.	1	2	3	4	5
6. Bu durumdan bir şeyler öğrenebileceğimi düşünürüm.	1	2	3	4	5
7. “Her şey çok daha kötü olabilirdi” diye düşünürüm.	1	2	3	4	5
8. Sık sık, yaşadığım olayın diğer insanlara başına gelen olaylardan çok daha kötü olduğunu düşünürüm.	1	2	3	4	5
9. Suçlanacak kişinin başkaları olduğunu düşünürüm.	1	2	3	4	5
10. Olanlardan sorumlu olan kişinin kendim olduğunu düşünürüm.	1	2	3	4	5
11. Durumu kabul etmem gerektiğini düşünürüm.	1	2	3	4	5
12. Zihnim yaşadığım olayla ilgili ne düşündüğüm ve ne hissettiğimle meşgul olur.	1	2	3	4	5
13. Yaşadığım olayla ilgisi olmayan güzel şeyler düşünürüm.	1	2	3	4	5
14. Bu durumla en iyi nasıl başa çıkabileceğimi düşünürüm.	1	2	3	4	5
15. Olanların sonucunda daha güçlü bir insan olabileceğimi düşünürüm.	1	2	3	4	5

	(nerede)se hiçbir zaman	Nadiren	Bazen	Sık sık	(nerede)se her zaman
16. Diğer insanların başından çok daha kötü şeyler geçtiğini düşünürüm.	1	2	3	4	5
17. Yaşadığım şeyin ne kadar korkunç bir şey olduğunu düşünür dururum.	1	2	3	4	5
18. Olanlardan başkalarının sorumlu olduğunu düşünürüm.	1	2	3	4	5
19. Durumla ilgili yaptığım hatalar hakkında düşünürüm.	1	2	3	4	5
20. Durumla ilgili hiçbir şeyi değiştiremeyeceğimi düşünürüm.	1	2	3	4	5
21. Yaşadığım olayla ilgili neden bu şekilde hissettiğimi anlamak isterim.	1	2	3	4	5
22. Olanları düşünmek yerine güzel bir şey düşünürüm.	1	2	3	4	5
23. Durumu nasıl değiştirebileceğimi düşünürüm.	1	2	3	4	5
24. Durumun olumlu yanları da olduğunu düşünürüm.	1	2	3	4	5
25. Diğer şeylerle karşılaştırıldığında yaşadığım şeyin o kadar da kötü olmadığını düşünürüm.	1	2	3	4	5
26. Sık sık yaşadığım durumun bir insanın başına gelebilecek en kötü durum olduğunu düşünürüm.	1	2	3	4	5
27. Durumla ilgili başkalarının yaptığı hataları düşünürüm.	1	2	3	4	5
28. Temelde durum bizzat benden kaynaklanmış olmalı diye düşünürüm.	1	2	3	4	5
29. Bu durumla yaşamayı öğrenmem gerektiğini düşünürüm.	1	2	3	4	5
30. Durumun bende uyandırdığı duygular üzerine kafa yorarım.	1	2	3	4	5
31. Yaşadığım güzel şeyler hakkında düşünürüm.	1	2	3	4	5
32. Duruma dair yapabileceğim en iyi şeyi planlarım.	1	2	3	4	5
33. Durumun olumlu yönlerini bulmaya çalışırım.	1	2	3	4	5
34. Kendime hayatta bundan daha kötü şeylerin olduğunu söylerim.	1	2	3	4	5
35. Sürekli bu durumun ne kadar berbat olduğunu düşünür dururum.	1	2	3	4	5
36. Sorunun temelinde diğer insanların yattığını düşünürüm.	1	2	3	4	5

## E. THE POSITIVE AND NEGATIVE AFFECT SCHEDULE

Bu ölçek farklı duyguları tanımlayan bir takım sözcükler içermektedir. Son iki hafta nasıl hissettiğinizi düşünüp her maddeyi okuyun. Uygun cevabı her maddenin yanında ayrılan yere (puanları daire içine alarak) işaretleyin. Cevaplarınızı verirken aşağıdaki puanları kullanın.

1. Çok az veya hiç
2. Biraz
3. Ortalama
4. Oldukça
5. Çok fazla

1. İlgili\_ 1 2 3 4 5

2. Sıkıntılı 1 2 3 4 5

3. Heyecanlı 1 2 3 4 5

4. Mutsuz 1 2 3 4 5

5. Güçlü 1 2 3 4 5

6. Suçlu 1 2 3 4 5

7. Ürkmüş 1 2 3 4 5

8. Düşmanca 1 2 3 4 5

9. Hevesli 1 2 3 4 5

10. Gururlu 1 2 3 4 5

11. Asabi 1 2 3 4 5

12. Uyanık 1 2 3 4 5

(dikkati açık)

13. Utanmış 1 2 3 4 5

14. İlhamlı 1 2 3 4 5

(yaratıcı düşüncelerle dolu)

15. Sınırlı 1 2 3 4 5

16. Kararlı 1 2 3 4 5

17. Dikkatli 1 2 3 4 5
18. Tedirgin 1 2 3 4 5
19. Aktif 1 2 3 4 5
20. Korkmuş 1 2 3 4 5

## F. CURRICULUM VITAE

### PERSONAL INFORMATION

Surname, Name: Uzun, Gizem

Nationality: Turkish (TC)

Date and Place of Birth: 10.06.1991, Samsun

E-mail: gizemuzun1991@gmail.com

### EDUCATION

2016 – 2021 Ph.D., Middle East Technical University (METU),  
Clinical Psychology Ph.D. Program

2014 – 2016 M.S., Middle East Technical University (METU),  
Clinical Psychology M.S. Program

2009 – 2014 B.S., Middle East Technical University (METU),  
Department of Psychology

### FOREIGN LANGUAGES

Advanced English

Beginner Spanish

### INTERNSHIP EXPERIENCES

<b>Year</b>	<b>Place</b>	<b>Enrollment</b>
October 2018 – June 2019	Middle East Technical University, AYNA Clinical Psychology Unit	Supervisor
October 2015 – September 2018	Middle East Technical University, AYNA Clinical Psychology Unit	Clinical Psychologist

February 2015 – June 2015	Middle East Technical University, Medical Center	Intern Psychologist
June 2012 – August 2012	Ankara GATA, Department of Psychiatry	Intern Psychology Student

### **SCHOLARSHIPS**

2014 – 2016	The Scientific and Technological Research Council of Turkey (TÜBİTAK), National MSc and PhD Scholarship Programme for Senior Undergraduate Students	
2016 – 2020	The Scientific and Technological Research Council of Turkey (TÜBİTAK), National PhD Scholarship Programme for Former Undergraduate and MSc/MA Scholars	

### **PROGRAMS**

SPSS, Microsoft Office (Word, Power Point)

## G. TURKISH SUMMARY / TÜRKE ÖZET

### 1. GİRİŞ

Doğurganlık oranlarındaki düşüş ve beklenen yaşam süresinin uzaması, dünya genelinde yaşlı nüfus oranının artmasına neden olmaktadır (United Nations [UN], 2017). 2019 yılında dünya nüfusunun yaklaşık %9'unu 65 yaş ve üstü bireyler oluşturmuştur ve bu oranın 2030 yılında %12'ye ve 2050 yılında ise %16'ya yükseleceği tahmin edilmektedir (UN, 2019). Tüm dünyada artan yaşlı nüfus oranı, yaşlanma ve yaşlılık dönemi ile ilgili çalışmalara olan ihtiyacı da artırmaktadır.

#### 1.1. Duygular

Duygular belirli sosyal ve fiziksel durumlardan kaynaklanan, biyolojik temelli çeşitli fizyoloji, algı, eylem ve deneyim biçimleri olarak açıklanabilir (Keltner ve Gross, 1999). Ruh sağlığı, fiziksel hastalık, hafıza, biliş ve intrapsişik dinamikler gibi birçok süreçte ve kişilerarası ilişkilerin kurulmasında duygular önemli bir rol oynamaktadır (Levenson, Carstensen, Friesen ve Ekman, 1991; Ekman, 1992).

Pozitif duyguların duygusal iyi oluş halindeki iyileşmeyi öngördüğü (Fredrickson ve Joiner, 2002) ve yaşam doyumunun artması ile ilişkili olduğu bulunmuştur (Cohn, deneyimleri, arkadaşlık ilişkilerinin ve aile bağlarının şekillenmesinde önemli bir rol oynamaktadır (Fredrickson, 1998). Pek çok alanyazın bulgusu pozitif duyguların fiziksel sağlık üzerindeki koruyucu rolüne dair kanıtlar sunmuştur (Cohen, Doyle, Turner, Alper ve Skoner, 2003; Richman ve ark., 2005; Davidson, Mostofsky ve Whang, 2010; Cohen, Alper, Doyle, Treanor ve Turner, 2006). Sonuç olarak, duygular bireylerin yaşamlarının pek çok alanında önemli bir role sahiptir. Bireyler yaşamları boyunca çeşitli duygu durumları yaşarlar ancak bunların sıklığı ve yoğunluğu yaşam süresi boyunca değişebilir (Grühn, Kotter-Grühn ve Röcke, 2010).

### 1.1.1. Duygusal Deneyimlerdeki Yaşa Bağlı Farklılıklar

Yaşlılıkta duyguların incelenmesi, yaşam boyu süren duygusal gelişimin son aşamalarını gözlemleme fırsatı sunar. Alanyazın bulguları, duyguların yaşlılıkta önemli bir rol oynamaya devam ettiğine dair ikna edici kanıtlar sağlamıştır (Levenson ve ark., 1991). Yaşlı bireyler bütün duyguları deneyimlemektedirler (Carstensen ve ark., 2000). Yaşlandıkça, duygu kontrolünün daha fazla olduğu (Gross, Carstensen, Skorpen, Tsai ve Hsu, 1997; Carstensen, Pasupathi, Mayr ve Nesselroade, 2000; Lawton, Kleban, Rajagopal ve Dean, 1992) ve duygusal labilitenin azaldığı belirtilmektedir (Carstensen ve ark., 2011). Bu bulguların aksine, sınırlı sayıda çalışma yaşla birlikte bazı duygu işlevlerinde bozulma olduğunu göstermiştir. Örneğin, ileri yaşlarda bireylerin bazı duyguları tanıma yetenekleri azalmaktadır (Khawar, Malik, Maqsood, Yasmin ve Habib, 2013; Mill, Allik, Realo ve Valk, 2009).

Yaşlılık genellikle kayıplar ve üzüntülerle dolu olarak görülse de (Carstensen ve ark., 2011), birçok araştırmacı, yaşla birlikte genel duygusal iyi oluş halinin iyileştiğini ya da değişmeden kaldığını öne sürmüştür (örn., Carstensen ve ark., 2011; Mroczek ve Kolarz, 1998). Alanyazın bulguları yaşlanmanın negatif duygu deneyimindeki azalma ile ilişkili olduğunu da göstermektedir (Gross ve ark., 1997; Löckenhoff, Costa ve Lane, 2008). Örneğin, 72 ve 99 yaşları arasındaki bireylerle yapılmış bir çalışmanın bulguları, mutluluk ve umut gibi pozitif duyguların öfke ve hayal kırıklığı gibi negatif duygulara kıyasla daha fazla deneyimlendiğini göstermiştir (Chipperfield ve ark., 2003). Duygusal deneyimlerdeki yaşa bağlı farklılıklar birçok araştırmacı tarafından ele alınmıştır. Alanyazın bulguları, genç bireylerin yaşlı bireylere göre negatif durumlara daha yoğun duygusal tepkiler verebildiklerini önermektedir. Yaşlı bireylerin negatif durumlara karşı amigdala tepkilerinin azaldığı bulunmuş (Mather ve ark., 2004) ve negatif uyarılara karşı bu azalan tepki diğer çalışmalarda desteklenmiştir (Levenson, Carstensen ve Gottman, 1994; Kisley, Wood ve Burrows, 2007). Charles ve Carstensen (2008), 18 ve 40 yaşları arasındaki genç yetişkinlerin 63 ve 86 yaşları arasındaki yaşlı yetişkinlere göre daha çok negatif duygu durumu ifade ettiklerini ve olumsuz olaylar karşısında daha çok öfkelenediklerini belirtmiştir. Yaşlılıkta negatif uyarılara karşı daha az tepki verildiği diğer çalışmalarla da

desteklenmiştir (Levenson, Carstensen ve Gottman, 1994; Kisley, Wood ve Burrows, 2007).

Yukarıda değinilen bulgular ışığında, genç ve yaşlı bireylerin duygusal deneyimlerinin farklı olduğu ve yaşlı bireylerin pozitif duygulara daha çok odaklandığı söylenebilir. Aşağıdaki bölüm, duygusal deneyimlerdeki yaşa bağlı farklılıklar ile ilgili bazı teorik açıklamalar sunacaktır.

## **1.2. Duygusal Yaşantılardaki Yaş Farklılıkları için Teorik Açıklamalar**

Duygusal deneyimlerdeki yaşa bağlı farklılıkların altında yatan psikolojik sebepler Carstensen'in Sosyo-Duygusal Seçicilik Teorisinde (SST) ele alınmıştır (Neiss ve ark., 2009). Bu teori, bireylerin öncelikleri, amaçları ve tercihlerinin zaman algılarına göre değiştiğini savunmaktadır (Hicks, Trent, Davis ve King, 2012). Bireyler zamanı daha geniş algıladıklarında, kendilerini bu uzun ve bilinmeyen gelecek için hazırlamaya çalışırlar (Carstensen, Fung ve Charles, 2003). Geleceğe yönelik hedeflerle motive olurlar (Reed ve Carstensen, 2012) ve kaynaklarının çoğunu bilgi toplamak ve yeni beceriler elde etmek için ayırırlar (Carstensen ve ark., 2003; Sims, Hogan ve Carstensen, 2015). Ancak, bireyler zamanı daha sınırlı olarak algıladıklarında, duygusal deneyimler uzun vadeli kazanımlardan daha önemli hale gelir (Carstensen, 1995). Carstensen ve arkadaşları (1999), bireylerin geleceğe yönelik kaygılarından kurtuldukları zaman, şimdiki ana yönelik deneyimlerinin ön plana çıkacağını belirtmiştir. Bu nedenle, yaşlı bireyler dikkatlerini şimdiki zamana yöneltmekte ve duygusal tatmin elde edebilecekleri amaçlar edinmektedir (Carstensen ve ark., 2003).

Bu teori, yaşlılık döneminde duygusal kazanç elde edilebilecek sosyal seçimlerin yapıldığını ele almaktadır (Lang ve Carstensen, 1994). Yaşlı bireyler anlamlı sosyal ilişkiler yaşamaya daha çok önem vermekte ve yüzeysel ve mutsuz oldukları sosyal ilişkilerini bitirmektedir (Carstensen ve ark., 2003; Carstensen ve ark., 1999; Löckenhoff ve Carstensen, 2004). Yaşlı bireylerin duygusal olarak daha yakın sosyal çevreleri vardır (Carstensen ve., 2003). Lansford, Sherman ve Antonucci (1998) tarafından yürütülmüş çalışmada, yaşlı bireylerin genç bireylere göre sosyal

ilişkilerinde daha çok tatmin oldukları bulunmuştur. Ayrıca, bazı çalışmalar yaşlı bireylerin kişilerarası ilişkilerde daha az gerginlik yaşadıklarını göstermiştir (Birditt, Fingerman ve Almeida, 2005). Bu nedenle, yaşlı bireyler duygusal kazançlarını en üst seviyeye çıkarmak için sosyal dünyalarını titizlikle inşa etmektedir (Carstensen ve ark., 2003).

Carstensen ve Mikels (2005), hatırlanan ya da dikkate alınan pozitif materyallerin negatif materyallere oranındaki yaşa bağlı değişimi ifade eden “pozitiflik etkisi” terimini önermiştir. İleri yaşlarda pozitif deneyimler giderek daha çok tercih edilmeye başlanır (Scheibe ve Carstensen, 2010; Carstensen ve Mikels, 2005). Livingstone ve Isaacowitz (2015) tarafından yürütülmüş bir çalışmada, yaşlı bireylerin pozitif materyalleri negatiflere kıyasla daha çok tercih ettiği ve daha çok sayıda negatif materyali geçiştirdiği bulunmuştur. Ayrıca, Barber, Opitz, Martins, Sakaki ve Mather (2016), daha sınırlı bir zaman üzerine düşünmenin bireylerin daha pozitif durumları hatırlamaları ile de ilişkili olduğunu belirtmiştir.

Yaş, bireylerin zaman algısını etkileyen tek faktör olarak ele alınamaz (Löckenhoff ve Carstensen, 2004). Örneğin, Sullivan-Singh, Stanton ve Low (2015), bir hastalık teşhisi sebebiyle yaşanan sınırlı zaman algısını incelemeyi amaçlamışlardır. Bu çalışmanın sonuçları, metastatik meme kanseri tanısı almış kadınların kanser tanısı almayan kadınlara göre sınırlı zaman algısına yönelik hedefleri daha çok tercih ettiklerini göstermiştir. Ayrıca, zaman algısındaki değişiklerin altında yatan motivasyonel süreç iş değişimi ve mezuniyet gibi çeşitli yaşam olaylarının etkisiyle de gözlemlenebilir. SST’ye göre, bu olayları deneyimleyen kişiler zamanı daha sınırlı algılayabilir ve duygusal amaçları ön plana çıkarabilir (Carstensen ve ark., 2003).

Sonuç olarak, bireyler yaşlandıkça hayatlarının duygusal olarak anlamlı yönlerine daha çok önem verirler (Carstensen ve Mikels, 2005). Löckenhoff ve Carstensen (2004), yaşlılık döneminde duygu odaklı amaçların ön plana çıkmasının duyguların etkili olarak düzenlenmesine yardımcı olduğunu belirtmiştir. Bu nedenle yaş ve duygusal deneyimler arasındaki ilişkide önemli bir rol oynayan duygu düzenlemesi kavramı bir sonraki bölümde incelenecektir.

### 1.3. Duygu D zenleme

Duygu d zenleme, duygusal tepkileri g zlemleyen, deęiřtiren ve deęerlendiren hem isel hem de dıřsal s reler olarak tanımlanmıřtır (Thompson, 1994). Duygusal uyarılmanın g lendirilmesi, s rd r lmesi veya engellenmesini kapsayan bilinli veya bilinsiz s releri ierebilir (Gross, 1998; Thompson, 1994).  rneęin, yansıtma ve ink r bilinsiz biliřsel s reler iken kendini sulama ve felaketleřtirme bilinli biliřsel s relerdendir (Garnefski, Kraaij ve Spinhoven, 2001). Duygu d zenlemesi, deneyimlenen ve ifade edilen duyguların incelenmesinde  nemli bir rol oynar (Phillips, Henry, Hosie ve Milne, 2008).

Kabul etme ve d ř nceye odaklanma gibi birok biliřsel duygu d zenleme stratejisi belirlenmiřtir (Garnefski ve ark., 2001; Thompson, 1991). D ř nceye odaklanma, negatif durumlarla ilgili duygular  zerine d ř nmek olarak tanımlanmıřtır (Garnefski ve ark., 2001). Depresyon ile iliřkilidir ve problem  zme becerileri ve sosyal iliřkilerde bozulmalara neden olmaktadır (Nolen-Hoeksema, Wisco ve Lyubomirsky, 2008). Felaketleřtirme, olayların negatif y nlerine odaklanmakla ilgilidir. Kendini sulama, bireyin yařadığı deneyimlerle ilgili kendini suladığı d ř nceler olarak tanımlanmıřtır (Garnefski ve ark., 2001). Felaketleřtirme, d ř nceye odaklanma ve kendini sulama stratejilerini kullanan bireylerin, dięer duygu d zenleme stratejilerini kullanan bireylere g re, duygusal problem yařama olasılıęı daha y ksektir (Garnefski ve Kraaij, 2006). Dięer bir duygu d zenleme stratejisi olan kabul, bireylerin yařadıklarını kabul ettiklerine dair d ř nceleri olarak aıklanabilir (Garnefski ve ark., 2001). Felaketleřtirme ve kabul n sosyal iřlev problemlerini yordadığı bulunmuřtur (Mihalca ve Tarnavska, 2013). Dięerlerini sulama stratejisi, bireylerin yařadıklarına dair bařkalarını sulu bulduęu d ř nceler olarak aıklanmaktadır (Garnefski ve ark., 2001). Bazı alıřmalar dięerlerini sulamının stres (Garnefski, Baan ve Kraaij, 2005) ve kaygı (Garnefski ve Kraaij, 2018) ile pozitif iliřkili olduęunu g stermiřtir.

Pozitif yeniden deęerlendirme, bireylerin kiřisel geliřim yolunda yařadıklarına olumlu ve faydalı bir anlam y kledikleri uyumlu bir s re olarak aıklanmaktadır (Garnefski ve ark., 2001; Garland, Gaylord ve Fredrickson, 2011). Bazı alıřma bulguları pozitif yeniden deęerlendirmenin bireylerin saęlıęı ve iyi oluř halini destekleyen yararlı bir

strateji olabileceğini göstermiştir (Shiota ve Levenson, 2012; Shiota, 2006; Moskowitz, Hult, Bussolari ve Acree, 2009). Bir diğer duygu düzenleme stratejisi olan plan yapmaya yeniden odaklanma, bireylerin negatif durumlarla nasıl baş edebileceğine dair düşünceler olarak tanımlanmaktadır (Garnefski ve ark., 2001). Balzarotti, Biassoni, Villani, Prunas ve Velotti (2014), pozitif yeniden değerlendirme ve plan yapmaya yeniden odaklanmanın hem psikolojik hem de öznel iyi oluş hali ile pozitif ilişkili olduğunu bulmuştur. Pozitif yeniden odaklanma, gerçek deneyimler yerine eğlenceli ve neşeli düşüncelere odaklanmak olarak tanımlanmaktadır (Garnefski ve ark., 2001). Extremera ve Ray (2014) tarafından yürütülmüş çalışmada, pozitif yeniden odaklanmanın fiziksel ve ruh sağlığı ile pozitif yönde ilişkili olan uyumlu bir strateji olduğu belirtilmiştir. Ayrıca, bakış açısına yerleştirme, olayların ciddiyetini azaltmak olarak tanımlanmıştır (Garnefski ve ark., 2001). Martin ve Dahlen (2005), bakış açısına yerleştirmenin depresyon ve kaygı ile negatif yönde ilişkili olduğunu belirtmiştir.

Alanyazındaki bazı çalışmalar, yaşla birlikte duygu düzenleme becerisinin arttığına dair kuramsal varsayımı desteklemektedir (Carstensen ve ark., 1999). Schirda, Valentine, Aldao ve Prakash (2016) tarafından yürütülmüş bir çalışma, 60 ve 80 yaşları arasındaki yaşlı bireylerin 18 ve 30 yaşları arasındaki genç bireylere göre uyumsuz duygu düzenleme stratejilerini daha az kullandıklarını ortaya çıkarmıştır. Başka bir çalışmanın sonuçları ise, 17 ve 37 yaşları arasındaki genç bireylerin 61 ve 81 yaşları arasındaki yaşlı bireylere göre duygularını düzenlemekte daha çok zorlandıklarını göstermektedir (Orgeta, 2009).

Duygu düzenleme stratejileri ile ilişkili birçok faktör alanyazında ele alınmıştır. Örneğin, bazı araştırmacılar bilişsel işlevler ile duygu düzenleme arasındaki ilişkiye vurgu yapmıştır (Schmeichel, Volokhov ve Demaree, 2008; Richards ve Gross, 2000). Duygu düzenlemesinin, yaşam doyumu (Schutte, Manes ve Malouff, 2009; McRae, Jacobs, Ray, John ve Gross, 2012) ve pozitif ve negatif duygu durumları (Balzarotti ve ark., 2014; McRae ve ark., 2012) gibi öznel iyi oluş halinin göstergeleriyle olan ilişkisi ise sınırlı sayıda çalışmada ele alınmıştır. Bir sonraki bölümde, duygu düzenlemesiyle ilişkili olan faktörlere değinilecektir.

### **1.3.1. Duygu D zenlemesinin Yařam Doyumu ile İliřkisi**

Yařam doyumunu kavramı  znel iyi oluřun  nemli bir unsurudur (Vitterso, Biswas-Diener ve Diener, 2005) ve bireylerin hayatlarının genel bir deęerlendirmesini ifade etmektedir (Diener, 1984). Alanyazın bulguları yařam doyumunun bir  ok fakt r ile iliřkili olduęunu g stermiřtir. Yařam doyumunu, yaklaşık 60 ve 90 yařları arasındaki bireylerle y r t lm ř  alıřma sonu  larına g re, eęitim seviyesi (Melendez, Tomas, Oliver ve Navarro, 2008; Seligowski ve ark., 2012), fiziksel saęlık (Melendez ve ark., 2008; Seligowski ve ark., 2012), finansal memnuniyet (Gautam, Saito ve Kai, 2008), ve aile desteęi (Kim ve Sok, 2012) ile pozitif y nde ve hafıza problemleri (Pinto ve Neri, 2013), depresif semptomlar (Li ve ark., 2015) ve negatif duygu durumu (Siedlecki, Tucker-Drob, Oishi ve Salthouse, 2008) ile negatif iliřkidir. Gen   bireylerle y r t lm ř  alıřma bulguları ise, yařam doyumunun sosyal destek (Fuhrer, Rintala, Hart, Clearman ve Young, 1992), iř doyumunu (Adams, King ve King, 1996), fiziksel egzersiz (Grant, Wardle ve Steptoe, 2009) ve mutluluk (Singh ve Jha, 2008) ile pozitif y nde ve depresyon (Zhang, Zhao, Lester ve Zhou, 2014; Koivumaa-Honkanen ve ark., 1996) ve intihar d ř ncesi (Zhang ve ark., 2014) ile negatif y nde iliřkili olduęunu g stermiřtir.

Alanyazın, yařam doyumunun gen   ve yařlı yetiřkinlerde iliřkili olduęu fakt rler ile ilgili  ok geniř bilgi sunsa da, kısıtlı sayıda  alıřma yařam doyumunun duygu d zenleme stratejileri ile iliřkisine deęinmiřtir. Saxena, Dubey ve Pandey (2011) tarafından y r t lm ř bir  alıřmanın bulguları, duygu d zenlemede yařanılan zorlukların yařam doyumunu ile negatif iliřkili olduęunu g stermiřtir. Sonu   olarak, yařam doyumunun duygu d zenleme ile iliřkisinin daha  ok arařtırılmaya ihtiya  ı vardır. Bir sonraki b l mde, duygu d zenlemesinin  znel iyi oluřun dięer unsurları olan pozitif ve negatif duygu durumları ile olan iliřkisi ele alınacaktır.

### **1.3.2. Duygu D zenlemesinin Pozitif ve Negatif Duygu Durumları ile İliřkisi**

Pozitif ve negatif duygu durumları bireylerin duygusal deneyimlerinin en geniř boyutları olarak a  ıklanabilir (Terracciano, McCrae ve Costa, 2003). Alanyazında

pozitif ve negatif duygu durumları ile ilişkili birçok faktör detaylı olarak incelenmiştir. Pozitif duygu durumunun işlevsel sağlık (Kunzmann, 2008), sosyal destek (Dulin ve Hill, 2003) ve bağışlayıcılık (Green, Decourville ve Sadava, 2012) ile pozitif yönde ve depresif semptomlar (Hu ve Gruber, 2008) ve kaçınmacı başa çıkma (Ben-Zur, 2009) ile negatif yönde ilişkili olduğu bulunmuştur. Ayrıca, negatif duygu durumunun bilişsel işlevlerdeki problemler (Payne ve Schnapp, 2014) ve depresyon (Spindler ve ark., 2009) ile pozitif yönde ve yaş (Mroczek ve Almeida, 2004), sosyal işlevler (Hirsch, Floyd ve Duberstein, 2012), ve problem-odaklı başa çıkma (Ben-Zur, 2009) ile negatif yönde ilişkili olduğu bulunmuştur.

Alanyazında duygu durumunun çeşitli faktörlerle ilişkisine dair çok fazla bilgi sunulsa da, pozitif ve negatif duygu durumunun duygu düzenlemesi ile olan ilişkisine sadece birkaç çalışmada değinilmiştir. Balzarotti ve arkadaşları (2014) pozitif duygu durumunun plan yapmaya yeniden odaklanma ve pozitif yeniden değerlendirme ile güçlü bir ilişkisi olduğunu belirtmiştir. Ayrıca, duygu düzenlemede yaşanan zorluklar negatif duygu durum ile pozitif yönde ve pozitif duygu durum ile negatif yönde ilişkilidir (Saxena ve ark., 2011). Bazı bulgular duygu durumunun duygu düzenlemesi ile anlamlı bir ilişkisi olduğunu desteklese de, bu konunun daha iyi anlaşılmasına ihtiyacı vardır.

#### **1.4. Çalışma**

Bu çalışmanın amaçlarından biri, 25 ve 40 yaşları arasındaki genç yetişkinler ve 65 ve 80 yaşları arasındaki yaşlı bireylerin bilişsel duygu düzenleme stratejilerini kullanmaktaki farklılıklarını incelemektir. Alanyazın, duygu düzenleme stratejilerindeki yaşa bağlı farklılıklara dair önemli bulgular sağlasa da (örn., Hofer ve ark., 2015; Shiota ve Levenson, 2009), çalışmalarda kabul gibi bazı stratejilere dair çelişkili bulgular ortaya çıkmıştır. Ayrıca, Türkiye'deki çalışmaların büyük bir çoğunluğu sadece ergenler veya genç yetişkinlerle yürütülmüştür (örn., Öngen, 2010; Yıldız, 2017; Aka ve Gencoz, 2014; Sünbül ve Güneri, 2019; Vatan ve ark., 2014). Bu çalışmada duygu düzenlemesinin yaşam doyumu ve pozitif ve negatif duygu durumları gibi öznel iyi oluşun göstergeleriyle olan ilişkisinin de incelenmesi amaçlanmıştır. Ayrıca, bilişsel duygu düzenleme stratejilerinin yaş ile duygu durumu ve yaşam

doyumunu arasındaki ilişkilerde aracı rolünün incelenmesi amaçlanmaktadır. Böylece, bu çalışma duygusal deneyimler ve iyi oluş halindeki yaşa bağlı farklılıkların altında yatan sebepleri aydınlatmaya yardımcı olacaktır.

Çalışmanın hipotezleri aşağıdaki gibidir:

1. Genç ve yaşlı bireyler iyi oluş halinin göstergeleri açısından birbirinden farklılaşacaktır.
  - (1a) Yaşlı bireyler genç bireylere göre anlamlı derecede daha yüksek yaşam doyumuna sahip olacaktır.
  - (1b) Yaşlı bireyler genç bireylere göre anlamlı derecede daha yüksek pozitif duygu durumuna sahip olacaktır.
  - (1c) Yaşlı bireyler genç bireylere göre anlamlı derecede daha düşük negatif duygu durumuna sahip olacaktır.
2. Genç ve yaşlı bireyler bilişsel duygu durum stratejileri açısından birbirinden farklılaşacaktır.
  - (2a) Yaşlı bireyler genç bireylere göre anlamlı derecede daha yüksek pozitif yeniden odaklanma puanına sahip olacaktır.
  - (2b) Yaşlı bireyler genç bireylere göre anlamlı derecede daha yüksek pozitif yeniden değerlendirme puanına sahip olacaktır.
  - (2c) Yaşlı bireyler genç bireylere göre anlamlı derecede daha yüksek plan yapmaya yeniden odaklanma puanına sahip olacaktır.
  - (2d) Yaşlı bireyler genç bireylere göre anlamlı derecede daha yüksek bakış açısına yerleştirme puanına sahip olacaktır.
  - (2e) Yaşlı bireyler genç bireylere göre anlamlı derecede daha düşük kendini suçlama puanına sahip olacaktır.
  - (2f) Yaşlı bireyler genç bireylere göre anlamlı derecede daha düşük diğerlerini suçlama puanına sahip olacaktır.
  - (2g) Yaşlı bireyler genç bireylere göre anlamlı derecede daha düşük felaketleştirme puanına sahip olacaktır.
  - (2h) Yaşlı bireyler genç bireylere göre anlamlı derecede daha düşük düşünceye odaklanma puanına sahip olacaktır.

- (2i) Yaşlı bireyler genç bireylere göre anlamlı derecede daha düşük kabul puanına sahip olacaktır.
3. Bilişsel duygu düzenleme stratejileri öznel iyi oluşun göstergeleri ile ilişkili olacaktır.
- (3a) Bilişsel duygu düzenleme stratejileri yaşam doyumu ile ilişkili olacaktır.
- (3b) Bilişsel duygu düzenleme stratejileri pozitif duygu durumu ile ilişkili olacaktır.
- (3c) Bilişsel duygu düzenleme stratejileri negatif duygu durumu ile ilişkili olacaktır.
4. Bilişsel duygu düzenleme yaş ve iyi oluş hali arasındaki ilişkiye aracılık edecektir.
- (4a) Bilişsel duygu düzenleme stratejileri yaş ve pozitif duygu durumu arasındaki ilişkiye aracılık edecektir.
- (4b) Bilişsel duygu düzenleme stratejileri yaş ve negatif duygu durumu arasındaki ilişkiye aracılık edecektir.
- (4c) Bilişsel duygu düzenleme stratejileri yaş ve yaşam doyumu arasındaki ilişkiye aracılık edecektir.

## 2. YÖNTEM

### 2.1. Katılımcılar

Bu çalışmanın örneklemini, 25 ve 40 yaşları arasındaki 153 (50.3%) genç yetişkin ve 65 ve 80 yaşları arasındaki 151 (49.7%) yaşlı birey oluşturmaktadır. Genç katılımcıların %64,7'si kadın, %69,9'u üniversite mezunu, %88.9'u iş sahibi, %68,6'sı evli ve %55,6'sı en az bir çocuk sahibidir. Genç katılımcıların, %73,9'u yaşamlarının çoğunu büyükşehirde geçirdiğini belirtmiş, %79,1'i gelir düzeylerini orta olarak değerlendirmiş ve %49'u eşleri ve çocukları ile birlikte yaşadığını belirtmiştir. Ayrıca, genç katılımcıların %96,7'si herhangi bir fiziksel rahatsızlığının bulunmadığını ve %94,8'si ise herhangi bir psikolojik rahatsızlığının bulunmadığını ifade etmiştir. Yaşlı katılımcıların %56,3'ü erkek, 27,2'si üniversite mezunu, %73.5'i

emekli, 81,5'i evli ve %97,4'ü en az bir çocuk sahibidir. Yaşlı katılımcıların %46,4'ü yaşamlarının çoğunu büyükşehirde geçirdiğini belirtmiş, %75,5'i gelir düzeylerini orta olarak ifade etmiş ve %57,6'sı eşleri ile birlikte yaşadıklarını belirtmiştir. Yaşlı katılımcıların %35,8'i en az bir fiziksel sağlık problemi olduğunu ve %31,6'sı fiziksel rahatsızlıkları için tedavi gördüğünü belirtmiştir. Ayrıca, yaşlı katılımcıların %94'ü herhangi bir psikolojik rahatsızlığının olmadığını ifade etmiştir.

## **2.2. Veri Toplama Araçları**

Çalışmada katılımcılara içerisinde demografik bilgi formu, Bilişsel Duygu Düzenleme Ölçeği, Pozitif ve Negatif Duygu Ölçeği ve Yaşam Doyumu Ölçeği bulunan bir anket seti dağıtılmıştır.

### **2.2.1. Demografik Bilgi Formu**

Bu form katılımcıların yaşı, cinsiyeti, eğitim seviyesi, medeni durumu, gelir düzeyi, yaşamlarının büyük bir çoğunluğunu geçirdikleri yer ve fiziksel ve psikolojik sağlık durumları ile ilgili sorular içermektedir.

### **2.2.2. Bilişsel Duygu Düzenleme Ölçeği**

36 maddeden oluşan bu ölçek, 9 tane bilişsel duygu düzenleme stratejisini (kendini suçlama, kabul, düşünceye odaklanma, pozitif yeniden odaklanma, plana yeniden odaklanma, pozitif yeniden değerlendirme, bakış açısına yerleştirme, felaketleştirme ve diğerlerini suçlama) ölçmek amacıyla Garnefski, Kraaij ve Spinhoven (2001) tarafından geliştirilmiştir. Ölçek bireylerin stresli durumlar yaşadktan sonraki düşünce biçimlerini değerlendirmek amacıyla kullanılmaktadır. Her alt ölçek 4 maddeden oluşmaktadır ve 1 (neredeyse hiçbir zaman) ile 5 (neredeyse her zaman) arasında değişen 5'li Likert ölçeği kullanılmaktadır (Garnefski ve ark., 2001). Ölçeğin Türkçe'ye adaptasyonu Tuna ve Bozo (2012) tarafından yapılmıştır. Bu çalışmada alt ölçeklerin güvenirlik katsayıları .54 ve .79 arasında değişmektedir.

### **2.2.3. Pozitif ve Negatif Duygu Ölçeği**

Bu ölçek Watson, Clark ve Tellegen (1988) tarafından duygu durumunun iki genel boyutunu ölçmek amacıyla geliştirilmiştir. Hem pozitif duygu durum hem de negatif duygu durum alt ölçeği 10'ar maddeden oluşmaktadır ve 1 (çok az veya hiç) ile 5 (çok fazla) arasında değişen 5'li Likert ölçeği kullanılarak değerlendirilmektedir. Pozitif duygu durumu coşku, uyanıklık ve aktiflik gibi duygu deneyimleri ile ilişkilirken, negatif duygu durumu sinirlilik, hor görme ve korku ile ilişkilidir (Watson ve ark., 1988). Ölçek Türkçe'ye Gençöz (2000) tarafından adapte edilmiştir. Bu çalışmada pozitif duygu durum alt ölçeğinin güvenirlik katsayısı .88 ve negatif duygu durum alt ölçeğinin güvenirlik katsayısı .83 olarak bulunmuştur.

### **2.2.4 Yaşam Doyumu Ölçeği**

Yaşam doyumu ölçeği Diener, Emmons, Larsen ve Griffin (1985) tarafından genel yaşam doyumunu ölçmek amacıyla geliştirilmiştir. Ölçek 5 maddeden ve 1 (kesinlikle katılmıyorum) ile 7 (kesinlikle katılıyorum) arasında değişen 7'li Likert tipinden oluşmaktadır. Ölçekten alınan yüksek puanlar yaşam doyumunun yüksek olduğunu göstermektedir. Ölçek Türkçe'ye Durak, Senol-Durak ve Gencoz (2010) tarafından adapte edilmiştir. Bu çalışmada ölçeğin güvenirlik katsayısı .84 olarak bulunmuştur.

## **2.3. Prosedür**

Orta Doğu Teknik Üniversitesi Etik Kurulu'ndan etik onayı alındıktan sonra, katılımcılar çalışmaya yüz yüze görüşülerek davet edilmiş ya da katılımcılara yakınları aracılığıyla ulaşılmıştır. Katılımcılar çalışmanın amacı konusunda bilgilendirilmiş ve istedikleri zaman çalışmadan ayrılma haklarının olduğu ifade edilmiştir. Çalışmaya katılmayı kabul eden katılımcılar gönüllü katılım formunu imzalamıştır. Anket setinin doldurulması genç bireyler için yaklaşık 20 dakika ve yaşlı bireyler için yaklaşık 25-30 dakika sürmüştür.

## **2.4. Veri Analizi**

İlk olarak, demografik deęişkenlerin seviyelerinin alıřma deęişkenleri aısından nasıl farklılařtıęını incelemek amacıyla IBM SPSS programı kullanılarak n analizler yapılmıřtır. Sonrasında, deęişkenler arasındaki doęrusal iliřkileri incelemek amacıyla korelasyon analizleri uygulanmıřtır. Son olarak, SPSS iin proses makro (Hayes, 2018) alıřtırılarak aracı deęişken analizi yapılmıřtır.

## **3. SONULAR VE TARTIřMA**

### **3.1. Demografik Deęişkenlerin Seviyelerinin alıřma Deęişkenlerine gre Farklılařması**

#### **3.1.1. alıřma Deęişkenlerine Gre Gen ve Yařlı Katılımcılar Arasındaki Farklılıklar**

Bu alıřmada gen katılımcılar yařlı katılımcılara gre kendini suçlama alt leęinden daha yksek ve pozitif yeniden odaklanma alt leęinden daha dřk puan almıřlardır. Bu bulgu, uyumsuz duygu dzenleme stratejilerinin yařlılar tarafından daha az kullanıldıęının ve yař ile uyumlu duygu dzenleme arasında pozitif bir iliřki olduęunun belirtildięi nceki alıřma bulguları ile paraleldir (rn., Schirda ve ark., 2016; Hay ve Diehl, 2011). Sosyo-Duygusal Seicilik Teorisi (SST) kısıtlı zaman algısının yařlı bireylerde motivasyonel deęişimlere sebep olduęunu nermektedir. Buna gre, duygu ile iliřkili amalara daha ok ynelmek beraberinde daha iyi duygu dzenlemesini de getirmektedir (Carstensen ve ark., 2003). Ayrıca, Livingstone ve Isaacowitz (2015) gen bireylere kıyasla yařlı bireylerin duygularını dzenlerken pozitif materyallere daha ok nem verdiklerini ileri srmüşür. Yařlılıkta gzlemlenen bu pozitiflik etkisi de duygu dzenlemesine katkıda bulunmaktadır (Lckenhoff ve Carstensen, 2004).

Çalışmada, genç katılımcıların yaşlı katılımcılara göre negatif duygu durumunun daha yüksek olduğu bulunmuştur. Bu bulgu alanyazın ile tutarlıdır (Mroczek ve Almeida, 2004; Thomsen, Mehlsen, Viidik, Sommerlund ve Zachariae, 2005; Brose, Schmiedek, Lövdén ve Lindenberger, 2011). Urry ve Gross (2010) yaşlı bireylerdeki gelişmiş duygu düzenlemesinin negatif duygu durumundaki azalma ile ilişkili olabileceğini ileri sürmüştür. Ayrıca, yaşlı katılımcıların genç katılımcılara göre daha yüksek yaşam doyumuna sahip oldukları belirlenmiştir. Bu konuda bazı çalışmalar yaşla birlikte yaşam doyumunun arttığını rapor etmiştir (örn., Angelini, Cavapozzi, Corazzini ve Paccagnella, 2012; Gana, Bailly, Saada, Joulain ve Alaphilippe, 2013). Carstensen ve arkadaşları (2003) yaşlı bireylerin çevrelerini şekillendirerek ve duygusal iyi oluş hallerini ve yaşam doyumlarını mümkün oldukça yükselterek yaşlanma sürecine aktif olarak cevap verdiklerini önermiştir.

### **3.1.2. Çalışma Değişkenlerine Göre Eğitim Seviyeleri Arasındaki Farklılıklar**

Bu çalışmada, üniversite ya da yüksek lisans mezunu katılımcıların ilkökul mezunu katılımcılara göre pozitif duygu durumlarının daha yüksek olduğu bulunmuştur. Ayrıca, yüksek lisans mezunu katılımcılar ortaokul mezunu katılımcılara göre daha yüksek pozitif duygu durumuna sahiptir. Bu bulgulara paralel olarak, Turk Charles ve arkadaşlarının (2001) çalışmasında eğitim yılı ve pozitif duygu durumu arasında anlamlı bir ilişki bulunmuştur. Eğitim, bir iş sahibi olma ve ekonomik zorluklarla baş etmede önemli bir role sahiptir. Eğitim süreci bireylere problemlerle baş etmeleri için gerekli becerileri edinmelerinde yardımcı olur (Ross ve Mirowsky, 2010). Bu nedenle eğitilmiş bireyler amaçlarını gerçekleştirip hızla değişen dünyaya adapte olabilirler (Agrawal ve ark., 2011). Eğitilmiş bireyler ayrıca öznel iyi oluş hallerini yükseltecek daha sağlıklı davranışlarla uğraşma eğilimindedirler (Ilies, Yao, Curseu ve Liang, 2018).

### **3.1.3. Çalışma Değişkenlerine Göre Medeni Durum Seviyeleri Arasındaki Farklılıklar**

Bu çalışmada, bekâr ve dul katılımcıların negatif duygu durumları evli katılımcılara göre daha yüksektir. Ayrıca, bekâr katılımcıların evli katılımcılara göre yaşam

doyumunu seviyeleri daha düşüktür. Bu bulgular önceki birçok çalışma sonuçları ile uyumludur (Bailey ve Snyder, 2007; Kouivumaa-Honkanen ve ark., 2000; Post, de Witte, van Asbeck, van Dijk, ve Schrijvers, 1998; Agrawal ve ark., 2011). Evlilik bireylerin duygusal iyi oluş hali ve ruhsal sağlığı için yararlı etkilere sahiptir (Gove, Style ve Hughes, 1990). Evli bireyler daha büyük bir akraba ve arkadaşlık ilişkisine sahiptir ve öz tanım ve iyi oluş hali için önemli olan ortak bir geçmiş biriktirirler (Musick ve Bumpass, 2012). Ayrıca, eşlerin sağladığı duygusal destek öznel iyi oluş üzerinde doğrudan bir etkiye sahiptir (Venkatraman, 1995).

### **3.1.4. Çalışma Değişkenlerine Göre Çocuk Sahibi Olan ve Çocuk Sahibi Olmayan Katılımcılar Arasındaki Farklılıklar**

Bu çalışmada, en az bir çocuk sahibi olan katılımcıların yaşam doyumu çocuk sahibi olmayan katılımcılara göre daha yüksek bulunmuştur. Bu bulguya benzer olarak, önceki çalışmalarda ebeveynlik ile iyi oluş hali, mutluluk ve hayatın anlamı arasında pozitif ilişki rapor edilmiştir (örn., Aassve, Goisis ve Sironi, 2012; Nelson, Kushlev, English, Dunn ve Lyubomirsky, 2012). Ebeveynler çocukları ile olan ilişkilerinden duygusal kazanımlar elde ederler. Çocuklar aileleri için heyecan ve neşe kaynağıdır (Pollmann-Schult, 2014). Çocuk sahibi olmak, ayrıca, kişisel gelişimin desteklenmesi (Nomaguchi ve Milkie, 2020) ve sosyal kimliğin artmasında önemlidir (Pollmann-Schult, 2014).

### **3.1.5. Çalışma Değişkenlerine Göre Çalışma Durumu Seviyeleri Arasındaki Farklılıklar**

Çalışan katılımcılar emekli katılımcılara göre kendini suçlama alt ölçeğinden daha yüksek ve pozitif yeniden odaklanma alt ölçeğinden daha düşük puan almıştır. Çalışan katılımcıların çoğu genç yaş grubunda ve emekli katılımcıların çoğu ise yaşlı gruptadır. SST'ye göre yaşlı bireyler geleceği daha sınırlı olarak görmekte ve bu durum onların amaçlarını etkilemektedir. Duygusal deneyimler ve amaçlar ön plana çıkmakta ve duygu düzenleme becerileri gelişmektedir (Carstensen ve ark., 1999).

Bu nedenle çalışan ve emekli katılımcıların yaşı, çalışma durumu ve bilişsel duygu düzenleme stratejileri arasındaki ilişkide rol oynamış olabilir.

Ayrıca, çalışan katılımcıların pozitif duygu durumları çalışmayan katılımcılara göre daha yüksek bulunmuştur. Modini ve arkadaşları (2016) bir iş sahibi olmanın öznel iyi oluş halini iyileştirdiğini ve stresle baş etme kaynaklarını artırdığını belirtmiştir. Diğer taraftan, işsizliğin iyi oluş hali üzerinde olumsuz etkilerinin olduğu da bulunmuştur (Kapteyn, Lee, Tassot, Vonkova ve Zamarro, 2015). Warr, Jackson ve Banks (1988) tarafından yürütülmüş bir araştırmada, çalışan bireylere kıyasla çalışmayan bireylerde daha yüksek düzeyde kaygı, depresyon ve daha düşük düzeyde özgüven gözlenmiştir.

### **3.1.6. Çalışma Değişkenlerine Göre Yaşanılan Yerin Seviyeleri Arasındaki Farklılıklar**

Yaşamlarının çoğunu büyükşehirde geçirmiş olan katılımcılar, yaşamlarının çoğunu ilçe veya köyde geçirmiş olan katılımcılardan daha yüksek pozitif duygu durumuna sahiptir. Bu konuda, Tobiasz-Adamczyk ve Zawisza (2017) küçük yerleşim yerlerinde yaşayan bireylere göre kentsel alanlarda yaşayan bireylerin sosyal katılımının daha yüksek olduğunu ve bunun da iyi oluş halini iyileştirdiğini ileri sürmüştür. Ayrıca, kentsel alanlarda geniş ürün ve hizmet çeşitliliği sağlanmaktadır ve bu durum pozitif duyguların artmasına sebep olmaktadır (Blaauw ve Pretorius, 2013).

### **3.1.7. Çalışma Değişkenlerine Göre Gelir Düzeyi Seviyeleri Arasındaki Farklılıklar**

Bu çalışmada, gelir düzeyini düşük olarak değerlendiren katılımcılar gelir düzeylerini orta ve yüksek olarak değerlendiren katılımcılara göre daha düşük pozitif duygu durumuna sahiptir. Bu bulguya paralel olarak, gelir düzeyi ve öznel iyi oluş hali arasındaki pozitif ilişki bazı çalışmalarda rapor edilmiştir (örn., Agrawal ve ark., 2011; Hampton, 2004). Gelir düzeylerini düşük ya da orta olarak değerlendiren katılımcılar gelir düzeylerini yüksek olarak değerlendiren katılımcılara göre daha düşük yaşam doyumuna sahiptir. Ayrıca, gelir düzeyini düşük olarak değerlendiren katılımcılar orta

olarak deęerlendiren katılımcılara gre daha dşk yařam doyumuna sahiptir. Bu bulgular gemiř alıřma sonuları ile tutarlıdır (rn., Zhang ve Yu, 1998; Shi, Joyce, Wall, Orpana ve Bancej, 2019). Gelir dzeyi yksek bireyler hayattaki amalarını daha kolay gerekleřtirebilirler (Tmkaya, 2011) ve stres etkenlerinin olumsuz sonularına karřı kendilerini koruyabilirler (Pinquart ve Srensen, 2000). Yksek gelir dzeyi ile kiřiisel geliřim arasında da anlamlı pozitif bir iliři ki vardır (Kaplan, Shema ve Leite, 2008). te yandan, ekonomik zorluk yařamak yeterlik ve zgvenin dřmesine neden olmakta ve bireylerin psikolojik iyi oluř halini olumsuz ynde etkilemektedir (Pearlin, Menaghan, Lieberman ve Mullan, 1981).

### **3.1.8 alıřma Deęiři Kenlerine Gre Yařam Dzeni Seviyeleri Arasındaki Farklılıklar**

Bu alıřmada sadece ocuklarıyla birlikte yařayan katılımcılar eřileriyle birlikte yařayan katılımcılara gre daha yksek negatif duygu durumuna sahiptir. Alanyazındaki bazı alıřmalar eři ile birlikte yařamanın psikolojik iyi oluř hali zerindeki yararlı etkilerine dikkat ekmiřtir. Kim, Hong ve Kim (2014) tarafından yrtlmř alıřmaya gre, eři ile birlikte yařayan yařlı bireylerin znel iyi oluř hali ve aile iliřkileri tatminleri daha yksektir. Ayrıca, Kooshiar, Yahaya, Hamid, Abu Samah ve Sedaghat Jou (2012), eři ile birlikte yařamanın sosyal destek zerinde ocuklarla birlikte yařamaktan daha gl pozitif etkisi olduęunu belirtmiřtir.

### **3.1.9. alıřma Deęiři Kenlerine Gre Fiziksel Hastalıęı Olan ve Olmayan Katılımcılar Arasındaki Farklılıklar**

En az bir fiziksel hastalıęı olan katılımcılar fiziksel bir hastalıęı olmayan katılımcılara gre plan yapmaya yeniden odaklanma alt leęinden daha dřk puan almıřlardır. Bu bulguya benzer olarak, Rey ve Extremera (2015) fiziksel saęlık durumu ve plan yapmaya yeniden odaklanma arasında anlamlı pozitif bir iliři ki rapor etmiřtir. Ayrıca, Li ve arkadaşları (2015) kanser hastalarının plan yapmaya yeniden odaklanmayı saęlıklı bireylere gre daha az kullandıklarını bulmuřtur. Bu alıřmada katılımcıların oęu yksek sayıda ila, klinik grřme, rejim ve yařam tarzı deęiřiklikleri gerektiren

(Turner ve Kelly, 2000; Gallacher, May, Montori ve Mair, 2011) kronik hastalıklara sahiptir. Tüm bu faktörler uzun süren stres ve psikolojik problemlere neden olmakta (Turner ve Kelly, 2000) ve bireylerin plan yapmaya yeniden odaklanma becerilerini zayıflatabilmektedir.

Ayrıca, en az bir fiziksel hastalığı olan katılımcılar fiziksel bir hastalığı olmayan katılımcılara göre daha düşük pozitif duygu durumuna sahiptir. Bu bulguya paralel olarak, birçok çalışma fiziksel sağlık problemlerinin bireylerin öznel iyi oluş halini olumsuz etkilediğini belirtmiştir (Tobiasz-Adamczyk ve Zawisza, 2017; Tambs, 2004; Kunzmann, Little ve Smith, 2000; Angelini ve ark., 2012). Lipowski (1983) fiziksel hastalıkların üzüntü, kaygı ve öfke duygularını uyandırıp bireylerin pozitif duygu durumlarını düşürebileceğini önermiştir. Ayrıca, Kendig, Browning ve Young (2000) bağımsız olma kapasitesindeki azalmanın fiziksel hastalık ve pozitif duygu durumu arasındaki ilişkiye aracılık ettiğini ortaya çıkarmıştır.

### **3.1.10. Çalışma Değişkenlerine Göre Fiziksel Rahatsızlıkları için Tedavi Gören ve Tedavi Görmeyen Katılımcılar Arasındaki Farklılıklar**

Fiziksel sağlık problemleri için tedavi görmeyen katılımcılar tedavi gören katılımcılara göre plan yapmaya yeniden odaklanma ve pozitif yeniden değerlendirme alt ölçeklerinden daha yüksek puan almıştır. Daha önce bahsedildiği gibi, katılımcıların çoğu kronik sağlık problemlerine sahiptir. Bu hastalıkların tedavisi zordur ve iyi oluş halinin düşmesi gibi olumsuz bazı sonuçlara neden olabilir (Sav ve ark., 2013). Bu nedenle, tedavi gören katılımcılar yaşadıkları deneyimlere pozitif anlam yüklemekte ve olaylarla nasıl başa çıkabilecekleri üzerine odaklanmakta zorlanmış olabilir. Ayrıca, fiziksel sağlık problemleri için tedavi görmeyen katılımcılar tedavi gören katılımcılara göre daha yüksek pozitif duygu durumuna sahiptir. Tedavi görmek zorlu yan etkilere neden olabilir, kaygı, öfke, ve korku gibi olumsuz duygular uyandırabilir, iş gücünü düşürebilir ve ekonomik zorluklara neden olabilir (Demain ve ark., 2015; Gallacher ve ark., 2011; Sav ve ark., 2013). Bu nedenle, fiziksel hastalıklar için tedavi görmek katılımcıların pozitif duygu durumunu düşürmüş olabilir.

### **3.1.11. Çalışma Değişkenlerine Göre Psikolojik Hastalığı Olan ve Olmayan Katılımcılar Arasındaki Farklılıklar**

Bu çalışmada, en az bir psikolojik rahatsızlığı olan katılımcılar psikolojik rahatsızlığı olmayan katılımcılara göre daha düşük pozitif duygu durumuna sahiptir. Bu bulgu önceki çalışma sonuçları ile paraleldir (örn., Lombardo, Jones, Wang, Shen ve Goldner, 2018; Puvill, Lindenberg, de Craen, Slaets ve Westendorp, 2016). Psikolojik rahatsızlıkları olan bireyler, hastalıkları hakkındaki yanlış anlamalarla ilgili önyargılarla mücadele ederler (Corrigan & Watson, 2002). Bireyleri psikolojik rahatsızlıkları ile ilgili etiketlemek toplumdaki uzak durma isteğine (Angermeyer ve Matschinger, 2003), öz değerini düşmesine ve moral bozukluğuna (Hinshaw ve Stier, 2008) neden olabilir. Ayrıca, psikolojik rahatsızlıklar işsizlik ve düşük eğitim seviyesi ile yakından ilişkilidir ve bu durum öznel iyi oluş halini olumsuz yönde etkilemektedir (Suvisaari ve ark., 2009).

### **3.1.12. Çalışma Değişkenlerine Göre Psikolojik Rahatsızlıkları için Tedavi Gören ve Tedavi Görmeyen Katılımcılar Arasındaki Farklılıkla**

Bu çalışmada, psikolojik sağlık problemleri için tedavi görmeyen katılımcıların tedavi gören katılımcılara göre daha yüksek pozitif duygu durumuna sahip olduğu bulunmuştur. Bystedt, Rozental, Andersson, Boettcher, ve Carlbring (2014)'in çalışmasında, psikolojik tedavilerin olumsuz taraflarından birisi çalışma ve sosyal aktiviteler için ayrılan zamanın azalması olarak belirtilmiştir. Ayrıca, psikolojik tedaviler üzüntü ve kaygı gibi geçici güçlü duygulara neden olabilir (Bystedt ve ark., 2014). Tüm bu faktörler psikolojik rahatsızlıkları için tedavi gören bireylerin pozitif duygu durumunu düşürebilir.

## **3.2. Çalışma Değişkenleri Arasındaki Korelasyon Analizleri**

Hem genç hem yaşlı katılımcılarda kendini suçlamanın kabul, düşünceye odaklanma, felaketleştirme ve diğerlerini suçlama ile pozitif ilişkili olduğu bulunmuştur. Bu bulgu, önceki çalışma sonuçları ile paraleldir (örn., Garnefski ve ark., 2001; Tuna ve Bozo,

2012; Omran, 2011). Ayrıca, yaşlı katılımcılarda kendini suçlama ile bakış açısına yerleştirme arasında pozitif bir ilişki bulunmuştur. Daha çok uyumsuz bir duygu düzenleme stratejisi olarak değerlendirilen kendini suçlama stres, kaygı, ve depresyon ile ilişkilidir (Martin & Dahlen, 2005; Garnefski et al., 2002). Öte yandan, bakış açısına yerleştirme psikolojik ve öznel iyi oluş hali ile pozitif ilişkilidir (Balzarotti ve ark., 2014). Bu nedenle, yaşlı katılımcılarda kendini suçlama ve bakış açısına yerleştirme arasındaki pozitif ilişki bu çalışmanın beklenmeyen sonuçlarından birisidir.

Hem genç hem yaşlı katılımcılarda kabul ve düşünceye odaklanma arasında pozitif bir ilişki bulunmuştur. Bu bulgu alanyazın ile tutarlıdır (örn., Garnefski, van Rood, de Roos ve Kraaij, 2017; Feliu-Soler ve ark., 2017). Ayrıca, kabul alt ölçeği genç katılımcılarda felaketleştirme ile ve yaşlı katılımcılarda plan yapmaya yeniden odaklanma, bakış açısına yerleştirme, pozitif yeniden değerlendirme ve diğerlerini suçlama ile pozitif ilişkili bulunmuştur. Bu alt ölçeğin yaşlı katılımcılarda güvenilirliğinin düşük olması sonuçları etkilemiş olabilir. Alanyazında da kabul alt ölçeği ile ilgili çelişkili bulgular mevcuttur. Örneğin, Martin ve Dahlen (2005) kabul alt ölçeğinin maddeleri umutsuzluk ifade ettiği için sadece bazı durumlarda uyumlu bir role sahip olabileceğini önermiştir. Bu nedenle, bu alt ölçeğinin kullanımında ki yaşa bağlı farklılıkları anlamak için daha fazla araştırmaya ihtiyaç vardır.

Düşünceye odaklanma, plan yapmaya yeniden odaklanma, pozitif değerlendirme ve bakış açısına yerleştirme ile pozitif ilişkilidir. Bu bulgu önceki çalışmalar ile aynı doğrultudadır (örn., Garnefski ve ark., 2002; Chamizo-Nieto, Rey ve Sanchez-Alvarez, 2020). Hem genç hem yaşlı katılımcılarda, pozitif yeniden odaklanmanın plan yapmaya yeniden odaklanma, bakış açısına yerleştirme ve pozitif yeniden değerlendirme ile pozitif ilişkili olduğu ve diğerlerini suçlama ile negatif ilişkili olduğu bulunmuştur. Bu bulgu da önceki sonuçlar ile tutarlıdır (Garnefski, Hossain, ve Kraaij, 2017; Mihalca ve Tarnavska, 2013; Garnefski ve ark., 2001). Ancak pozitif yeniden odaklanma ve felaketleştirme arasındaki anlamlı düzeydeki negatif ilişki sadece yaşlı katılımcılarda ortaya çıkmıştır. Felaketleştirme genç bireylerde psikolojik ve öznel iyi oluş hali ile ilişkiliyken (Omran, 2011; Balzarotti ve ark., 2014),

yaşlandıkça daha çok önem kazanan somatik şikayetler ve fiziksel sağlık durumu ile de yakından ilişkidir (Extremera ve Rey, 2014; Garnefski ve ark., 2017). Bu nedenle, bu strateji yaşlı bireylerde fiziksel iyi oluş hali ile ilişki olabilir ve daha çok öznel iyi oluş hali ile ilişkili olan pozitif yeniden odaklanma ile doğrudan ilişkili olmayabilir.

Bu çalışmada hem genç hem yaşlı katılımcılarda, plan yapmaya yeniden odaklanmanın bakış açısına yerleştirme ve pozitif yeniden değerlendirme ile pozitif ilişkili ve felaketleştirme ile negatif ilişkili olduğu bulunmuştur. Alanyazında plan yapmaya yeniden odaklanma ve felaketleştirme arasındaki ilişki ile ilgili çelişkili sonuçlar vardır. Önceki bazı çalışmalar bu iki duygu düzenleme stratejisi arasında anlamlı bir ilişki bulmazken (örn., Balzarotti ve ark., 2014; Martin ve Dahlen, 2005; Omran, 2011), diğer çalışmalar pozitif bir ilişki rapor etmişlerdir (örn., Mihalca ve Tarnavska, 2013; Garnefski ve ark., 2017; Garnefski ve ark., 2002; Extremera ve Rey, 2014; Garnefski ve ark., 2005). Bu nedenle katılımcıların demografik özellikleri gibi başka faktörler bu ilişkiyi etkiliyor olabilir.

Hem genç hem yaşlı katılımcılarda pozitif yeniden değerlendirme bakış açısına yerleştirme ile pozitif ilişkili ve felaketleştirme ile negatif ilişkilidir. Bu bulgu önceki sonuçlar ile aynı doğrultudadır (örn., Garnefski ve ark., 2017; Omran, 2011; Rey ve Extremera, 2015; Stikkelbroek, Boddien, Kleinjan, Reijnders ve van Baar, 2016). Ancak, pozitif yeniden değerlendirme ile diğerlerini suçlama arasındaki negatif ilişki sadece yaşlı yetişkinlerde anlamlı düzeydedir. Yaşlanma beraberinde kayıp deneyimlerini getirmektedir (Reker, 1997). Ayrıca, yaşlı bireyler genç bireylere göre sosyal ilişkilerine daha çok önem verirler (Löckenhoff ve Carstensen, 2004); bu nedenle daha çok ilişkisel stres yaşayabilirler. Yaşlılıktaki bu kayıp deneyimleri ve ilişkisel stresin diğerlerini suçlama ile ilişkili olduğu ortaya çıkmıştır (Schroevers, Kraaij ve Garnefski, 2007). Ayrıca pozitif yeniden değerlendirme ve stres arasında negatif bir ilişki vardır (Martin ve Dahlen, 2005) ve stres genç bireylerde diğerlerini suçlama stratejisi ile ilişkili değildir (Miklosi, Martos, Szabo, Kocsis-Bogar ve Forintos, 2014). Bu nedenle, yaşlı bireyler arasındaki pozitif yeniden değerlendirme ve diğerlerini suçlama arasındaki ilişkide stres rol oynamış olabilir.

Hem genç hem yaşlı katılımcılarda, pozitif duygu durumu pozitif yeniden odaklanma, plan yapmaya yeniden odaklanma ve pozitif yeniden değerlendirme ile pozitif ilişkilidir. Ayrıca, pozitif duygu durumu yaşlı katılımcılarda bakış açısına yerleştirme ve düşünceye odaklanma ile pozitif ilişkili bulunmuştur. Düşünceye odaklanma ve pozitif duygu durumu arasındaki pozitif ilişki bu çalışmanın beklenmeyen bir bulgusudur çünkü birçok çalışmada düşünceye odaklanma depresyon, kaygı ve stres ile ilişkilidir (örn., Garnefski ve Kraaij, 2006; Martin ve Dahlen, 2005; Garnefski ve ark., 2005; Garnefski ve Kraaij, 2018). Ancak, bu alt ölçeğin maddeleri duygulara odaklanmaktadır (Garnefski ve ark., 2001). SST yaşlılık döneminin, şimdiki zaman ve duygusal deneyimlerle ilişkili olduğunu ve bu durumun duygusal iyi oluş hali için yararlı olduğunu önermiştir (Carstensen ve ark., 1999). Bu nedenle yaşlı bireylerin duygulara olan yönelimlerinin artması (Carstensen, 1995) artan pozitif duygu durumu ile de ilişkili olabilir.

Hem genç hem yaşlı katılımcılarda negatif duygu durumu felaketleştirme ve diğerlerini suçlama ile pozitif ilişkili ve pozitif yeniden odaklanma ile negatif ilişkilidir. Negatif duygu durumu yaşlı katılımcılarda pozitif yeniden değerlendirme ile negatif ilişkili bulunmuştur. Pozitif yeniden değerlendirme, bireylerin hayat tecrübeleriyle birlikte daha etkili bir şekilde kullanılabilir ve bu nedenle yaşlandıkça ön plana çıkabilir (Shiota ve Levenson, 2009; Gross ve John, 2003). Pozitif duygu durumu ve negatif duygu durumu arasındaki negatif ilişki sadece yaşlı katılımcılarda gözlenmiştir. Scott, Sliwinski, Mogle ve Almeida (2014) genç bireylerin karışık duygu durumlarını daha fazla deneyimleyebilme eğiliminde olduklarında belirtmiştir. Bu nedenle pozitif ve negatif duygu durumu genç bireylerde birbirinden bağımsız olabilir. Hem genç hem yaşlı katılımcılarda yaşam doyumu pozitif duygu durumu ile pozitif ilişkili ve negatif duygu durumu ile negatif ilişkili bulunmuştur. Ancak yaşam doyumu ile pozitif yeniden odaklanma, plan yapmaya yeniden odaklanma, pozitif yeniden değerlendirme ve bakış açısına yerleştirme arasındaki anlamlı düzeydeki pozitif ilişki sadece yaşlı katılımcılarda ortaya çıkmıştır. Yaşlılık dönemindeki sınırlı zaman algısı duygulara ve duygu düzenlemesine daha çok vurgu yapılmasına yol açar ve bu durum yaşamdan doyum elde etme isteği ile yakından ilişkilidir. Ancak, zaman daha geniş algılandığında bilgi toplamak duygu düzenlemesinin önüne geçer (Löckenhoff ve

Carstensen, 2004; Carstensen ve ark., 1999; Carstensen ve ark., 2003). Bu nedenle, yaşlı bireylerde yaşam doyumu birçok duygu düzenleme stratejisi ile ilişkili olabilir.

### **3.3. Yaş Grupları ve İyi Oluş Halinin Göstergeleri Arasındaki İlişkilerde Duygu Düzenlemesinin Aracı Rolü**

Bu çalışmada, pozitif yeniden odaklanma yaş grubu ve negatif duygu durumu arasındaki ilişkiye aracılık etmektedir. SST yaşlılık döneminde duygular ve duygu ile ilişkili amaçların ön plana çıktığını ve bu durumun duygu düzenlemesini geliştirdiğini önermektedir. Olumsuz duygusal deneyimleri yumuşatmak için duygu ile ilişkili amaçlara daha çok kaynak harcanmaktadır. Başka bir deyişle, bu teori yaşlı bireylerin negatif duygusal tepkilerden daha çok kaçınabildiklerini ve pozitif tepkileri artırdıklarını; bu şekilde negatif duygu durumlarının azaldığını vurgulamıştır (Carstensen ve ark., 1999; Turk Charles ve ark., 2001). Çoklu aracı değişken analizleri yaş grubu ve öznel iyi oluş hali arasındaki ilişkilerde duygu düzenlemesinin aracı rolüne dair anlamlı başka bir sonuç ortaya çıkarmamıştır. Başka faktörler bu ilişkilerde rol oynamış olabilir; bu nedenle daha fazla araştırma gerekmektedir.

Aracı değişken analizlerine göre, pozitif yeniden odaklanma alt ölçeği yüksek öznel iyi oluş hali ile ilişkilidir. Duygularını düzenlemek için pozitif yeniden odaklanma stratejisini kullanan bireyler pozitif ve eğlenceli düşüncelerle meşgul olurlar (Garnefski ve ark., 2001). Pozitif düşünmek stresle baş etme becerilerini geliştirir (Naseem ve Khalid, 2010) ve iyi oluş halini yükseltir (Taylor ve Brown, 1988). Bu çalışmada, ayrıca, felaketleştirme puanının yüksek olması negatif duygu durumunun yüksek olması ile ilişkilidir. Balzarotti ve arkadaşları (2014) tarafından yürütülmüş çalışmada felaketleştirmenin negatif duygu durumunu artırdığı ortaya çıkmıştır. Felaketleştirmenin kullanılması olayların olumsuz tarafları hakkında abartılı algılara neden olmakta (Garnefski ve ark., 2001; Jenness ve ark., 2016) ve psikolojik ve öznel iyi oluş halini olumsuz etkilemektedir (Balzarotti ve ark., 2014; Panahi ve ark., 2016). Ayrıca, bu çalışmada plan yapmaya yeniden odaklanma yüksek pozitif duygu durumu ile ilişkilidir. Bu bulgu ile tutarlı olarak, Balzarotti ve arkadaşları (2014) tarafından yürütülmüş bir çalışmada plan yapmaya yeniden odaklanma pozitif duygu durumunu

yordamaktadır. Plan yapmaya yeniden odaklanma uyumlu duygu düzenleme stratejilerinden birisidir (Garnefski ve ark., 2001) ve pozitif duygu durumunu artırmakta önemlidir.

### **3.4. Güçlü Yönler ve Uygulamalar**

Bildiğimiz kadarıyla, bu çalışma yaş grubu ve öznel iyi oluş halinin göstergeleri arasındaki ilişkilerde bilişsel duygu düzenleme stratejilerinin aracı rolünü inceleyen ilk çalışmadır. Bu nedenle, yaş, duygu düzenlemesi ve iyi oluş hali arasındaki ilişkilerle ilgili yeni bulgular sağlamıştır. Duygu düzenlemesi ve iyi oluş halini inceleyen önceki birçok çalışma sadece üniversite öğrencileri ya da genç yetişkinlerle yürütülmüştür (örn., Quoidbach ve ark., 2010; Haga ve ark., 2009; Gross ve John, 2003; Saxena ve ark., 2011); bu nedenle bu çalışma iki farklı yaş grubunu karşılaştırarak alanyazına katkıda bulunmuştur. Ayrıca, tüm dünyada nüfus yaşlanmakta olduğu için (Boz ve Ozsarı, 2019), özellikle yaşlı bireylerle çalışmak klinik psikoloji için önemlidir.

Bu çalışma pozitif yeniden odaklanmanın yaş grubu ve negatif duygu durumu arasındaki ilişkiye aracılık ettiğini göstermiştir. Bu nedenle, hem genç hem yaşlı bireylerle uygulanan psikoterapiler duygu düzenlemesinde pozitif yeniden odaklanma becerisinin geliştirilmesi üzerine çalışmalıdır. Ayrıca, bazı bilişsel duygu düzenleme stratejilerinin öznel iyi oluş halinin göstergeleri ile ilişkili olduğu belirlenmiştir. Bu nedenle, klinik uygulamalarda uyumlu duygu düzenleme stratejilerinin geliştirilmesi ve uyumsuz stratejilerin değiştirilmesi üzerine çalışılması çok önemlidir.

### **3.5. Sınırlılıklar ve Gelecek Araştırmalar için Öneriler**

Çalışmanın kesitsel yapısından dolayı, duygu düzenleme stratejilerinin kullanımındaki gelişimsel değişimler ve değişkenler arasındaki neden sonuç ilişkisi incelenememiştir. Gelecek çalışmalarda boylamsal desenli çalışmaların yürütülmesi önerilmektedir. Gelecek çalışmalar değişkenler arasındaki ilişkiler hakkında daha geniş bilgi sahibi olabilmek için nitel yöntemlerle veri toplayabilir. Ayrıca, Türkiye’de duygu

düzenlemesi ve iyi oluş hali arasındaki ilişki çok kısıtlı sayıda çalışmada incelenmiştir ve bu durum çalışmanın bulgularının tartışılmasını sınırlandırmaktadır. Genç ve yaşlı bireyler arasında demografik değişkenlerin dağılımı eşit değildir; bu nedenle, gelecek çalışmalar bu konuya dikkat etmelidir. Son olarak, çalışmanın örneklemini 25 ve 40 yaşları arasındaki genç yetişkinler ve 65 ve 80 yaşları arasındaki yaşlı yetişkinler oluşturmuştur. Duygu düzenlemesindeki yaşa bağlı farklılıklar hakkında daha geniş bilgi edinebilmek için gelecek çalışmalara farklı yaş gruplarını dâhil etmeleri önerilmektedir.

### **3.6. Çalışma ile İlgili Kişisel Deneyimler**

Bu çalışmada özellikle yaşlı bireylerle çalışmak önemli bir deneyim sağlamıştır. Yaşlı katılımcıların birçoğunun anketlerdeki maddelerle ilgili geçmiş deneyimlerini, duygu ve düşüncelerini açıklama ihtiyacı içinde olduğu gözlenmiştir. Yaşlı katılımcılar anketlere içtenlikle ve samimi yanıtlar vermeye çalışmış ve kendilerini iyi ifade edebilmek için çaba harcamışlardır. Ancak, bu yaş grubu ile çalışmanın bazı zorlukları da olmuştur. Bazı yaşlı katılımcıların anketleri doldururken çabuk sıkıldıkları ve yarıda bıraktıkları gözlenmiştir. Yaşlı bireyler için anketleri doldurmak genç bireylere göre çok daha uzun sürmüştür. Ayrıca, akademik çalışmalara daha aşina oldukları için genç bireylerin çalışmaya katılmak konusunda yaşlı bireylerden daha istekli oldukları gözlenmiştir.

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