

The Relationship between Parental Invalidation and Episodic Future Thinking

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Submitted to the
Institute of Graduate Studies and Research
in partial fulfillment of the requirements for the degree of

Master of Science
in
General Psychology

Eastern Mediterranean University
February 2022
Gazimağusa, North Cyprus

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ABSTRACT

Episodic future thinking enables individuals to envision what is upcoming, in turn they make up plans, alter their current behaviors, modify their current mood and develop or design goals, further goal-directed behaviors might occur. Previous studies showed that subjective experiences of future thought might be influenced by the emotion regulation strategies. On the other hand, children who grow up in an invalidating environment, may not learn how to label their emotions, identify their own emotional expressions and others, as well as they fail to handle those emotions which they were not allowed to express or taught to suppress. Taken together with previous literature, we proposed that phenomenological characteristics of future events would be influenced by emotional invalidation (parental invalidation). Further we expected to examine this relationship with the mediating effects of emotion regulation strategies. In addition, we used cue words related to the family to evoke experiences of invalidation. The study contained 108 participants recruited from the Eastern Mediterranean University and conducted through online data collecting tool Psytoolkit. Participants were randomly assigned to either of the conditions; family-related cue words and neutral cue words. Each participant received a total of two cue words and asked to generate future events depending on their cue word conditions. Afterwards, they rated phenomenological characteristics of each event and completed further questionnaires. Our findings showed that family-related cue words were significantly related with the emotional valence, temporal distance and centrality of events. On the other hand, we found that parental invalidation negatively predicted the emotional valence, visual, auditory and location/person details through the habitual use of reappraisal. Furthermore, we found that parental invalidation negatively

predicted the centrality of events through the habitual use of suppression. In addition to our findings we also found that parental invalidation and habitual use of reappraisal was negatively associated. In contrast, habitual use of suppression was positively related with parental invalidation. However, we did not find significant associations with vividness, temporal distance, difficulty to generate future events and the personal importance of future events and parental invalidation. Overall, our findings combine the literature that suggests that emotional invalidation might relate to the emotion regulation strategies and the phenomenological characteristics of future events are influenced by the emotion regulation strategies.

Keywords: mental time travel, autobiographical memory, episodic future thinking, parental invalidation, emotional invalidation, emotion regulation, expressive suppression, cognitive reappraisal

ÖZ

Epizodik gelecek düşüncesi, bireylerin yaklaşanı tasavvur etmelerini, sırayla planlar yapmalarını, mevcut davranışlarını değiştirmelerini, mevcut ruh hallerini değiştirmelerini ve hedefler geliştirmelerini veya tasarlamalarını sağlar, daha fazla hedefe yönelik davranışlar meydana gelebilir. Önceki çalışmalar, gelecek düşüncesinin öznel deneyimlerinin duygu düzenleme stratejilerinden etkilenebileceğini göstermiştir. Öte yandan, onaylanmayan çevrede büyüyen çocuklar, duygularını etiketlemeyi, kendi duygusal ifadelerini ve diğerlerinin duygularını tanımlamayı öğrenemeyebilirler ayrıca ifade etmelerine izin verilmeyen veya öğretilmedikleri duyguların üstesinden gelemezler. Önceki çalışmalarla birlikte ele alındığında, gelecekteki olayların fenomenolojik özelliklerinin onaylanmayan çevrede yetişmeden etkileneceğini ve bu ilişkinin duygu düzenleme stratejilerinin aracılık edeceğini öne sürdük. Ek olarak, geçersiz kılma deneyimlerini uyandırmak için aile ile ilgili ipucu sözcükleri kullandık. Bu çalışma, Doğu Akdeniz Üniversitesi'nden alınan ve çevrimiçi veri toplama aracı Psytoolkit aracılığıyla yürütülen 108 katılımcıyı içeriyordu. Katılımcılar, rasgele olacak şekilde kelime gruplarına atanmıştır. Her katılımcıdan toplamda kelimeleri kullanarak, iki adet anı oluşturmaları istenmiştir. Daha sonra, her olayın fenomenolojik özelliklerini derecelendirdiler ve gerekli anketleri doldurdular. Bulgularımız, aile ile ilgili ipucu kelimelerin, olayların duygusal değeri, zamansal uzaklığı ve merkeziliği ile önemli ölçüde ilişkili olduğunu gösterdi. Öte yandan, deneyimleri onaylanmamış bireylerin duygusal değerlik, görsel, işitsel ve yer/kişi ayrıntılarını alışılmış yeniden değerlendirme kullanımı yoluyla olumsuz yordadığını bulduk. Ayrıca, deneyimleri onaylanmamış bireylerin, bastırmanın alışılmış kullanımı yoluyla olayların merkeziliğini olumsuz bir şekilde etkilediğini

bulduk. Bulgularımıza ek olarak, onaylanmamış deneyimler ve yeniden değerlendirmeyi alışkanlık haline getirmenin olumsuz bir şekilde ilişkili olduğunu da bulduk. Bastırmanın alışılmış kullanımı ise deneyimleri onaylanmamış bireyler ile pozitif olarak ilişkiliydi. Bununla birlikte, canlılık, zamansal mesafe, gelecekteki olayları oluşturma zorluğu ve gelecekteki olayların kişisel önemi ve onaylanmamış deneyimler ile anlamlı ilişkiler bulamadık. Genel olarak, bulgularımız, içsel deneyimlerin onaylanmamasının duygu düzenleme stratejileri ile ilgili olabileceğini ve gelecekteki olayların fenomenolojik özelliklerinin duygu düzenleme stratejilerinden etkilendiğini öne süren literatürü birleştirmektedir.

Anahtar Kelimeler: epizodik gelecek düşüncesi, otobiyografik bellek, onaylanmayan çevre, duygu düzenleme becerileri, duygu düzenleme güçlüğü, bilişsel yeniden değerlendirme, baskılama, çocukluk çağı deneyimleri

ACKNOWLEDGMENT

I present my sincere thanks to my thesis supervisors for all of their valuable contributions to my thesis Asst. Prof. Dr. Burcu Kaya Kızılöz and Asst. Prof. Dr. Emre Alpay.

I am very grateful to my family and my friends who always supported me, and experienced all the stress that I feel and shared my happiness.

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Chapter 1

INTRODUCTION

Both remembering past experiences and imagining a future event requires mental time travel (Tulving, 2002). The ability to think about future events that might happen, which has been argued to set us apart from other species, is called episodic future thinking (Atance & O’Neil, 2001). Episodic future thinking enables individuals to pre-experience possible future situations which can determine one’s beliefs about the future events (Ernst & D’Argembeau, 2017) that in turn shape one’s decisions and behaviors (Libby et al., 2007, as cited in D’Argembeau, 2021). It was found that individual differences in emotion regulation strategies have an impact on phenomenological characteristics of episodic future thinking (D’Argembeau & Van der Linden, 2006; Jumentier et al., 2018). Moreover, it is established that emotion regulation strategies can be affected by early childhood experiences such as parental invalidation (Braden et al., 2021). The present study aims to examine the effects of invalidating environments in childhood on emotion regulation to identify whether parental (emotional) invalidation has an effect on episodic future thinking.

1.1 Episodic Future Thinking

Episodic memory allows individuals to recall events experienced in the past and it enables re-experience of those events with details (Atance & O’Neill, 2001). Episodic memory is usually considered as a long-term memory which stores information along with the temporal and spatial contexts in which it was obtained (Klein, 2013).

The term “autonoetic consciousness” Tulving (1985) describes the kind of consciousness that holds both one's awareness of his/her identity while projecting themselves into the past or future (D'Argembeau & Van der Linden, 2006; Atance & O'Neill, 2001). This self-knowing (autonoesis) is the key and a must for mental time travel which distinguishes remembered events from dreaming and the experiences of other people (Tulving, 2002). The term "mental time travel" describes the ability which people mentally project oneself backwards in time to relive experiences, or forwards in time to pre-live events (Suddendorf & Corballis, 2007). In order to retrieve memories or to plan our future or to maintain/develop a sense of identity, we engage in mental time travel. When we mentally travel back in time, we may remember an event in great detail, for example, by “seeing” the location where this experience occurred, as well as the people and objects who were present, what we felt or thought while experiencing it, and so on in our minds (D'Argembeau & Van der Linden, 2004). The mental experiences of time travelling is enabled by the projection of ‘self’ through time (D'Argembeau & Mathy, 2011; Atance & O'Neill, 2005).

In the literature, mental time travel to the past is usually referred to as *autobiographical memory* or *episodic memory* while future mental time travel is referred to as *episodic future thinking* (Ramussen & Berntsen, 2013). Autobiographical memory is a long-term memory storage that allows individuals to remember self-related events and facts (Gülgöz, 2018). Furthermore, it consists of self-knowledge (personal information) that allows individuals to maintain who they are and form a stable identity while updating the self with autobiographical narratives (Vranic et al., 2018). To sum up, autobiographical memories are defined as a rich database of personal information and

recollection of particular events integrated with sensory information, emotion, etc. (Holland & Kensinger, 2010).

Episodic future thinking, on the other hand, is the ability to pre-experience a possible event that might happen in the future (Atance & O'Neill, 2001). Further, it serves multiple functions such as psychological wellbeing (Jing et al., 2016), decision making and planning, self-regulation such as emotion regulation, the sense of identity (Barsics et al., 2016; Schacter et al. 2017), and more effective planning to attain future goals (Atance & O'Neill, 2001).

Episodic future thinking and autobiographical memory both contain mental time travel and autonoetic consciousness (Atance & O'Neill, 2001) but how we experience them is not fully understood yet. Therefore, many studies compared the characteristics of past and future events. The results demonstrated that future thinking and memories of past experiences have common cognitive mechanisms and the neuroimaging studies provide the support that both past and future events engage in similar neural areas (see Szpunar, 2010; D'Argembeau & Van der Linden, 2004, 2006; Schacter et al. 2017; Szpunar & McDermott, 2008; Okuda et al., 2003; Addis et al., 2007). Additionally, memories and future thoughts are found to be affected by the phenomenological characteristics such as valence, temporal distance, experimental manipulations, visual imagery etc. (see review, D'argembeau, 2021). Moreover, representations of future and past events emerge at similar ages (3-5 years old) (Atance & O'Neill, 2005) and they are affected by healthy aging (Acevedo-Molina et al, 2020).

In addition, brain damaged patients' reports of inability to retrieve episodes as well as simulate future episodes provides evidence that memories and future events are both

organized by the episodic memory system. For instance, the case of K.C., who lost his episodic memory as a result of a traumatic brain injury including lesions in other cortical and subcortical regions (e.g. medial temporal and frontal lobes) in a motorcycle accident, reported facts about himself and other general facts accurately but he couldn't retrieve his past events or imagine his future (Tulving, 2002). Another instance of D.B., had amnesia as a result of anoxia produced by cardiac arrest, preserved semantic self-knowledge but lost episodic memory (Klein et al., 2002). D.B. also had impairments in remembering his past experiences and imagining future events that might happen. Finally, both representations of past and future events are affected by the psychiatric disorders, in terms of specificity and episodic detail (for review: Hallford et al., 2018; D'Argembeau, 2012).

The reason why remembering and future thinking is related can be explained by the fact that they might rely on the similar multiple component processes (D'argembeau, 2012). Most emphasized explanation is *The Constructive Episodic Simulation Hypothesis* (Schacter & Addis, 2007). According to the hypothesis, episodic future thinking is mainly a collaboration of episodic events from the episodic memory pool then flexibly turned into a novel future representation of events that are likely to happen (Schacter et al. 2017). This hypothesis suggests that future events are constructed through the collection of personal experiences which are stored in the episodic memory. Episodic memory re-activates sensory and contextual information from the stored experiences and further recombines them into novel future events (Akdere, 2020).

A recent study examined the content-specific similarities between episodic memory and future thinking (Thakral et al., 2019). In line with the Constructive Simulation

Hypothesis, results indicated that future simulations were based on the contents of past experiences (Thakral et al., 2019). However, findings related to the loss of semantic knowledge shows that patients with semantic dementia exhibit impairments in ability to simulate novel future scenarios although their retrieval of recent episodic events were intact (Irish & Piguet., 2013). Those findings suggest that future thinking may not be only constructed by the episodic memory in contrast to Constructive Episodic Simulation Hypothesis. Thus, findings contribute to the *Scaffolding Simulation Hypothesis*, which argues that semantic knowledge scaffolds or creates a frame/context for novel future simulations and facilitates remembering or future thinking interacting with the episodic details (Irish & Piguet., 2013; Wang et al., 2016). A study found that the construction of the episodic future thoughts in response to cue words activates the general personal knowledge then produces episodic details (e.g. objects, people and location) (D'argembeau & Mathy, 2011). If we gather controversies of whether future simulations depend solely on episodic memory or it is also related with semantic knowledge we can conclude that the episodic memory system allows us to reconstruct episodic details in the light of personal semantic knowledge (p.165, Özbek, 2018).

Overall, evidence shows that episodic future thinking and autobiographical memories are affected by similar concepts and they stem from similar cognitive and neurological bases. Therefore, it is plausible to expect their phenomenological characteristics to be affected by similar factors and processes (see D'Argembeau& Van der Linden, 2004; 2006). The next section will cover how phenomenological characteristics are affecting future events in detail.

1.1.2 Phenomenological Characteristics of Episodic Future Thinking

The phenomenological characteristics are the subjective experiences of individuals' during mental time travel which allows researchers to understand how people subjectively experience mental time travel (Akdere, 2020). In short, phenomenal characteristics (sensorial, contextual, valence and so on.) describe how it is like to be in that mental state. The subjective feeling of "pre-experiencing" can be influenced by phenomenological characteristics further may result in determining one's belief about what might happen in the future may in turn influence one's behaviors and decisions (see review, D'Argembeau, 2021).

Findings indicate that future events are generated with less vivid, sensory (visual, sound and taste), contextual details (location, spatial arrangement of person/objects), less coherent story and fewer words compared to past events (D'Argembeau & Van der Linden, 2004; 2006). These differences can be interpreted as future events require less sensory and contextual details because they are less foreseeable, novel and require more effort to generate than past events because it is a process of recombining and constructing new events (D'Argembeau & Van der Linden, 2004; Bernstein & Bohn, 2010).

Furthermore, the vividness of the future events found to be largely related on the familiarity of the locations, persons or objects as well as it is influenced by the temporal distance which is mediated by the familiarity settings (Arnold et al., 2011; D'Argembeau & Van der Linden, 2012). While visual perspective depended on the temporal distance of the events. It is found that people tend to use third-person (observer) perspective rather than the first-person perspective in distant future and past events (D'Argembeau & Van der Linden, 2004; 2012). The influence of the temporally

distant events to be more related with the third person perspective can be explained by the irrelevance of the future self-concept from the current one (in line with the study of Libby & Eibach, 2002). In other words, the obscure future events might be different from what we are experiencing right now, therefore, individuals might give broader meanings to the distant events. Overall, the feeling of pre-experiencing, its perceived closeness and belief that the event will occur are increased with the vividness of the future thought and further increased by the use of individuals' own visual perspective (D'Argembeau & Van der Linden, 2012). In addition to that, feelings of pre-experiencing is also affected by the personal importance and its connections to personal goals and values, which participants reported pre-experiencing the event to a greater extent and felt the event was closer in time (D'Argembeau & Van der Linden, 2012).

According to D'Argembeau (2021), the essence of the subjective feeling of pre-experiencing one's personal future is related to the connection of the imagined events with personal goals. In this review, the author argues that the important function of the episodic future thinking is to provide a simulation of what it would be like in the desired goal state and to mentally re-construct potential steps in order to reach that goal which in turn motivates individuals to pursue their goals. Indeed, research shows that personal goals are important for the construction of episodic future thoughts (D'Argembeau & Mathy, 2011; D'Argembeau & Van Der Linden, 2012).

Moreover, although it is found that the vividness and clarity of details were related to the familiarity, it is found that temporally close events were containing more sensory details were related with a better representation of contextual information (place, time of day), and elicited a stronger sense of pre-experiencing than temporally distant

events. This can be related with that the near future events are easier to connect with our present self-concept and or it can be related with that it contains more arranged goals, more accessible or it involves more concrete tasks (Arnold et al., 2011; D'Argembeau and Van Der Linden, 2004). In addition, when individuals believe that imagined events will occur in the near future, they construct more detailed representations. This result can be related to the proposition that representations of distant future events are more abstract and considered more isolated from their context compared to the near future events (D'Argembeau & Van der Linden, 2012; 2004).

Another individual difference which affects phenomenological characteristics of future thought is capacity of visual imagery. Visual imagery is an ability in which individuals create mental images of locations, people, or objects from the source of stored information (Borst & Kosslyn, 2008). It is found that individuals with higher capacity for visual imagery reported experiencing more visual and sensory details both remembering and imagining the future events (D'Argembeau & Van der Linden, 2006). Moreover, it is also proposed that individual differences in emotion regulation strategies also have an effect on episodic future thinking (D'Argembeau & Van der Linden, 2006).

Lastly, episodic future thinking is affected by emotional valence of the events and it is linked with the sense of self (D'Argembeau, 2021). Future-oriented thought is rated as being more positive and more important than past events (D'Argembeau & Van der Linden, 2006). Moreover, when participants were asked to imagine positive future events, it is found that positive events contained more sensory details, had more clear temporal information, and experienced more feelings of pre-experiencing (or re-experiencing) than negative events (D'Argembeau & Van der Linden, 2004;

Rasmussen & Berntsen, 2013) and they are experienced more frequently (Barsics et al., 2016). Additionally, results show that individuals spent more time imagining negative future events compared to positive ones (D'Argembeau & Van der Linden, 2004; Newby-Clark & Ross, 2003). The results are accounted to the clinically healthy individuals (Acevedo-Molina et al., 2020). A more recent study by Barsics et al. (2017) which was an diary based naturally occurring design showed that individuals were more likely to report positive future thoughts and the positivity bias was related to the anticipated future emotions (rather than the emotions here and now). Moreover, future positive future thoughts were in the form of visual images rather than inner speech which is experienced with negative future thoughts.

Overall studies show that phenomenological characteristics of future events are influenced by the temporal distance, capacity of visual imagery, emotional valence, personal importance (goals), familiarity of constructive elements of events and by the habitual use of emotion regulation strategies (D'Argembeau, 2021; D'Argembeau, 2012). Moreover, it is consistently found that future events are more positive, less detailed, less vivid and reported in the third person perspective as well as they comprise personal goals compared to past events (D'Argembeau, 2021; D'Argembeau, 2012).

1.1.3 Centrality of Events

According to Berntsen and Rubin (2006), as a reference point for personal identity and life narrative, a memory that is highly negative, unusual, and unexpected leads to ruminations, excessive worries, and a persistent, unhealthy urge to avoid such situations in the future. In other words, those traumatic events can become a cognitive reference in shaping our autobiographical knowledge, and interpretations of the events

which function as turning points therefore becoming central to one's identity. In addition, these incidents also can be positive such as giving birth or graduation. Based on these ideas, they developed a scale measuring the degree to which a memory about a stressful event serves as a reference point for a person's personality and life story.

Studies which investigated centrality of future events, showed that positive events are often viewed as more important to one's life story and identity than negative events (Rasmussen and Berntsen, 2013; Berntsen et al., 2011). Özbek et al. (2017) also found that future events were more positive, central to life story and with the increase in the distance, events become more central. Moreover, in our knowledge there are few studies which used CES to compare the phenomenological differences between memories and future events as well as counterfactual thinking (see Akdere, 2020; Özbek et al., 2017; Berntsen and Bohn, 2010, and Rasmussen & Berntsen, 2013). They suggest that future projections are more positively biased and they are more central to the life stories compared to memories and counterfactuals.

As stated previously, episodic future events are the flexible combination of autobiographical memories into novel events, therefore negative experiences may also become central in a person's life that may cause misattributions to the generation of future events (Berntsen & Rubin, 2006). Mutlutürk and Tekcan (2016) found that memories consistent with the current self-concept are seen as more central to one's life story compared to memories of events which are inconsistent with their current selves. They also found that memories that are inconsistent with the current self-concept are accepted as a life lesson and they are integrated to the self as a gained insight to avoid failures of the past. These findings demonstrate that our self-concepts are affected by

the memories as well as how we see ourselves defines how we see our past and what we expect from the future.

In the present study we asked participants to generate future events, therefore it is expected that those events to be more central to their life stories which enables us to properly measure phenomenological characteristics of those events and the effects of perceived childhood invalidation. In other words, if their experiences of invalidation are the reference point in their life stories, it is expected that cue words which are used to trigger experiences of parental invalidation to influence phenomenological characteristics of the events.

1.1.4 Positivity Bias

Episodic future thinking occurs frequently in everyday life and tends to be positive for personal events (D'Argembeau & Van der Linden, 2006; Salgado & Berntsen, 2019). The primary function of episodic memory is thought to be to retain information likely to be important in the future, with fragments of information from previous experiences serving as "key components" that can be flexibly rearranged to simulate possible hypothetical future scenarios (Addis et al., 2007; Marsh et al., 2019). Also, Conway (2005) suggests that the working self-governs the recombination of selectively encoded, stored, and retrieved memory traces, which is impacted by current beliefs, active objectives, and self-image (Marsh et al., 2019). Together with, an important function of AM is to maintain and promote the development of the self (Bluck et al., 2005), individuals tend to hold positive views about themselves to maintain or enhance their self-image which can help to support self-esteem and to motivate goal-directed behavior (D'Argembeau, 2021).

Positivity bias was found to be present at spontaneous and naturally occurring episodic future thoughts (Grant & Wilson, 2020; Berntsen & Bohn, 2010; Barsics et al., 2016). Furthermore, they are characterized as being more emotionally positive and considered more idealized than our memories which are an essential feature of future simulations (D'Argembeau & Van der Linden, 2006; Schacter et al. 2017; Salgado & Berntsen, 2019). Studies investigating the influence of valence on phenomenological characteristics of past and future events found that individuals tend to expect more positive futures for themselves and they imagined more positive events than negative ones (Newby-Clark & Ross, 2003; Barsics et al., 2016). Another study comparing involuntary memories and future simulations also shows that positivity bias was greater for future events although they were both relatively positive (Finnbogadóttir & Berntsen, 2013). In addition, positive events were reported as more likely to happen in the near future than happening in the distant future (Rasmussen & Bernsten, 2013) and they were generated faster compared to negative ones (Newby-Clark & Ross, 2003).

As previously mentioned, autobiographical memory plays an important role in maintaining and updating the sense of identity (Vranic et al., 2019). The sense of self and its regulation is associated with the interactions with caregivers (Huxley & Bizumic, 2016). However, if a child's need for validation or self-regulation is not met or limited, therefore the child may not learn how to regulate their own sense of self and related emotions. In which, parental invalidation may result in poor internal self-regulation and rather regulation is provided by the approval and validation from others (Huxley & Bizumic, 2016). In line with the centrality of events, it is proposed that a person who has difficulties with regulating their emotions and themselves might also have differences in positivity bias for future events.

Emotional inhibition refers to the restraining of emotional expression as well as the suppression of emotions-related thoughts, feelings, desires, and/or sensations (Krause et al., 2003). Research shows that recollection of pervasive emotional invalidation events in childhood tend to show use of more inhibiting or avoiding strategies against experiences and expressions of emotion in adulthood (Krause et al., 2003). Further they found that parental distress was highly correlated with suppression of thoughts, depression, and anxiety as well as emotion inhibition. It's also possible to think of suppressing unwanted thoughts as a way of avoiding emotional experience. Unwanted cognitions are often closely linked to negative emotional experiences, and attempts to escape them frequently occur with negative emotionality (Lynch et al., 2001). On the other hand, Finnbogadóttir and Berntsen (2013) mentioned in their study that positivity bias is reduced in the negative affect context such as individuals with depression, anxiety or who have a tendency to engage in thought suppression and so on. Therefore, it can be suggested that individuals with the experiences of parental invalidation, depending on the severity, might develop inhibition strategies which might result in a reduction of positive bias for future thoughts.

1.2 Emotional Invalidation in Childhood

Invalidating environments where the child's emotional experiences are responded with inconsistent, inappropriate, and extreme responses by their caregivers (Linehan, 1993). In contrast, validation is that we understand others' internal experiences such as their emotions and thoughts as well as these internal experiences make sense (Linehan, 1993). And it can be useful for protecting positive affect in the existence of negative experiences compared to invalidation which reduces positive affect (Benitez et al., 2020). Invalidation occurs when an individual's thoughts, emotions, or behaviors are misunderstood, ignored, or viewed as inappropriate (Benitez et al., 2020).

Linehan (1993) describes two dimensions of invalidation. First, it indicates that the individuals perceive their descriptions and analyses of their own experiences are wrong, especially in their interpretations of what is triggering their feelings, beliefs, and behaviors. Second, an individual's experiences are attributed to socially inappropriate characteristics or traits. Other individuals might insist that the person's emotions are not accurately experienced, shown oppositely, or covered (e.g. "You are sad but you do not admit it"). Moreover, invalidating environments might not tolerate showing negative affect, and individuals' are expected to try hard to make it.

In summary, parental invalidation is caregivers' reactions to a child's inner experiences (Huxley & Bizumic, 2017): Punishing emotional display and over-simplification of the problem-solving skills based on expectations from the child's ability by the parents (Salsman&Linehan, 2006). As an outcome, children learn to invalidate their feelings, experience difficulty in regulating and recognizing their emotions as well as tend to use maladaptive coping strategies against distress (Sturrock et al., 2009).

Gottmann et al. (1996) propose that there are two kinds of parental behavior that influence how children learn to manage their emotions. When parents are warm, responsive, and provide emotion-coaching behaviors, children develop better emotion regulation skills. Parents who are aware of their children's emotions teach them how to cope with stressful emotions and give their children intimacy. Parents who exhibit emotion dismissive parenting behaviors, on the other hand, tend to discourage emotional expressivity and experience more discomfort with emotions, which is linked to their children's poorer emotion regulation abilities. This concept is closely related to childhood maltreatment that has been associated with the development of psychopathology (Elzy, 2013).

As Linehan (1993) proposed, individuals who experienced invalidation might develop distrust to their representations of emotional and cognitive responses as their own accurate life experiences therefore they begin to check environmental cues to find the appropriate responses. Further, she supposes that these children growing up in an invalidating environment will learn to invalidate themselves when they become adults. Therefore, it is expected that individuals who experienced inconsistent responses or neglect by their parents are more likely to learn maladaptive use of emotion regulation strategies.

1.2.1 Emotion Regulation

Emotion regulation is the process of generating thoughts or behaviors that impact which emotions people experience when they experience them, and how they experience or express those feelings (Richards & Gross, 2000). Emotion regulation requires the ability to recognize and understand one's own emotions, as well as the ability to adapt emotions and handle behavioral change in response to environmental demands (Zeman et al., 2006). Emotion regulation is the ability to identify, comprehend, and accept one's feelings, as well as strategies for modulating emotional experience and expression in accordance with long-term goals and values. This ability emerges over time, and early childhood interactions with caregivers appear to be crucial (Monell et al., 2015). Emotion regulation can decrease, intensify, or maintain those experiencing emotions with automatic and controlled processes. Moreover, emotion regulation contributes to effective peer and family relationships, academic achievement, and mental health (Morris et al., 2017).

Examples of emotion regulation strategies include *expressive suppression* which is the tendency to inhibit behavioral component of an emotion after an emotional response

has been evoked and *cognitive reappraisal* defined as the tendency to re-evaluate and re-assign meaning to events in other words, it is changing one's perception of an event to control its emotional impact and emotional response (Cutuli, 2014). Reappraisal is an antecedent-focused strategy, meaning it occurs before emotion-response tendencies have fully developed. This means that reconsideration has the ability to modify the entire emotional direction. Suppression, on the other hand, is a response-oriented strategy: it occurs late in the emotion-generation process and primarily alters the behavioral element of emotion-response tendencies. As a result, while suppression is successful at reducing negative emotion behavioral expression, it may have a limiting effect on positive emotion expression. Simultaneously, suppression will not aid in the reduction of negative emotions, which will continue to exist unresolved and accumulate (Demirtaş, 2018, p.491). Moreover, unchanged internal experiences of emotions might increase physiological arousal as well as it might weaken interpersonal relationships (Warner et al, 2020). In addition, suppression may result in discrepancies between inner and outer expressions. The inconsistency between inner feelings and suppressed outer expressions, as well as a sense of not being honest with oneself, can lead to more negative feelings about oneself, as well as alienation from oneself and others (Gross & John, 2003). While reappraisal was found to be effective and results in favorable outcomes such as life satisfaction and positive emotions, suppression is related to depression and anxiety symptoms (Hong et al., 2018; Aldao et al., 2010).

Additionally, it was found that suppression has direct associations with psychopathology, suicidal behavior, and self-harm (McLafferty et al., 2020; see related studies in Pascuzzi & Smorti, 2017, p.2). Moreover, the results of a meta-analysis study showed that suppression, as a maladaptive emotion regulation strategy,

was strongly associated with mental health problems (Aldao et al., 2010). To sum up, relevant literature highlights the adaptive use of emotion regulation strategies and suggests that they are important to maintain and improve our psychological well-being (Kobylinska&Kusev, 2019; Zielinski, 2013).

1.2.2 Episodic Future Thinking and Emotion Regulation Strategies

It is assumed that because memories can be created to emphasize positive or negative information, the reconstructive character of autobiographical memory may make it particularly ideal for emotion regulation mechanisms (Pascuzzi&Smorti, 2017). Particularly, it is established that individuals tend to decrease their negative mood by recalling (positive) memories that are going to repair their negative mood (Pascuzzi & Smorti, 2017; Öner & Gülgöz, 2020). A study which focused on the emotional future-oriented thoughts suggested that the negative future thoughts were more likely to be suppressed (Barsics et al., 2016). Moreover, it is found that suppressing future thoughts were worsening the mood. They suggested that the tendency to suppress negative future thoughts may result in induction of negative mood states which in turn would enhance the accessibility of negative thoughts. Overall, the suppression may lead to a cycle of reinforcing emotionally negative future thoughts and the mood states. In addition, results indicated that the good amount of future thoughts were perceived by the participants as contributing the emotion regulation. Interestingly, they found that positive emotional future thoughts were contributing the current emotion regulation while negative future thoughts were helpful for the anticipated for future emotion regulation.

In contrast to memory influences on emotion regulation or mood repair, studies also focused on how individual differences in emotion regulation strategies impact

autobiographical memory. Findings showed that individuals who habitually use suppression performed poor in memory recall and they were more likely to recall more emotional memory (negative emotions), whereas the reappraisal group either remembered better or no effects were found (see details; Richard and Gross, 2000; Richards et al., 2003). However, few studies were focused on the effects of emotion regulation on episodic future thinking.

In the present study we aimed to investigate the effects of emotion regulation strategies on episodic future thinking and to our knowledge few studies covered this subject of interest. The ability to remember and to simulate future events are closely related therefore, in line with the results of memory studies mentioned above, D'Argembeau & Van der Linden (2006) hypothesized that the impact of emotion processing and emotion regulation strategies on memory performances can also impair the phenomenal characteristics of episodic future thinking. They instructed participants to remember a personally experienced event then generate future events as precise and specific (events had to take place in a certain location at a specified time, and they had to last a few minutes or hours, but not longer than a day). There were 2 sessions and they were divided by a one-week interval. The order of the sessions were assigned as half, past to future or future to past. Participants were asked to remember 7 past and to imagine 7 future events from different temporal distances. (E.g. happened today/might happen today, happened yesterday/might happen tomorrow, etc.). After remembering/imagining, participants wrote down their descriptions of events. Later participants rated their subjective experiences on autonoetic consciousness, sensory details, spatial context, vividness of visual imagery, and emotion regulation strategies.

The results associated with individual differences in emotion regulation strategies indicated that individuals who habitually use suppression to regulate their emotions rated lower in autonoetic consciousness, reported less visual details, feeling emotions, emotional intensity, the extent how events were represented in words as well as a spatial context for both when recalling the past and generating future events, while the use of reappraisal did not show a similar effect on the past and future events (D'Argembeau & Van der Linden, 2006). These results indicate that individuals who scored high on the suppression scale experience less mental time travel which means that they felt less feeling of re-experiencing past events or pre-experiencing the future scenarios. Their memories or simulations did not include rich details of visual or other sensory domains, as well as, they did not have clear representations of location, arrangements of people, or objects. Additionally, individuals reported the time of the day the event occurred or would occur was not clear. Furthermore, individuals with suppressive tendencies reported experiencing emotions with less intensity and less feeling the emotions when events occurred and if the event would occur.

Overall results suggest that episodic future thinking can be affected by the emotion regulation strategies, specifically with the habitual use of suppression (D'Argembeau & Van der Linden, 2006). With that conclusion, they attempted to explain how habitual use of expressive suppression influences episodic thinking through different assumptions. First, it was applied to the encoding differences. According to the Constructive Simulation Hypothesis, future events are constructed from the common episodic memory pool and future events are the flexible recombination of past episodes therefore, they suggested that individuals who habitually use suppression might encoded the past events with few details would also generate less detailed future

events. Second, they suggested that mental representations of events might create emotions similar to real events therefore, it can be possible that suppression is invaded during retrieval of information. And finally, they suggested that individuals, who habitually use suppression, might have developed a specific cognitive strategy that forces them to avoid creating too detailed representations of past and future events to prevent experiencing strong emotions. In line with the prediction, findings that participants who were high in suppression reported less emotional engagement in mental time travel supports the idea that individuals with habitual suppression tendencies might have developed a specific cognitive style. Overall, D'Argembeau and Van Der Linden (2006) debates on whether individuals who are likely to engage in suppression to regulate their emotions experiences decline in sensory-contextual details as well as feelings of emotions and intensity of emotions for future events.

Another study that examined emotion regulation strategies in addition to phenomenological characteristics is done by Jumentier et al. (2018). In this study, they examined the subjective experiences and the level of specificity of EFT in older adults compared to middle-aged adults. They stated that age-related specificity of events can be affected by the cognitive factors and other individual differences. For instance, proneness to avoidance in accordance with the affect regulation hypothesis (Williams, 1996; Williams et al., 2007). According to the affect regulation hypothesis, adopting a less specific memory retrieval strategy may allow individuals to avoid the affective impacts of memories, as well as the search for specific events in memory may be abandoned to avoid negative consequences. It is assumed that it serves as an avoidance function to imagination of future events with people who are likely to repress. Moreover, it was proposed that older individuals are more likely to report their

subjective experiences based on their emotional value. In this case that we know subjective experiences are affected by the emotion regulation strategies (D'Argembeau & Van Der Linden, 2006), they examined the use of positive reappraisal and positive refocusing compared to maladaptive strategies. They manipulated the temporal distance and valence of the cue words to investigate their influence on the specificity of generated future events.

The manipulations were conducted by asking participants to imagine and describe particular events in the immediate (i.e. 1 year) or in the distant future that might reasonably happen to them (i.e., 5 years). They also used cue words which are negative and positive. Then they examined the effects of emotion-regulation strategies, positive re-focusing, and positive reappraisal, on the subjective experiences of imagined events. Positive reappraisal was defined as the re-evaluation of previous emotional responses by giving beneficial or valuable meanings to those responses while positive refocusing is the changing of negative emotions with positive ones. Moreover they assessed the specificity of future events with the proneness to use avoidance strategies. To trigger avoidance strategies they induced the uncomfortable condition which consists of negative and more distant future events. The results demonstrated similar findings with the previous literature (Addis et al., 2008; Arnold et al., 2011; D'Argembeau & Van der Linden, 2004 as cited in Jumentier et al. 2018): for events which are more distant in the future both middle aged and older adults generated fewer specific thoughts and represented more abstract compared to events which are in the close future. Additionally, positive cue words led participants to generate more specific events and these events were rated higher in most of the phenomenological characteristics compared to negative cues in which the events were less specific and

restricted subjective experiences. Findings related to the subjective experiences manipulated by temporal distance and emotional valence of cue words showed that both middle aged and older adults share similar experiences. Besides, they found that participants who used positive reappraisal contributed to the higher ratings of vividness, visual details and feelings of experiences in both age groups. Additionally, it was found that positive refocusing was correlated with characteristics of future thinking. Moreover, it is found that middle aged participants were more likely to engage in experiential avoidance (when a person is unwilling to maintain contact with certain intimate experiences; i.e. emotions, thoughts etc.) when they were induced by the negative and distant cue words. Whereas older individuals were found to be more prone to cognitive avoidance in which they avoid stimuli which will make them feel uncomfortable. Overall, findings implicate that future thinking about personal events may also rely on affect, temporal distance of the events, proneness to avoidance and emotion regulation strategies.

In sum, studies implicate that episodic future thinking can be influenced by the individuals' emotion regulation strategies. Similarly, the development of emotion regulation strategies can be influenced by the experiences of invalidation during childhood. This contributes to our assumption that emotional invalidation in childhood may result in the habitual use of suppression which will have an impact on projecting oneself into future events. Therefore, parental invalidation might have an effect on episodic future thinking in terms of its phenomenological features.

1.3 The Present Study

According to the biosocial model (Linehan, 1993), emotion dysregulation or maladaptive use of emotion regulation strategies can be linked to the biological root

in high emotional reactivity and childhood invalidation (Braden et al., 2021). In emotionally invalidating environments which parents either ignore or undervalue their child's emotional expressions or child's thoughts/judgments may induce invalidated children to be more prone to using maladaptive strategies of emotional regulation (Linehan, 1993).

In other words, parents may negatively affect the development of healthy emotion regulation strategies in their children. Therefore, children may develop ineffective emotion regulation strategies as a result of adverse experiences from their parents which can affect children's mental health in the long term (Hong et al., 2018). According to the Tripartite *Model of Family Impact on Children's Emotion Regulation and Adjustment* by Morris et al. (2007), the family environment influences how children develop emotion regulation which affects children's adjustment outcomes (e.g., internalizing, externalizing etc.). Therefore, it is plausible to expect children who experienced parental invalidation will use more maladaptive emotion regulation strategies, particularly suppression.

In line with this notion, Warner et al. (2020) found that individuals who experienced parental invalidation in their childhood are more likely to use ineffective emotion regulation strategies such as expressive suppression and less cognitive reappraisal. Similarly, Balan et al. (2017) found that parental practices such as poor monitoring, inconsistent discipline significantly predicted use of expressive suppression in adolescents.

These findings can be linked to the findings of D'Argembeau & Van der Linden (2006) showing that using expressive suppression compared to reappraisal significantly

affected how individuals experienced the representations of future and past and events. As the previous studies suggest, habitual use of suppression impacts phenomenological characteristics of episodic future thinking. It can be linked and hypothesized that children who experienced parental invalidation may learn to suppress their emotions and would also have different subjective experiences when projecting themselves into the future events.

The present study aimed to investigate the impact of parental invalidation on episodic future thinking through emotion regulation strategies. There is no direct research on the effects of parental invalidation on episodic future thinking. Therefore, the main goal of this study is to contribute to the literature on episodic future thinking and encourage other researchers to highlight this notion. A prior data collection was conducted to identify cue words that are related to "family." These cue words were intended to evoke participants' experiences of invalidation by their parents. In sum, we hypothesized that phenomenological characteristics of episodic future events will show differences by the perceived experiences of childhood invalidation mediated by the emotion regulation strategies.

1.3.1 Hypotheses

H1: It is expected that family related cue words to trigger parental invalidation experiences compared to neutral cue words which will also be expected to affect the phenomenological characteristics of future events.

H2: It was hypothesized that the experiences of childhood invalidation would impact the phenomenological characteristics of future events. Additionally, it is hypothesized that emotion regulation strategies will mediate this relationship.

H3: It is expected that perceived childhood invalidation mediated by the suppression would negatively predict the vividness, emotional valence, sensory, contextual details and the centrality of future events.

H4: It is expected that perceived childhood invalidation mediated by the reappraisal would not show differences in the vividness, emotional valence, sensory, contextual details and the centrality of future events.

Chapter 2

METHOD

2.1 Participants

The data was collected through convenience sampling from the EMU students using an online tool (PsyToolKit). All participants were taking the Introduction to Psychology courses. A priori power analysis was conducted using G*Power 3.1.9.7 (Faul et al., 2007) to test the multiple regression analysis (mediation) using two tailed test, with medium effect size $f^2 = 0.15$ and alpha level of .05. The analysis showed that at least total of 103 number of participants is required to achieve the statistical power of .80. Therefore, data analysis was conducted from 208 participants in total and they received credits for their participation. The uncompleted and repeated data was removed. Additionally, the box plot showed that one participant's anxiety score was higher than the mean score of the sample and data was identified as an outlier, it was removed. Currently, only 108 participant's data was analyzed which is still accomplishes required number of participants. There were 87 female, 20 male and 1 person who did not want to mention their gender. The age range of participants were between 18 to 26 years ($M = 20.82$, $SD = 1.60$). All participants were native Turkish speakers and they were undergraduate students.

2.2 Materials

2.2.1 Cue Words

Before the study, another data collection was carried out to select the words that would remind individuals' parents, therefore, elicit individuals' experiences of invalidation in their families.

Twenty words were taken from the book "*Türkçe Kelime Normları*" by Göz and Tekcan (2005). The word's mean level of their concreteness ranged between 6.74 to 3.50 and how easy or difficult it is to imagine those words mean scores ranged between 6.94 to 1.74 (Göz & Tekcan, 2005). The list of words used in the study can be seen in Appendix I.

The word selection criterion was based on their association sets. Using the Psytoolkit platform (Stoet, 2017), 70 (46 women and 24 men) participants ($M_{age} = 20.17$, $SD_{age} = 1.76$) rated how much each presented word associated with the word "family" on a 7-point Likert scale (1 = not at all to 7 = too much). After each word, participants were asked to rate the valence of the words on a 7-point Likert scale (1 = very negative, 7 = very positive). We reviewed the words included in the "Family" set and chose two words associated with family. Neutral cue words were selected randomly from other sets of words. The results showed that Bayram ($M_{family} = 6.49$, $M_{valence} = 5.84$) and Çocuk ($M_{family} = 6.17$, $M_{valence} = 5.67$) words were most likely to resemble the word "family" while Bahar ($M_{family} = 3.20$, $M_{valence} = 5.63$) and Dükkan ($M_{family} = 3.14$, $M_{valence} = 3.71$) was found to be least related with the word "family". The mean scores of each word and the mean valence scores of the words are reported respectively.

2.2.2 Episodic Future Thinking Instructions

Participants were asked to read the definition of episodic future thinking with an example (see Appendix B) of a specific episodic future event including the details of the event (e.g. an event which happens in a particular place, at a specific time, and lasts at least an hour or less than a day) (D'Argembeau & Van der Linden, 2012). A total of two words was later represented depending on the condition of the participant. In the invalidation condition, participants presented with two cue words (Bayram and Çocuk) in order to trigger their feelings of parental invalidation by reminding them of their parents. On the other hand, participants in the control condition received Bahar and Dükkan, which are neutral cue words. Participants were allowed to report events which they thought of what that word makes them think of (Hallford, 2019) in case they couldn't use the actual cue word in their events. Later, participants were asked to write down their events and rate each word's phenomenological characteristics on a different scale (AMQ -F).

2.2.3 Autobiographical Memory Questionnaire

The Autobiographical Memory Questionnaire (AMQ) was initially established in 2003 (Rubin et al., 2003) and later adapted to the Turkish language (Rubin et al., 2007). The scale consists of a set of questions to rate the qualities and phenomenological characteristics of events. The scoring of each item is separately taken into account rather than their sum of scores. We assessed eight items which included vividness, sensory details (smell/sound), location/person details, emotional valence, difficulty to generate future events, importance of the events and temporal distance. We reviewed studies that examined phenomenological characteristics of episodic future thinking and identified that these items were the most evaluated characteristics of future events.

The inclusion criteria of studies were, they used autobiographical memory questionnaires.

2.2.4 The Invalidating Childhood Environment Scale (ICES)

The ICES consists of a total of 18 items and it measures retrospectively an individual's perceptions of emotional invalidation by their parents during childhood (Mountford et al., 2007). It has two subscales. The first section includes 14 items scored on a 5-point Likert scale ranging from 1 – never to 5- always and this section assesses both mothers and fathers separately. The total scores range between 14 to 70 for both father and mother scales. The second section consists of 4 items which assess the broad family types and styles. The invalidating family types were defined as typical, perfect, and chaotic. Fourth family type was supportive and validating. In the present study, family types were not included. The second section were similarly rated on a 5-point Likert-type scale (1: never, 5: always). The high scores on the first section represent parental invalidation in a great sense (original Cronbach's alpha coefficients for mother form. 88 and father form .90). In the scale 5, 8, 12 and 14 items were coded as reversed. In this study, we used the adapted version of ICES to Turkish language (Alpay et al., 2018). The reliability and validation of the scale shows that the Turkish version of the ICES is acceptable to adapt with Turkish speaking individuals and it can be used to assess a wide range of topics related with psychopathologies in Turkey. At the present study Cronbach's alpha level was found as $\alpha = .90$ (alpha levels for mother scale was found as $\alpha = .86$; father as $\alpha = .86$).

2.2.5 The Emotion Regulation Questionnaire

This scale was originally established by Gross and John (2003) to assess the differences among individuals with their habitual use of either cognitive reappraisal (ERQ-R) or expressive suppression (ERQ-S). Cognitive reappraisal, involves

reinterpreting an incident that triggers emotion to alter its emotional effect and expressive suppression, involves obstructing the emotional expressions which can be observed externally (Gross, 2002). The ERQ contains ten items in total, six items for the reappraisal scale and four items for the suppression scale. These items are rated on a 7-point Likert scale (strongly agree to strongly disagree) which then the level of scores will demonstrate the frequency of which strategy individuals are using habitually. The reappraisal subscale measures individuals' way of regulating emotions with re-thinking or changing thoughts about the situations. The items included in the reappraisal subscale were 1, 3, 5, 7, 9, 10. For instance, “When I feel negative emotions, I change my thoughts to reduce negative emotions”. Suppression scale on the other hand measures individuals' habit to suppress or hide their emotions to not to express them. The items included in the suppression subscale were 2, 4, 6, and 8. For example, “I control my emotions without showing them”. Both scales comprise at least one negative and one positive emotion related questions. The present study, we used the Turkish version of ERQ (see Appendix G). The Turkish version of ERQ (Eldelekoğlu & Eroğlu, 2015) show acceptable internal consistency ($\alpha = .78$ for the reappraisal and $\alpha = .73$ for the suppression). The Cronbach's alpha levels of the present study were: Suppression scale $\alpha = .70$ and Reappraisal scale $\alpha = .85$.

2.2.6 Depression Stress and Anxiety Scale (DASS-21)

This scale was originally developed by Lovibond and Lovibond (1995) which consists of 42 items that measures depression, stress and anxiety. Each subscale includes 14 items and these items are rated on a 4-point Likert scale (from 0: Did not apply to me at all to 3: Applied to me totally). To apply this scale, we used the DASS-21 Turkish short (Yıldırım et al., 2018) form which consists of 21 items in total. Each subscale consists of 7 items and these items are rated on a 4-point Likert scale similarly to the

long version. The depression scale included items of 3, 5, 10, 13, 16, 17, items of stress scale were 1, 6, 8, 11, 12, 14, 18 and anxiety were 2, 4, 7, 9, 15, 19, 20. The internal consistency of depression subscale was $\alpha = .87$, anxiety subscale $\alpha = .89$ and stress subscale $\alpha = .90$. The validity and reliability of the DASS-21 short form provides adequate results which enable this scale to be applied to Turkish clinical or non-clinical samples. The Cronbach's alpha levels of the scale was found as Depression $\alpha = .89$, Stress $\alpha = .89$ and Anxiety $\alpha = .83$.

2.2.7 Centrality of Events Scale Short Turkish Version (CES-S)

The Centrality of Event Scale (CES) was originally established by Berntsen & Rubin (2006) to measure stressful or traumatic events' centrality on an individual's life story with a single factor ($\alpha = .94$) consisting of three dimensions; turning point, reference point and identity. It is a 5-point Likert scale that consists of 20 items. However, we will use the short version of the scale which is a validated and reliable version to Turkish samples by Egeci & Doğruyol (2019). The CES-short version contains 7 items and items are measured on a 5 point-Likert scale (0= not at all, 5= totally agree). In this study, we used this scale for the centrality of future events (see Özbek et al., 2017). The Cronbach's alpha of the present study was found as $\alpha = .90$.

2.2.8 Demographic Questionnaire

The demographics form (see Appendix I) consisted of 11 questions about participants' age, gender, education levels, psychological well-being, with whom participants are living with and questions about participant's parents; marital status, education levels, job, if the parents are still alive.

In addition, Covid-19 related questions were added at the end of the questions to control the effects of pandemics during the research. The Covid-19 Traumatic Stress Scale consisted of 12 questions measuring the present stress related to Covid-19 (i.e.

fear of getting Covid-19 or stress predicted by the financial difficulties). The scale had Cronbach's Alpha level of $\alpha = .78$.

2.3 Procedure

After obtaining approval from the Eastern Mediterranean University Ethics and Research Committee, all of the procedures started. The data was collected during the 2020 – 2021 Spring Semester. The study was implemented and designed online on the Psytoolkit platform (Stoet, 2017). Participants were informed about the study's procedure, as well as their right to withdraw at any time and confidentially, at the beginning. There were two groups in total. The participants were randomly assigned to groups and the order of the questionnaires was counterbalanced. Group one received two cue words (Bayram and Çocuk) that were found as associated with the “family” previously at the pilot study. The second group received two different cue words (Bahar and Dükkan) with neutral meanings. Both groups were instructed to write their future thoughts using the cue words they saw on the screen in a text box. After participants complete writing their few sentences of future events for both cue words separately, they proceeded to the next part and completed phenomenological questions (AMQ- F) and Centrality of Events Scale for the events they imagined. When participants completed the future episodic event section they proceeded to fill up DASS-21, ICES, and ERQ questionnaires. The order of the scales was arranged randomly to mediate the sequence effect. Due to the worldwide pandemic, there were questions included at the end of the study which assessed their experiences during the Covid-19 pandemic. The Covid-19 Traumatic Stress scale was used because it was expected that individuals would be experiencing distress due to the pandemic. At the end of the tasks, participants were thanked for their contributions and debriefed about the study. The data collection took approximately 25 minutes.

Chapter 3

RESULTS

The Statistical Package Program for Social Sciences (SPSS) v22.0 was used to analyze the data. The alpha level chosen for the analysis was .05. The variables were analyzed by Independent Samples T-test, Multiple Regression using Process v3.3 by Andrew F. Hayes and ANCOVA.

3.1 Normality Tests of Scales

In the present study, the values of Skewness and Kurtosis of the Invalidating Childhood Environment Scale, Emotion Regulation Scale and Centrality of Events including their subscales fell between -2 and +2, therefore the data was accepted as normally distributed (George & Mallery, 2010).

3.2 Phenomenological Characteristics of Episodic Future Events

Independent Samples T-Test was carried out to examine whether age, DASS-21 and Covid-19 related stress scale results were different between family-related cue words and neutral cue words conditions. Result indicated that individual's age, stress levels related with Covid-19, their perceived invalidation in childhood, use of suppression and reappraisal; depression, stress and anxiety levels in family-related cue word condition were not significantly different from individuals' in neutral cue word condition (all $p > .05$). Means and standard deviations of all variables can be seen in table 1.

Table 1: Means and Standard Deviations of Scales Depending on Their Cue Word Conditions

	Family-Related		Neutral Cue Words	
	Cue Words			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age	21.09	1.65	20.56	1.51
Covid-19 related stress	31.30	7.76	29.78	8.62
ICES	52.54	16.43	57.35	16.69
ERQ-S	13.61	6.24	13.28	5.29
ERQ-R	27.70	8.22	28.81	9.22
Depression	7.50	5.80	8.80	5.45
Anxiety	8.43	5.25	9.65	5.15
Stress	5.54	4.10	5.80	4.63

The Chi-Square Test of Independence was used to examine if there were group differences in gender. Results showed that there were no significant differences between conditions in terms of gender, $X^2(2, n= 108) = 1.30, p = .52$. There were 42 female, 11 male and 1 other in the family related cue word group. There were 45 female, 9 male in the neutral cue word group.

3.3 Phenomenological Characteristics According to Cue Word Groups

The study aimed to trigger childhood invalidation experiences through the use of cue words. In order to see cue words effectiveness, an Analysis of Covariance was carried out (ANCOVA). To control the effects of perceived childhood experiences (ICES scores) and emotion regulation strategies (ERQ scores) on phenomenological

characteristics. The table shows the cue word group mean differences of each phenomenological characteristics of future events that was carried out with ANCOVA (Table 1)

Table 2: The Mean Values According to Effects of Cue Words on Phenomenological Characteristics

	Family-Related		Neutral Cue Words	
	Cue Words			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Vividness	5.70	1.33	5.32	1.61
Sensory details (visual)	5.83	1.12	5.69	1.44
Sensory Details (sound)	5.31	1.42	5.14	1.58
Location/Person	5.33	1.82	5.23	1.56
Emotional Valence*	6.20	.91	5.68	1.16
Ease of imagining	2.32	1.36	2.04	1.29
Temporal Distance*	114.50	116.35	56.77	86.85
Centrality of Events*	17.78	6.87	15.12	5.25

One way-ANOVA was carried out to examine whether cue words had any effect for each phenomenological characteristic, then ANCOVA was used to control the parental invalidation experiences and the habitual use of emotion regulation strategies. Results of ANOVA indicated that cue word groups were not significantly different from each other for vividness, visual details, sound details, location/person details, difficulty to generate future events and perceived importance of future events ($p > .05$). Which means that there were no cue word effects for those characteristics. Furthermore, after controlling covariates (ICES and ERQ), those phenomenological characteristics listed

above still showed no significant differences for the cue words ($p > .05$). Results indicated that cue words which were used in the study to trigger parental invalidation did not show significant differences for vividness, visual details, sound details, location/person details, difficulty to generate future events and perceived importance of future events. However, rest of the phenomenological characteristics which are visual, sound and location/person details showed significant relationship with the habitual use of reappraisal although they did not show main cue word effect after controlling covariates.

Visual details of future events showed no significant group differences ($M_{family} = 5.83$, $SD_{family} = 1.12$ and $M_{neutral} = 5.69$, $SD_{neutral} = 1.44$) after ICES, ERQ-S and ERQ-R scores were controlled, $F(1, 103) = .537$, $p = .465$. However, results demonstrated that reappraisal scores had a significant relationship with visual details of the future events, $F(1, 103) = 13.47$, $MS_e = 1.46$, $p < .05$, $\eta^2 = .116$. Suppression and ICES scores did not show significant relationship with visual details ($p > .05$).

The analysis of covariance showed that there were still no significant cue word effect ($M_{family} = 5.31$, $SD_{family} = 1.42$ and $M_{neutral} = 5.15$, $SD_{neutral} = 1.58$) for auditory details when covariates were controlled, $F(1, 103) = .400$, $p = .529$. It is found that there was a significant relationship between reappraisal and sound details of episodic future thinking, $F(1, 103) = 5.21$, $MS_e = 11.29$, $p < .05$, $\eta^2 = .048$.

Moreover, there were no significant effects of cue words for location/person details in future events after controlling covariates, $F(1, 103) = .145$, $p = .704$. In which, cue words related with family did not show difference from neutral cue word group ($M_{family} = 5.33$, $SD_{family} = 1.18$; $M_{neutral} = 5.23$, $SD_{neutral} = 1.56$). However, it was found that

habitual use of reappraisal had a significant relationship with the details of location/person in events, $F(1, 103) = 5.00$, $MS_e = 1.81$, $p < .05$, $\eta^2 = .046$.

For the valence, temporal distance and centrality of events: ANOVA results indicated that there were significant group differences for cue words. For emotional valence of future events it is found that participants who received family related cue words ($M_{family} = 6.20$, $SD_{family} = 0.91$) rated their future events as more positive than participants who received neutral cue words ($M_{neutral} = 5.68$, $SD_{neutral} = 1.16$), $F(1, 106) = 6.94$, $MS_e = 1.08$, $p < .05$, $\eta^2 = .061$. Results showed that emotional valence of the future events still showed significant group differences after controlling ICES and ERQ scores, $F(1, 103) = 6.80$, $MS_e = .95$, $p < .05$, $\eta^2 = .062$. The individuals total scores for ICES scale had significant relationship with emotional valence, $F(1, 103) = 5.05$, $MS_e = 4.79$, $p < .05$, $\eta^2 = .047$. Furthermore, habitual use of reappraisal was found to be significantly related to the emotional valence of the future events, $F(1, 103) = 7.73$, $MS_e = 7.32$, $p < .05$, $\eta^2 = .070$. However, suppression did not show significant relationship with the valence of the future events ($p > .05$).

The results showed that temporal distance was affected by the cue words, $F(1, 106) = 8.05$, $MS_e = 10449.77$, $p < .05$, $\eta^2 = .075$. The results indicated that participants who were cued with family related words ($M_{family} = 114.50$, $SD_{family} = 116.35$) reported future events to happen in the distant future compared to the neutral cue word group ($M_{neutral} = 56.77$, $SD_{neutral} = 86.85$). Moreover, it was found that there were still significant group differences in temporal distances of future events after controlling ICES and ERQ scores, $F(1, 103) = 6.69$, $MS_e = 10652.99$, $p < .05$, $\eta^2 = .065$. However, results did not show a significant relationship between suppression, reappraisal and ICES scores ($p > .05$).

Lastly, results showed that centrality of events showed significant group differences, $F(1, 106) = 5.11$, $MS_e = 37.35$, $p < .05$, $\eta^2 = .046$. Which indicates that family related cue word groups ($M_{family} = 17.78$, $SD_{family} = 6.87$) significantly reported their future events which they have imagined to be more central to their lives than the neutral cue word group ($M_{neutral} = 15.12$, $SD_{neutral} = 5.25$). Additionally, centrality of events still showed significant differences between the groups after controlling ICES and ERQ scores, $F(1, 103) = 6.17$, $MS_e = 35.18$, $p < .05$, $\eta^2 = .057$. Finally, it was found that habitual use of suppression was significantly related to the centrality of events, $F(1, 103) = 9.11$, $MS_e = 320.39$, $p < .05$, $\eta^2 = .081$. Reappraisal and ICES scores did not predict associations with the centrality of events ($p > .05$).

Overall, results indicated that emotional valence, temporal distance and centrality of events showed significant differences depending on the type of cue words. Furthermore, it was found that emotion regulation strategies and perceived childhood experiences do not predict differences between groups in terms of the effects of cue words on phenomenological characteristics ($p > .05$). Besides, results indicate that emotion regulation strategies and perceived childhood invalidation at some level, has a relationship with the phenomenological characteristics of future events.

3.4 Mediation Model

A mediation analysis was carried out to evaluate the perceived childhood invalidation with mediating effects of emotion regulation strategies; suppression and reappraisal separately, on the phenomenological characteristics of episodic future thoughts. The mediation analysis was tested using PROCESS v4.0 macro for SPSS (Hayes, 2017). The indirect effects were estimated by the bootstrap analysis with 5000 samples in %95 bias corrected confidence intervals. All indirect effects which did not contain zero

value in their confidence intervals confirmed as significant. The zero value represents that the estimated error also contains zero which does not reject the null hypothesis so we cannot be sure if the analysis were significant or not.

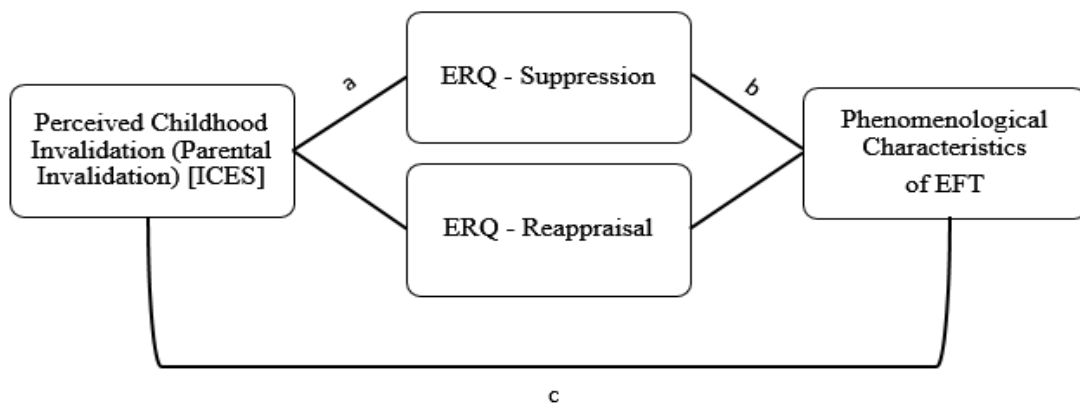


Figure 1: The Mediation Model of ICES, ERQ and Phenomenological Characteristics of EFT

Table 3: Means, Standard Deviations and the Correlations among Study Variables

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12
1. ERQ-S	13.44	5.76	-	-.049	.229*	.140	.015	.065	-.073	-.101	-.107	-.076	-.272*	-.054
2. ERQ-R	28.26	8.71	-	-	-.257**	.099	-.117	-.203*	.295**	.249**	.365**	.238*	.044	.175
3. ICES	54.94	16.66	-	-	-	.046	-.051	.215*	-.317**	-.190*	-.191*	-.132	-.068	-.171
4. Importance	5.51	1.48	-	-	-	-	-.172	-.042	-.229*	-.044	-.029	-.120	-.537**	-.010
5. Temporal Distance	84.78	105.76	-	-	-	-	-	.096	.191	-.254*	-.188	-.100	.207*	-.195
6. Ease of imagining	2.18	0.32	-	-	-	-	-	-	-.340**	-.418**	-.476**	-.429**	-.065	-.310**
7. Emotional Valence	5.94	1.07	-	-	-	-	-	-	-	.351*	.431**	.353**	.204*	.297**
8. Location/Person	5.28	1.38	-	-	-	-	-	-	-	-	.767**	.681**	.120	.408**
9. Visual Details	5.76	1.29	-	-	-	-	-	-	-	-	-	.747**	.177	.494**
10. Auditory Details	5.23	1.50	-	-	-	-	-	-	-	-	-	-	.301**	.449**
11. Centrality of Events	16.45	6.23	-	-	-	-	-	-	-	-	-	-	-	.054
12. Vividness	5.51	1.48	-	-	-	-	-	-	-	-	-	-	-	-

* $p < .05$, ** $p < 0.01$.

The results indicated there were no significant indirect effects for vividness, temporal distance, importance and difficulty to generate future events which means that there is no mediation ($p > .05$). Their bootstrapped confidence interval based on 5000 samples contained zero. Although the model and the direct effect of ICES on sound details did not show significant results, use of reappraisal was found to positively predict sound details $B = 0.038$, $SE = 0.017$, 95% CI [0.004, 0.071], $t = 2.236$, $p < .05$. Interestingly, there was a significant indirect effect of parental invalidation on auditory details of future events through use of reappraisal ($B = -0.051$, $SE = 0.029$). The bootstrapped confidence interval based on 5000 samples did not include zero [LLCI: -.1292, ULCI: -.004]. The results might indicate that in the presence of parental invalidation, with use of reappraisal, sound details of future events can be elevated.

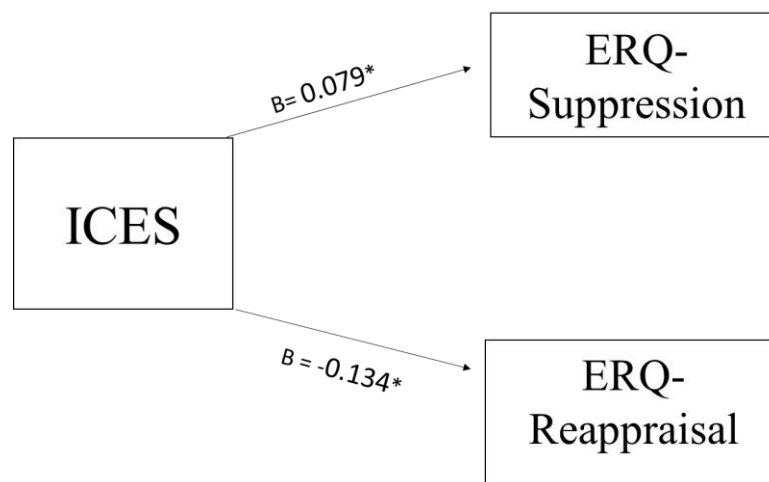


Figure 2: The Relationship between ICES and the Emotion Regulation Strategies

The results showed that the perceived childhood invalidation negatively predicted the use of reappraisal, $B = -0.134$, $SE = 0.0491$, 95% CI [-0.231, -0.037], $t = -2.734$, $p = 0.073$. The value of $R^2 = 0.658$ represents that perceived childhood invalidation explains the % 6.58 of variance in reappraisal. Additionally, results indicated that perceived childhood invalidation positively predicts use of suppression, $B = 0.079$, SE

= 0.033, 95% CI [0.014, 0.144], $t = 2.424$, $p = 0.017$. The $R^2 = 0.0525$ value represents that perceived childhood invalidation explains % 5.25 variance in suppression.

3.4.1 The Mediation Analysis of Each Phenomenological Characteristics of Future Events

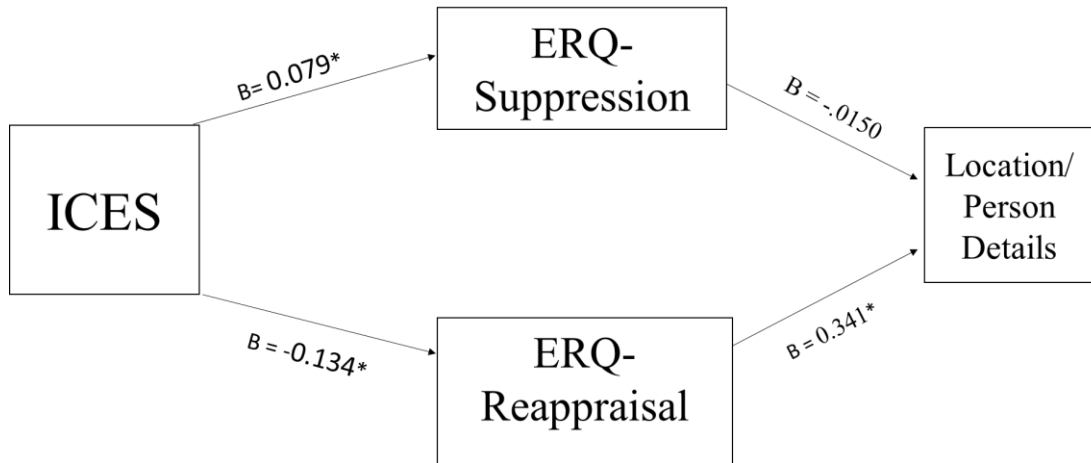


Figure 3: Emotion Regulation Strategies Mediating the Relationship between ICES and Location/Person Details of Episodic Future Thoughts

The regression of the mediation model of location/person details predicted from both emotion regulation strategies and ICES was significant, $F(3, 104) = 3.14$, $p < .05$ and $R^2 = 0.083$ value represents that the model explains 8.3% of the variance in location/person details. However, it was found that only reappraisal positively predicted the location/person details, $B = 0.341$, 95% CI [0.0036, 0.0646], $t = 2.216$, $p = 0.029$. The total effect model showed a significant relationship between ICES and person/location details of future events, $F(1, 106) = 3.99$, $p < .05$, 95% CI [-0.0314, -0.0001]. The total effect model showed that parental invalidation negatively predicted location/person details of future events ($B = -0.025$, $SE = 0.036$). The indirect effect of parental invalidation on location/person details of future events through reappraisal was significant ($B = -.0046$, $SE = .0029$). The bootstrapped confidence interval based on 5000 samples did not contain the value of zero [LLCI: -.0117, ULCI: -.0004].

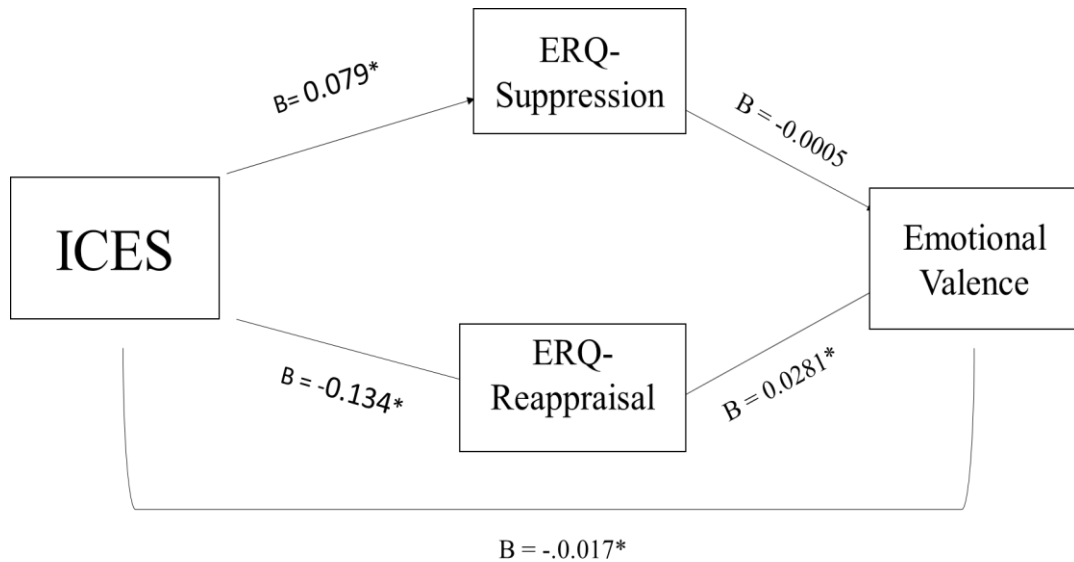


Figure 4: Emotion Regulation Strategies Mediating the Relationship between ICES and Emotional Valence of Episodic Future Thoughts

The regression of the model of emotional valence predicted from both emotion regulation strategies and ICES was significant, $F(3, 104) = 6.09, p < .001$ and $R^2 = 0.1495$ value represents that model explains 14.95% of the variance in emotional valence of future events. It was found that habitual use of reappraisal positively predicts the emotional valence of the future events ($B=0.028, SE = 0.012, 95\% CI [0.005, 0.051], t = 2.45, p = 0.016$). Results also showed that ICES negatively predicts the emotional valence, $B = -.0017, SE = 0.006, 95\% CI [-0.029, -0.004], t = -2.68, p < .05$. The total effect model predicts a significant relationship between ICES and emotional valence, $F(1, 106) = 11.84, p < .001$. In addition, parental invalidation negatively predicts emotional valence of future events when mediators are not included, $B = -0.020, SE = 0.006, 95\% CI [-0.032, -0.009], t = -3.44, p < 0.001$. The indirect effect of ICES on emotional valence through use of reappraisal was significant ($B = -0.004, SE = 0.002$) and falls between bootstrapped confidence intervals based on 5000 samples [LLCI= -0.009 and ULCI= -.000], indicating a possible mediation.

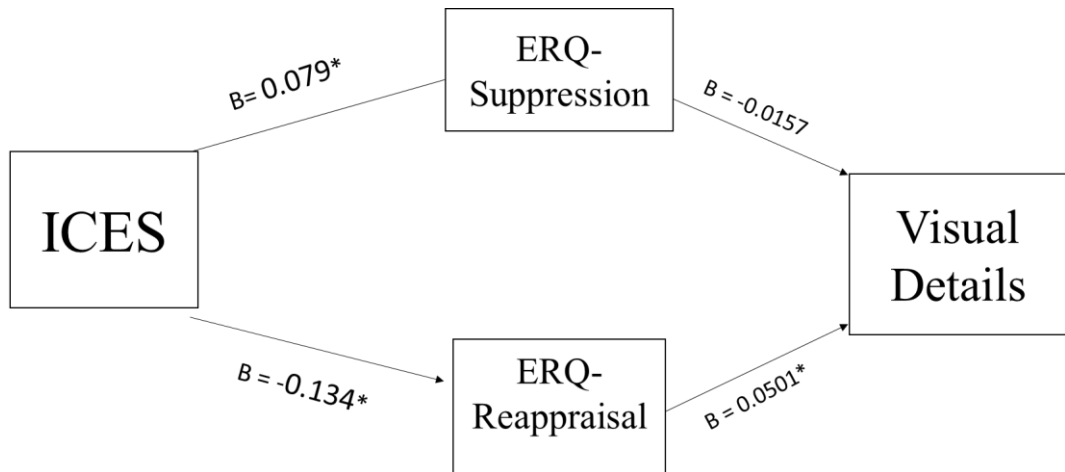


Figure 5: Emotion Regulation Strategies Mediating the Relationship between ICES and Visual Details of Episodic Future Thoughts

The model of visual details predicted from both emotion regulation strategies and ICES was significant, $F(3, 104) = 6.02$, $p < .05$ and $R^2 = 0.1479$ value represents that model explains 14.79% of the variance in visual details of episodic future events. However, it was found that only reappraisal positively predicts the visual details, $B = 0.050$, $SE = 0.014$, 95% CI [0.023, 0.078], $t = 3.62$, $p < 0.001$. The total effect model predicted a significant relationship between ICES and visual details, $F(1, 106) = 4.00$, $p < .05$. Moreover, parental invalidation negatively predicted the visual details of future events, $B = -0.147$, $SE = 0.074$, 95% CI [-0.029, -0.001], $t = -2.00$, $p = 0.48$. The indirect effect was significant ($B = -0.007$, $SE = 0.031$) and the bootstrapped confidence interval did not include zero [LLCI= -0.014, ULCI= -0.002], indicates that the relationship between ICES and visual details was mediated by the use of reappraisal.

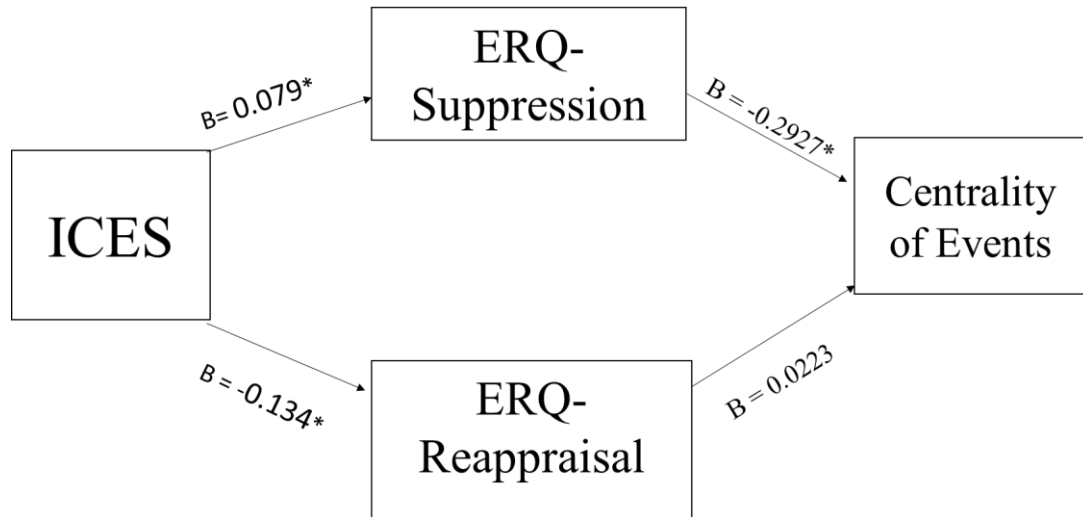


Figure 6: Emotion Regulation Strategies Mediating the Relationship between ICES and Centrality of Future Thoughts

Lastly, the regression analysis of the model of centrality of events predicted from both emotion regulation strategies and ICES was significant, $F(3, 104) = 2.80$, $p < .05$ and the $R^2 = 0.0747$ value represents that the model explains 7.47% of the variance in centrality of events. The model showed that only suppression significantly predicted the centrality of events, $B = -0.293$, $SE = 0.105$, 95% CI $[-0.501, -0.085]$, $t = -2.791$, $p = 0.006$. The indirect effect of parental invalidation on centrality of future events through use of suppression was significant which indicates a mediation ($B = -0.232$, $SE = 0.129$). The bootstrap confidence interval for the indirect effect based on 5000 samples did not contain zero [LLCI = -0.1394 , ULCI = -0.0067]. The total effect model showed that parental invalidation does not predict centrality of future events ($B = -0.025$, $SE = 0.036$).

Chapter 4

DISCUSSION

The present study aimed to examine whether there is a relationship between experiences of childhood invalidation and the phenomenal characteristics of future thoughts. In addition to that, we hypothesized, emotion regulation strategies would mediate this relationship. As predicted, we showed an association between parental invalidation and the phenomenological characteristics of future thoughts and this relationship was mediated by the habitual use of emotion regulation strategies. In line with our expectation, centrality of events was mediated by the habitual use of suppression. However, we hypothesized that only habitual use of suppression would be related to the ratings of each phenomenological characteristic in the presence of parental invalidation. On the contrary, we found that this relationship was mainly related to the habitual use of cognitive reappraisal and all phenomenological characteristics were mediated by the habitual use of reappraisal. This section will cover the interpretations of the results while considering the previous findings.

4.1. The Effects of Cue Words on Phenomenological Characteristics

We hypothesized that cue words related to the family would influence the ratings of each phenomenological characteristic of the future thoughts. In order to investigate the influences of cue words, parental invalidation and emotion regulation strategies were controlled.

Accordingly, in this study we found that cue words related with a particular context, might affect the subjective experience of the future events. Furthermore, we propose that cue words can be used to trigger past experiences in order to examine the effects of prior experiences on the phenomenological characteristics of future events. Our findings suggest that family-related cue words might influence the subjective experiences of future events. Overall, in the literature, cue-word induced experiments are commonly used while asking individuals to generate future events. However, the cue words selections were based on their familiarity, commonality, concreteness, imageability, valence and relatedness with personal projects (Hallford et al., 2020; Jumentier et al., 2018; Neroni et al., 2016; D'Argembeau & Van der Linden, 2012; D'Argembeau & Mathy, 2011; Szpunar & McDermott, 2008). In contrast to previous studies, this is the first study which used cue words in a context of reminding family. Further aimed to trigger past and specifically, childhood experiences.

The results showed that participants in the family-related cue words group rated their future events as more positive compared to the neutral cue words group. Previous studies consistently found that future events were more positive than past events (Rasmussen & Berntsen, 2013; D'Argembeau & Van Der Linden, 2006). This tendency to expect positive outcomes in the future or perceiving oneself in a better position in the future compared to the present self was termed as positivity bias and it was associated with psychological well-being (Schacter et al., 2008 cited in Marsh et al., 2019). Further, studies showed that positivity bias serves a self enhancement function (Salgado & Berntsen, 2019). This self-enhancement was based on the Temporal Self- Appraisal Theory (Wilson & Ross, 2001), in which individuals tend to see themselves better in the present and depreciate their past selves, further projecting

themselves in future as better than they are now (Grysman et al., 2015). Research found that related to the valence of the cue words, participants tended to generate positive future events to happen closer in time compared to negative ones expected to happen in the distant future (Salgado & Berntsen, 2019; Rasmussen & Berntsen, 2013). Further it was found that the positivity of future events were not based on cultural life scripts and it was linked to self-enhancement (Grysman et al., 2015). In contrast to previous studies, we used family-related and non-family related cue words to evaluate the emotional valence of the future thoughts. We found that participants who used family-related cue words in their future events reported those events as more positive compared to the non-family group. Our findings show that positivity bias further self-enhanced effects might be induced through cue words other than cultural lifescritps. Further, positivity bias might be induced by the family-related cue words.

We found that family-related cue words group reported their future events as more likely to happen in the distant future and they rated their events as more central to their life stories compared to non-family group. This finding is in line with the previous studies that showed, future events were rated as more likely to occur in the distant future and more related to the cultural life-scripts as well as rated as more central to their life stories and identity (Neroni et al., 2016; Berntsen & Bohn, 2010). According to D'Argembeau and Van Der Linden (2011), future oriented thoughts consist of abstract representations of goals and expected life-time periods and they are accessed as a personal knowledge without mentally generating those representations. Moreover they found that those distant thoughts are more personally important compared to near events. On the other hand, the unknown nature of the future events, individuals might rely on general self-knowledge as well as personal goals to generate future events

(D'Argembeau & Mathy, 2011). Further, cultural life scripts can be used as a search mechanism while generating future events when episodic details are not accessible (Grysmann et al., 2015). In our study we found that individuals who used family-related cue words reported their future events as temporally distant and also reported those events as central to their life stories. This finding is also similar to the findings of Rasmussen and Berntsen (2013), who found that future events were more positive, central to life stories, more likely constructed by cultural life scripts. We did not examine the cultural life scripts in our study, however, the cue word Child might have triggered the cultural life-script of 'having a child'. The temporal distance of the events might be reported as more distant, due to the attributed meanings to the cue words.

Another study showed that individuals tend to generate future events that are more likely to happen in the near future with more details (D'Argembeau & Van Der Linden, 2004). We found that family-related cue word groups rated their future events as temporally distant compared to the control group. Moreover, we did not find significant group differences in the visual, auditory and location/person details. These results might be related with the previous findings, that individuals who rated their imagined future events were more likely to happen in the distant future and their details of future events did not differ from the neutral future events. Moreover, although vividness of the future events found to be related with the temporal distance, when familiarity of location, person and objects are taken into account, the effect of temporal distance disappears (D'Argembeau & Van Der Linden, 2012). In this study we did not ask participants to rate their familiarity with the location/person or objects that were present in their future events. Besides, the cue words for each group might be assumed as familiar, we cannot say that individuals perceived those details as familiar to

themselves. Therefore, we can only interpret these findings as, family-related cue words are not different from the non-family related cue words in their perceived vividness. Finally, we found no significant differences in difficulty to generate future events for both family-related and non-family related cue words. These results indicate that the family-related cue words that are used in this study did not affect the ease of imagining future events.

In addition, our results showed that the importance of the future events were not significantly different among the conditions. Previous studies showed that as temporal distance increases, importance, centrality of events and relying on cultural scripts increases (D'Argembeau & Van Der Linden, 2011). However, current findings show that the level of importance is not different between family-related cue words group and the non-family related cue words group. First, these results might be related with our previous interpretations of the likelihood our cue word triggered the cultural life script of having a child or the other word means a national holiday, might not be perceived as important as among individuals. Further, the individual differences in importance might cause indifferences with the neutral cue words that are spring and store. Secondly, these results might indicate that personal importance is not solely related to cultural life scripts, temporal distance or personal goals. The meanings attributed to the cue words should be taken into account while examining the importance of the future events. Third, we collected our data from undergraduate students. Again with the previous proposition of having a child concept or things related with a holiday, this might not be the first thing or a goal for a university student to achieve other than academic success or future work opportunities.

Previous findings mainly based on the comparisons of phenomenological characteristics of past and future events, and they found that future events were more vivid, positive, personally important, related with the personal goals and less detailed than past events (Rasmussen & Berntsen, 2013; D'Argembeau & Mathy, 2011; D'Argembeau & Van Der Linden, 2004). This is the first study in which we only used future events and the cue word manipulation was based on triggering experiences with the parents by using family related cue words. Likewise, to our knowledge there is no study that investigates parental invalidation using cue words. There are only a few studies which use experimental design to investigate emotional invalidation in childhood (Elzy & Karver, 2018; Yap et al., 2008). Moreover, from our findings, we can propose that family-related cue words are more likely to increase the emotional valence of the future events, makes future events to be perceived as more central and leads to expectations of the future events to be happening in the more distant future compared to the non-family related cue words.

4.2. Interpretations of the Mediation Model

Findings supported our second hypothesis as that there is an association between parental invalidation and the phenomenological characteristics of future events. Moreover, we found that emotion regulation strategies mediated the effects of parental invalidation on episodic future thinking.

Our main goal was to examine the effects of parental invalidation on each phenomenal characteristic of future thought mediated by the emotion regulation strategies. Vividness, temporal distance, personal importance and difficulty generating future events were not significantly associated with parental invalidation. The mediation

occurred only with the emotional valence, the centrality of the events, sensory details and contextual details.

The sensory-contextual details were positively associated with the habitual use of reappraisal. These results showed that individuals who were more likely to use reappraisal to regulate their emotions would be more likely to report details of location/person, visual and auditory details. These findings extend the previous studies which found that use of positive reappraisal increases the details of the future thoughts (Jumentier et al., 2018) while suppression decreases the subjective experiences of the future thoughts (D'Argembeau & Van Der Linden, 2006).

Moreover, the total effect of parental invalidation negatively predicted the sensory-contextual details. These results indicate that parental invalidation predicts the visual, location and person details of future events without the emotion regulation included in the model. However, this is a negative relationship which also indicates that the more an individual experienced parental invalidation would report less visual details, and as well as location and arrangements of people included in those events.

We hypothesized that the habitual use of suppression would mediate the sensory-contextual details, and there would not be a relationship with the habitual use of reappraisal. Although our hypothesis was not supported, we found that the habitual use of reappraisal was associated with the sensory-contextual details and results indicate that this relationship was positive. According to the findings of D'Argembeau & Van Der Linden (2006), habitual use of suppression was associated with lower ratings in most phenomenological characteristics, specifically with the sensory details. In addition, they did not find a significant relationship between habitual use of

reappraisal and phenomenal characteristics. D'Argembeau & Van Der Linden (2006) attempted to explain the possible reasons why the suppression affected future thinking. Their assumptions were the encoding differences, invade of the suppression during retrieval and the possibility of a specific cognitive style to avoid experiencing strong emotions. We know that the episodic future thoughts are constructed from the episodic and semantic memory (Irish & Piguet, 2013; Schacter & Addis, 2007). Therefore, we can assume that individuals who habitually use reappraisal might have encoded more sensory-visual details in the past events (Richards et al., 2003), therefore they were more likely to report sensory and contextual details, compared to people who are more likely to suppress their thoughts and emotions.

On the other hand, cognitive reappraisal is an antecedent-focused strategy which means that before emotions are fully activated, we tend to change our perception or the meanings we give to that emotional event (Gross, 2002). In this case, it is more likely to enhance our positive emotional experiences and we know that individuals who are more likely to use reappraisal in their daily lives are experiencing and expressing more positive emotions (Gross, 2002; Cutuli, 2014). Thus, positive valence enhances the details of future events (D'Argembeau & Van Der Linden, 2004). Therefore, we can predict that habitual use of reappraisal enhances the details of sensory-contextual details of generated future events.

The indirect effects of parental invalidation on sensory-visual details were significant. This indicates that parental invalidation decreases the sensory-contextual details of future events when the individuals lack using cognitive reappraisal. In other words, parental invalidation decreases the likelihood of an individual's tendency to use reappraisal which in turn reduces the sensory-contextual details of future events. When

we think about future events, we are usually making plans and defining goals to achieve, which in turn motivates us to behave according to that. Other than making plans, we may change our behaviors or thoughts by envisioning upcoming results (D'Argembeau, 2021). Further, we can use future events as regulating our current mood (Barsics et al., 2016) by thinking positively about our future. In order to, episodic future thinking function better, we might prefer to have more details in those events. The more details it contains, the more vividly they are going to be pre-experienced. Therefore, the current study reveals that there would be an important impact of parental invalidation in our details of future thoughts.

Another finding from the present study is that emotional valence was negatively predicted by parental invalidation mediated by the habitual use of reappraisal. The habitual use of reappraisal positively predicted emotional valence of the future events. We hypothesized that the habitual use of suppression would reduce the emotional valence and the reappraisal would not show significant relationship. However, results indicated that the habitual use of suppression was not significantly related to the emotional valence. This finding is consistent with the previous work from D'Argembeau & Van Der Linden (2006), they also did not find a significant relationship between suppression and emotional valence. They only mentioned that the participants who were high in suppression were less likely to engage in emotional mental time travel. In the present study, we found that parental invalidation was negatively associated with the emotional valence mediated by the reappraisal. The results indicate that when an individual is more likely to use reappraisal they are more likely to report emotional valence of their future events although they had experiences of childhood emotional invalidation.

In addition, we expected that parental invalidation would predict negatively emotional valence and centrality of events through the use of suppression. Our hypothesis was partially supported by the results. We found that parental invalidation and centrality of events were mediated by the habitual use of suppression. The total effect and direct effect for parental invalidation predicting centrality of events were not significant but still there was a mediation. The results demonstrated a relationship between parental invalidation and centrality of events only when the use of suppression is added into the model.

Habitual use of suppression negatively predicted events' centrality and was positively related to parental invalidation. Results indicated that the experiences of parental invalidation reduces the centrality of events in the presence of habitual use of suppression. Therefore, we suggest that individuals who experienced parental invalidation might be more likely to suppress their inner experiences and would reduce the centrality of their future events.

Childhood experiences of invalidation might have reduced the emotional control and the adaptive problem solving skills which lead to dependency on the environment for cues on how to think and behave (Huxley et al., 2021). In addition, in invalidating environments, due to the oversimplification of the problems and lack of guidance by the parents, individuals fail to learn how to deal with the distress and experience difficulties in problem-solving skills (Salsman & Linehan, 2006). This result can be interpreted as that individuals, who learned to invalidate their inner experiences and more likely to suppress their emotions and thoughts might avoid or put less meanings to the future events as their life stories in order to avoid the distress of the unknown. Eventually, they may prevent themselves from making future events more central to

their life stories. Previous studies found that future events were more central to the individuals life stories compared to past events (Akdere, 2020; Berntsen and Bohn, 2010; Rasmussen & Berntsen, 2013; Özbek et al., 2017), our study expands and makes contribution to the literature as that the experiences of parental invalidation has an impact on the centrality of events in cases of habitual use of suppression.

For the vividness, temporal distance, personal importance, and difficulty to generate future events we did not find a significant relationship with parental invalidation and emotion regulation strategies. Interestingly, although we found that sensory-contextual details were significantly associated with emotion regulation and parental invalidation, we did not find significant results for the vividness. According to the literature, vividness is enhanced with familiarity, and more vividness were related to the increase in the details of sensory and contextual features (D'Argembeau & Van Der Linden, 2012). On the other hand, we did not manipulate the temporal distance of the future events, this might be the reason why we did not find significant results. However, both groups had significantly shown differences in temporal distance.

In addition to our findings, we also found that parental invalidation positively predicted the habitual use of suppression and negatively predicted the habitual use of reappraisal. We can interpret these results as individuals who were raised in invalidating environments may learn to suppress the expression of their inner experiences and they are less likely to learn reappraising their emotions. These results are consistent with Linehan (1993)'s biosocial theory, suggests that the experiences of emotional invalidation might lead to the use of maladaptive emotion regulation strategies and individuals who were not able to learn how to communicate their emotions may engage in suppression (Salsman & Linehan, 2006). Along with the

biological factors, social factors such as family, peers, etc. together establish the individual differences in emotion regulation in adulthood (John & Gross, 2004). Consequently, past experiences of emotional invalidation may result in reduced emotional awareness which might reduce someone's ability to detect and re-evaluate the emotion-stimulating events. Moreover, individuals who learned that their emotions are not appreciated and learned to suppress to avoid punishment or not to feel validated may have adopted suppression as a habitual regulation strategy.

Moreover, in an invalidating environment, a child faces dismissing or punishing responses from their caregivers when the child attempts to share or express his/her emotions. The child potentially learns that their emotions are inappropriate or wrong (even accept emotional expression as a sign of weakness), therefore, they might experience difficulties to label and cope with the latter emotions (Haslam et al., 2012). According to Gross and Jazaieri (2014), one of the components of adaptive regulation is emotional awareness. They suggest that it is relatively difficult to engage in more advanced emotion regulation strategies such as cognitive reappraisal without the awareness of emotions.

Overall, results demonstrated that the experiences of emotional invalidation in childhood is related to the phenomenological characteristics of future events. Moreover, this association was mediated by the emotion regulation strategies. In addition, we found that cue words related to the family, also have an impact on the phenomenological characteristics of the future events. In previous studies, cue words were used to manipulate the valence, familiarity or personal importance of the future thoughts (Jumentier et al., D'Argembeau & Van Der Linden, 2012), however, to our knowledge this is to first study which used cue words to trigger childhood experiences

of parental invalidation. Furthermore, we found that parental invalidation positively predicts habitual use of suppression and negatively predicts the use of habitual reappraisal.

Moreover, the results indicate that phenomenological characteristics are reduced with the experiences of parental invalidation when individuals fail to use cognitive reappraisal. Future thinking frequently occurs in our daily lives and it serves multiple functions and it is related to planning, decision making, emotion regulation, and motivation (see, Schacter et al., 2017; Baumgartner et al., 2008). As we are all familiar with that we often think about our future and we make plans we make decisions according to the possible outcomes. Therefore, it is crucial to understand how episodic future thinking is subjectively experienced and which factor affects those events. On the other hand, our childhood experiences usually influence us who we are right now. Learning healthy strategies (e.g., cognitive reappraisal) to modify our emotions is important to preserve our psychological and social well-being (Cutuli, 2014). One factor that impacts our development of emotion regulation strategies is emotional invalidation by caregivers. In this study, we propose that emotion regulation strategies have an impact on how we subjectively experience future events and emotion regulation strategies are affected by the experiences of parental invalidation. As a result, the present study was designed to shed light on the fact that experiences of emotional invalidation are associated with the phenomenological characteristics of future events mediated by the emotion regulation strategies.

4.3 Limitations

The present study has some limitations. We hypothesized that parental invalidation might predict habitual use of suppression therefore and we expected that the cue words

would trigger experiences of parental invalidation. Further we expected to find decreased ratings for phenomenological characteristics of future thoughts in the family-related cue words due to the experiences of parental invalidation. However, results for emotional valence was highly positive than expected. This shows that the cue words used in this study might have increased the ratings of the characteristics and our manipulation did not work the way it was expected. The reason why cue words did not work as we expected could be related with the cue word selection and the valence of the cue words. For the cue word selection, we did not design a study to find the effectiveness of cue words to trigger parental invalidation, in fact, we assumed that these cue words were eligible to trigger the experiences. However, there should be an additional study which investigates the effectiveness of cue words to evoke the experiences of parental invalidation in order to investigate influences of parental invalidation on episodic future thoughts. In addition, since it is the first study which investigated these concepts together we used neutrally valenced cue words. Previous studies found that the valence of the cue words impacts the phenomenal characteristics; therefore, in future studies, negative cue words that are related to the parental invalidation can be included to trigger the negative aspects of the parental invalidation. On the other hand, the experimental design can be constructed as asking participants to watch videos that would trigger experiences of childhood emotional invalidation or with asking to report their own experiences of childhood invalidation might be also used for manipulating experiences of parental invalidation rather than using cue words. Another reason why our manipulation did not work would be that family-related cue words might have caused reappraisal of participants' past experiences therefore they reported the phenomenological characteristics higher than expected. Furthermore, cue words related with the family might have increased the use of reappraisal and reduced

the perceived experiences of parental invalidation. Therefore, it is crucial to control the possibility of reappraising effects of cue words or other manipulation techniques.

Another limitation of the study is that we collected our data from a small sample of participants. These participants might not have experienced traumatic or severe experiences of parental invalidation. Therefore, our results may not represent the actual affects of parental invalidation on episodic future thought. In future studies, data collection should be done with a larger sample of participants. Moreover, we combined the total means of the cue words, to evaluate the model in one mediation analysis. Otherwise, we were supposed to examine each cue word separately. To eliminate possible differences between cue words, we combined the total cue word means of the each condition. In future studies, rather than combined effects of each cue word, the effects for each cue word should be taken into account.

In addition, we only measured the invalidation based on past experiences, however, participants were young adults, in which we should have used another scale which measures their current experiences of emotional invalidation. The results can be affected if the parents have changed their attitudes, or if the individuals managed to regulate their emotions in more healthy ways. To be certain about the effects of invalidation checking both past and current perceived experiences of emotional invalidation would be more appropriate. I would like to note that, in this study we mainly focused on expressive suppression which is a strategy that individuals tend to hide their emotions from expressing them to others, which eventually causes feelings of inauthenticity that result in negative emotion experiences (John & Gross, 2004). However, past or current experiences of invalidation cover other types of adaptive and maladaptive emotion regulation strategies. I would like to recommend that in future studies, focusing on

experiential suppression would also be helpful to have an insight into effects of parental invalidation on episodic future thought.

Moreover, we did not manipulate the temporal distance of the future thoughts. Temporal distance of the events might affect how future events are self-relevant and it affects the importance of the events. Moreover, as temporal distance increases the more likelihood constructing cultural life scripts increases. In order to examine the events relatedness with the self and personal goals or they are generated from cultural life scripts, it is important to define the temporal distance of the future thoughts. In addition, because we did not define time instructions, participant's might have reported their repeated future thoughts which are already available. Otherwise, participants might have reported the events that are more central to their life stories due to the absence of time prompts.

The whole data collection was during the Covid-19 pandemic, therefore it is possible that our findings might be influenced by the lockdown. In order to control the effects of covid related stress and other factors we controlled for the possible effects of depression, stress and anxiety, and all of the participants were clinically healthy. However, another study should consider examining the influences of invalidation on phenomenological characteristics of future events occurring with other psychological disorders (e.g., BPD; Linehan, 1993). Finally, we only compared the phenomenological characteristics of future events, to have a better understanding of the effects of parental invalidation on episodic memory, past events can be also added to the comparison.

4.4 Conclusions and Implications

To our knowledge this is the first study which investigated the relationship between parental invalidation and the episodic future thoughts with using cue words to trigger those experiences. Who we are is the construction of experiences we had and what we will become is actually driven from those experiences (Mutlutürk & Tekcan, 2015). What we experienced in the past, in fact affects our thoughts and behaviors for the present and possibly the current experiences will shape our future (D'Argembeau, 2021). Without thinking about the future and having a purpose to live, we would be having trouble and probably we would face psychological problems, it is important to maintain psychological well-being (de Jong et al., 2020). Our psychological well-being is closely related with the strategies we use to cope with stressful events (De Castella et al., 2013). Therefore, it is important to investigate parental invalidation that would impair the emotion regulation strategies and to feel lonely due to the invalidation. This is why we conducted this study to gather better information about the effects of parental invalidation and its relationship with the emotion regulation strategies which would predict the subjective experiences of future thoughts.

In conclusion, current study showed that cue words related with family compared to neutral cue words, influenced the ratings of emotional valence, temporal distance and the centrality of events. In addition, findings showed that parental invalidation negatively predicts the phenomenological characteristics and this relationship was mainly mediated by the lessened habitual use of reappraisal. This study was conducted to fill the gap in the literature, and suggest other researchers to take a look at that there would be another and important factor which affects the generation of future thoughts. Further studies should be focused on other emotion regulation strategies rather than

generalizing only on cognitive reappraisal and expressive suppression. Unwillingness to experience emotions (experiential suppression) and thought suppression also should be included in the future studies. Additionally, for more in depth understanding how parental invalidation affects our episodic memory, future studies should also examine and compare the memories with future thoughts.

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APPENDICES

Appendix A: Informed Consent



Psikoloji Bölümü
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Bireylerin Otobiyografik Bellek Değerlendirmeleri

Değerli katılımcı,

Araştırmaya katılmayı kabul etmeden önce, lütfen araştırma ile ilgili aşağıda bulunan bilgileri dikkatle okumak için birkaç dakikanızı ayırınız. **Araştırma ile ilgili herhangi bir sorunuz varsa, aşağıda iletişim bilgileri olan araştırmacıyla iletişim kurabilirsiniz.** Bu araştırma Genel Psikoloji Yüksek Lisans öğrencisi Şenel Özdilek tarafından, Yrd. Doç. Dr. Burcu Kaya Kızılöz ve Yrd. Doç. Dr. Emre Han Alpay denetimi altında yürütülmektedir. Araştırmanın amacı **bireylerin otobiyografik belleklerini** araştırmaktır. Çalışma, en fazla 20-25 dakikanızı alacaktır.

Çalışmaya katılmamız zorunlu değildir ve katılmayı reddetme hakkına sahipsiniz. Çalışmadan, istediğiniz bir anda, açıklama yapmaksızın çekilme hakkına sahipsiniz. Araştırmadan çekilmeniz durumunda, yanıtlarınız yok edilecektir ve araştırmada kullanılmayacaktır. Eğer araştırmaya katılmayı ve tamamlamayı kabul ederseniz, cevaplar ve anketler **gizlilikle** korunacaktır. İsmi ve tanımlayıcı bilgileriniz, anketin geri kalan kısımlarından ayrı olarak muhafaza edilecektir. Veriler, araştırma tamamlandıktan sonra en çok 6 yıl boyunca muhafaza edilecektir. Verilerin analizinden sonra, araştırma ile ilgili bir rapor yayımlanabilir.

Gönüllü katılımlarınızı belirtmek için, lütfen aşağıda bulunan bilgilendirilmiş onam formunu imzalayınız.

BİLGİLENDİRİLMİŞ ONAY FORMU

Araştırmanın Başlığı: Covid-19 Salgınının Bireylerin Gelecek ile Düşüncelerine Etkisi
Araştırmacıların Adları: Şenel Özdilek (senel.ozdilek@emu.edu.tr), Yrd.Doç.Dr. Burcu Kaya Kızılöz (burcu.kaya@emu.edu.tr) ve Yrd.Doç.Dr. Emre Han Alpay (emre.alpay@emu.edu.tr)

Her ifadeye katıldığınızı belirtmek için lütfen yanda bulunan kutuları işaretleriniz.

1. Bilgileri okuyup anladığımı ve soru sorma fırsatının olduğumu onaylıyorum. ☐
1. Katılımımın gönüllü olduğumu ve açıklama yapmaksızın, istediğim bir anda araştırmadan çekilebileceğimi anlıyorum. ☐
3. Bu araştırmaya katılmayı kabul ediyorum. ☐

Tarih _____ İmza _____

Araştırmanın etiği ile ilgili bir endişeniz var ise, endişenizi detaylı bir şekilde açıklayan yazılı bir metin ile Doğu Akdeniz Üniversitesi, Araştırma ve Etik Komitesi Başkanı, Prof. Dr. Şenel Hüsnü Raman ile iletişime geçebilirsiniz (shenelhusnu.raman@emu.edu.tr)

Appendix B: Episodic Future Thinking Task

Episodic Future Thinking Task Instructions for Future Events

Lütfen, xxxx kelimesini kullanarak veya bu kelimenin sizde oluşturduğu anlama göre hayatınızda daha sonra gerçekleşebilecek önemli bir olayı yazınız. Lütfen zihninizde canlandırıdığınız olayları yazarken belirli bir yerde, spesifik bir zaman diliminde ve süresinin bir tam günü (24 saati) aşmayacak şekilde bir olay olmasına dikkat ediniz.

Örnek Kelime: Para “Bu ay sonunda, maaşımı aldığım zaman kendime yeni kıyafetler alacağım. Bir adet üzerinde desenleri olan kısa bir elbise ve yeni tüyleri olan güzel beyaz bir kazak alabilirim. Daha sonra yakın arkadaşım olan Ebru ile evimin karşı sokağında bulunan kafe de kahve içip en sevdiğim çikolatalı kekten yiyeceğim”.

Appendix C: Autobiographical Memory Questionnaire

Phenomenological Characteristics of Episodic Future Thinking

1. Bu hayali olay, canlı bir olaydır.

Hiç 1 2 3 4 5 6 7 Son derece canlı

2. Bu olayı zihnimde canlandırdığımda, onu zihnimde görebiliyorum.

Hiç 1 2 3 4 5 6 7 Şu anda oluyormuş gibi

3. Bu olayı zihnimde canlandırdığımda, onu zihnimde duyabiliyorum.

Hiç 1 2 3 4 5 6 7 Şu anda oluyormuş gibi

4. Bu olayı zihnimde canlandırdığımda, olayın geçtiği mekanda kimin/neyin nerede durduğunu biliyorum.

Hiç 1 2 3 4 5 6 7 Şu anda oluyormuş gibi

5. Bu olayı zihnimde canlandırdığımda hissettiğim duygular

Son derece olumsuz 1 2 3 4 5 6 7 Son derece olumlu

6. Zihnimde canlandırdığım bu olay hayatımda önemli bir yere sahip olacaktır.

Hiç 1 2 3 4 5 6 7 Son derece önemli

7. Bu olayı zihnimde canlandırmak

Çok kolaydı 1 2 3 4 5 6 7 Çok zordu

8. Bu olay ne kadar süre sonra gerçekleşebilir? _____ hafta sonra.

Appendix D: Centrality of Future Events

OLAYLARIN MERKEZİYETİ ÖLÇEĞİ

Lütfen geriye dönüp, hayatınızdaki en stresli veya travmatik olayı düşünün ve aşağıdaki soruları, dürüst ve samimi bir şekilde 1'den 5'e kadar yer alan numaralardan birini işaretleyerek yanıtlayın.

1 = Hiç Katılmıyorum; 5 = Tamamen Katılıyorum

1. Bu olayın kimliğimin bir parçası haline geldiğini hissediyorum.
2. Bu olay, kendime ve dünyaya anlam vermemde bir dayanak noktası haline geldi.
3. Bu olayın, hayat hikayemin merkezi bir parçası haline geldiğini hissediyorum.
4. Bu olay, diğer deneyimler hakkında düşünme ve hissetme şeklimi renklendirdi.
5. Bu olay, kalıcı olarak hayatımı değiştirdi.
6. Sıklıkla bu olayın geleceğim üzerinde sahip olacağı etkiler hakkında düşünüyorum.
7. Bu olay hayatımda bir dönüm noktasıydı.

Appendix E: Invalidating Childhood Environment Scale (ICES) – Turkish Version

Aşağıdaki sorular ebeveynlerinizin siz çocukken sizin duygunuza nasıl karşılık verdikleri ile ilgilidir. Her bir maddede belirtileni 18 yaşıınıza kadar ne derece deneyimlediğinizi belirtmek adına 1 den 5 e kadar puanlayınız. Anne ve babanızın tepkileri birbirlerinden farklı olabileceğinden her bir ebeveyniniz için ayrı ayrı puanlayınız.

1-Hiçbir zaman, 2-Nadiren, 3-Bazen, 4-Çoğu zaman, 5-Her zaman

Çocukluğumda...

1. Onlarla anlaşmazlığa düşersem ebeveynlerim öfkelenirlerdi.					
	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
Annem	1	2	3	4	5
Babam	1	2	3	4	5
2. Kaygılandığımda ebeveynlerim buna aldırılmazlardı.					
	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
Annem	1	2	3	4	5
Babam	1	2	3	4	5
3. Mutluysam “gülünecek ne var” gibi şeyler söyleyip beni iğnelerlerdi.					
	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
Annem	1	2	3	4	5
Babam	1	2	3	4	5
4. Üzgünsem ebeveynlerim “seni gerçekten ağlatacak bir şey yapayım da gör” gibi şeyler söylerlerdi.					

	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
Annem	1	2	3	4	5
Babam	1	2	3	4	5

5. Onlara zor bir şeyi ilk defasında anlayamadığımı söylersem ebeveynlerim benim iyi hissetmemi sağlardı.

	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
Annem	1	2	3	4	5
Babam	1	2	3	4	5

6. Okulda iyi olduğum için keyfim yerindeyse ebeveynlerim “kendine o kadar güvenme” gibi şeyler söylerlerdi.

	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
Annem	1	2	3	4	5
Babam	1	2	3	4	5

7. Bir şeyi yapamayacağımı söylersem ebeveynlerim “bunu kasten yapıyorsun” gibi şeyler söylerlerdi.

	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
Annem	1	2	3	4	5
Babam	1	2	3	4	5

8. Bir şeyi hemencecik yapamadıysam ebeveynlerim bunu anlayıp bana yardım ederlerdi.

	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
Annem	1	2	3	4	5
Babam	1	2	3	4	5

9. Ebeveynlerim “endişelerimiz hakkında konuşmak sadece onları daha da kötü bir hale getirir” gibi şeyler söylerlerdi.

	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
Annem	1	2	3	4	5
Babam	1	2	3	4	5

10. Ebeveynlerim bir şeyi çok uğraşıp yapamadığımda bile bana “tembel” olduğumu söylerlerdi.

	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
Annem	1	2	3	4	5
Babam	1	2	3	4	5

11. Onlara sormadan kararlar aldıysam ebeveynlerim öfkeyle bana çıkıştırlardı.

	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
Annem	1	2	3	4	5
Babam	1	2	3	4	5

12. Çok perişan bir halde olduğum zamanlarda ebeveynlerim bana yardım edebilmek için canımı sıkkan şeyin ne olduğunu sorarlardı.

	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
Annem	1	2	3	4	5
Babam	1	2	3	4	5

13. Bir problemi çözemediysem ebeveynlerim bana “bu kadar aptal olma, bunu bir gerizekalı bile çözer” gibi şeyler söylerlerdi.

	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
Annem	1	2	3	4	5
Babam	1	2	3	4	5

14. Ebeveynlerime gelecekle ilgili planlarımdan söz ettiğimde, beni dinler ve yüreklendirirlerdi.

	Hiçbir zaman	Nadiren	Bazen	Çoğu zaman	Her zaman
Annem	1	2	3	4	5
Babam	1	2	3	4	5

Appendix F: Depression Stress and Anxiety Scale (DASS-21) Turkish

Short Form

AÇIKLAMA: Lütfen sizin için en uygun seçeneğin karşısına çarpı (x) işareti koyunuz

	Son 1 haftadaki durumunuz	Hiçbir Zaman	Bazen Ve Ara Sıra	Oldukça Sık	Her Zaman
1S	Sakinleşip rahatlamak bana zor geldi	0	1	2	3
2A	Ağzımın kuruduğunu fark ettim	0	1	2	3
3D	Hiçbir şekilde olumlu duygular hissedemeyecekmişim gibi geldi	0	1	2	3
4A	Nefes alma güçlüğü yaşadım (örn., aşırı derecede hızlı nefes alma, fiziksel egzersiz olmadığı halde nefessiz kalma)	0	1	2	3
5D	Bir şeyleri yaparken başlamakta zorluk çektiğimi fark ettim	0	1	2	3
6S	Olaylara aşırı tepki vermeye meyilliydim	0	1	2	3
7A	Titremeler yaşadım (örneğin ellerimde)	0	1	2	3
8S	Bendeki gerginliğin büyük ölçüde enerjimi harcadığını hissettim	0	1	2	3
9A	Beni panikletebilen ve kendimi aptal gibi hissedebileceğim durumlardan endişe duydum	0	1	2	3

10D	Hiçbir beklentimin olmadığı hissine kapıldım	0	1	2	3
11S	Tedirgin olduğumu fark ettim	0	1	2	3
12S	Rahatlamak bana zor geldi	0	1	2	3
13D	Kendimi morali bozuk ve canı sıkkın hissettim	0	1	2	3
14S	Yaptığım şeyden beni alıkoyan hiçbir şeye karşı tahammülüm yoktu	0	1	2	3
15A	Kendimi paniklemeye yakın hissettim	0	1	2	3
16D	Hiçbir şeye karşı bir istek duyamadım	0	1	2	3
17D	Bir insan olarak çok fazla değerimin olmadığını hissettim	0	1	2	3
18S	Oldukça alingan olduğumu hissettim	0	1	2	3
19A	Fiziksel bir egzersiz yapmadığım halde kalbimin hareketlerini fark edebiliyordum (örn., kalp atış hızında artış hissi, atışlarda düzensizlik)	0	1	2	3
20A	Ortada bir neden olmadığı halde korktuğumu hissettim	0	1	2	3
21D	Hayatın anlamsız olduğunu hissettim	0	1	2	3

Appendix G: Emotion Regulation Questionnaire

Emotion Regulation Questionnaire

Size duygusal yaşamınızla özellikle de duygularınızı nasıl kontrol ettiğiniz (yani düzenlediğiniz veya yönettiğiniz) ile ilgili sorular sormak istiyoruz. Aşağıdaki sorular duygusal yaşantınızın iki farklı yönünü kapsamaktadır. Birisi duygusal deneyiminiz ya da içinde ne hissettiğinizdir. Diğer duygusal ifadeniz ya da konuşma, el kol hareketleri yapma ve davranma şeklinizde duygularınızı nasıl gösterdiğinizdir. Aşağıdaki soruların bazıları size benzer görünebilir fakat önemli açılardan farklıdırlar. Her bir madde için, lütfen aşağıdaki ölçeği kullanarak cevap veriniz. Her bir ifadenin sizi ne ölçüde tanımladığını aşağıdaki 7 aralıklı ölçek üzerinde değerlendiriniz.

1 2 3 4 5 6 7
Kesinlikle Karasızım Kesinlikle

1.Daha olumlu duygular hissetmek istediğimde(keyif veya eğlence gibi) düşündüğüm şeyi değiştiririm.	1	2	3	4	5	6	7
2.Duygularımı kendime saklarım.	1	2	3	4	5	6	7
3.Daha az olumsuz duygu hissetmek istediğimde(üzüntü ve öfke gibi) düşünüyordüğüm şeyi değiştiririm.	1	2	3	4	5	6	7
4.Olumlu duygular hissettiğimde onları ifadeetmemeye özen gösteririm.	1	2	3	4	5	6	7

5.Stresli bir durumla karşılaştığımda sakin kalmama yardım edecek biçimde düşünmeye çalışırım.	1	2	3	4	5	6	7
6. Duygularımı onları açıklamayarak kontroledirim.	1	2	3	4	5	6	7
7.Daha fazla olumlu duygu hissetmek istediğimde, içinde bulunduğum durum hakkındaki düşünme biçimimi değiştiririm.	1	2	3	4	5	6	7
8.Duygularımı içinde bulunduğum durumla ilgilidüşünme biçimimi değiştirerek kontrol ederim.	1	2	3	4	5	6	7
9.Olumsuz duygular hissediyorsam kesinlikle onları ifade etmem.	1	2	3	4	5	6	7
10.Daha az olumsuz duygu hissetmek istediğimde durumla ilgili düşünme biçimimideğiştiririm.	1	2	3	4	5	6	7

Appendix I: Demographics Form

Demografik Bilgi Formu

PART 1.

Lütfen doğum yılınızı belirtiniz

Cinsiyetiniz? Kadın () Erkek () Diğer () Belirtmek İstemiyorum ()

Eğitim durumunuz?

a) İlkokul b) Ortaokul c) Lise d) Üniversite e) Yüksek lisans f) Doktora

4. Anneniz şu an hayatta mı?

a) evet b) hayır

Babanız şu an hayatta mı?

a) evet b) hayır

Anne ve babanızın medeni durumu nedir?

a) Beraber b) Boşanmış c) Ayrı yaşıyorlar

Annenizin eğitim durumu?

a) Okur yazar b) İlkokul c) Ortaokul d) Lise e) Üniversite f) Yüksek lisans/Doktora

8. Babanızın eğitim durumu?

a) Okur yazar b) İlkokul c) Ortaokul d) Lise e) Üniversite f) Yüksek lisans/Doktora

9. Anne ve Babanızın mesleklerini lütfen belirtiniz.

Anne: Baba:.....

10. Şu an kiminle yaşıyorsunuz?

a) Aile b) Öğrenci evi c) Arkadaşlar d) Yalnız e) Diğer (lütfen belirtiniz)

11. Tanı almış herhangi bir psikolojik rahatsızlığınız var mı?

Evet, ise lütfen belirtiniz Hayır ()

PART 2.

Covid-19 sürecinde tüm dünyadaki insanlar bir takım zorluklar ve sıkıntılar yaşamaktadır. Bu süreçte aşağıdaki zorluklardan hangisini/hangilerini yaşadığınızı lütfen belirtiniz.

COVID-19 Travmatik Stres Ölçeği

Aşağıda, Coronavirus (COVID-19) etkileri hakkında bir dizi ifadeler ve sorular mevcuttur. Lütfen her bir ifadeyi / soruyu aşağıdaki ölçeğe göre derecelendirin / cevaplayın:

	Hiç (1)	Biraz (2)	Orta Düzeyde (3)	Çok (4)	Pek çok (5)
1. Koronavirüsten (COVID-19) korkuyorum.	1	2	3	4	5
2. Başka insanların etrafındayken stresliyim çünkü koronavirüse (COVID-19) yakalanacağımdan endişeleniyorum.	1	2	3	4	5
3. Koronavirüs (COVID-19) hakkında düşünmek beni tehdit altında hissettiriyor.	1	2	3	4	5
4. Size koronavirüs bulaşacağı konusunda ne kadar endişelisiniz?	1	2	3	4	5

5. Son iki hafta içinde, koronavirüs nedeniyle gelecek hakkında endişeli ve korkmuş hissettim.	1	2	3	4	5
6. Koronavirüs (COVID-19) beni maddi açıdan olumsuz etkiledi.	1	2	3	4	5
7. Koronavirüs (COVID-19) nedeniyle işimi veya işten gelen gelirimı kaybettim.	1	2	3	4	5
8. Koronavirüs (COVID-19) nedeniyle ihtiyaç malzemelerine (gıdaya) erişmekte zorlandığım zamanlar oldu.	1	2	3	4	5
9. Koronavirüs (COVID-19) nedeniyle ihtiyacım olan şeyleri almakta zorlandım.	1	2	3	4	5
10. Son iki hafta içinde, koronavirüsten dolayı sosyal olarak izole olduğumu hissettim.	1	2	3	4	5
11. Son iki hafta içinde, günlük rutinlerim koronavirüsün yol açtığı durumdan etkilendi.	1	2	3	4	5
12. Yaşadığınız yerde kapalı kalmak başkalarıyla olan ilişkilerinizi ne ölçüde olumsuz etkiledi?	1	2	3	4	5

Appendix J: Debriefing Form



Psikoloji Bölümü
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Web: <http://brahms.emu.edu.tr/psychology>

Bireylerin Otobiyografik Bellek Değerlendirmeleri

Bireylerin Otobiyografik Bellek Değerlendirmeleri başlığı altında yürütülen bu çalışmaya katıldığınız için teşekkür ederim.

Araştırmamın amaçlarını ve hedeflerini açıklamayı amaçlayan aşağıdaki bilgileri okumak için birkaç dakikanızı ayırınız. Araştırma ile ilgili sorularınız varsa, aşağıda iletişim bilgileri olan araştırmacıyla iletişim kurabilirsiniz.

Bu araştırmada çocukluk dönemlerinde onaylanmamış bireylerin, duygu düzenlemelerindeki etki ve kullanılan duygu düzenlemelerinin bireylerin gelecekle ilgili zihinde oluşturdıkları gerçekleşmesi muhtemel olayların fenomenolojik özellikleri araştırılacaktır. Bu konuda daha önce yapılan çalışmalar, bireylerin çocukluk dönemlerinde yaşadıkları travmatik deneyimlerin, ileri yaşlarda duygu düzenlemelerinde daha bastırmaya yönelik stratejiler kullandıkları (Warner et al., 2020), ayrıca bireylerin duygu düzenleme stratejilerinin gelecek hakkında düşündükleri olayların ne kadar detaylı ve spesifik bir zaman diliminde aynı zamanda hangi duyguyu içerdiğini etkilediği bulunmuştur (D'Argembeau & Van Der Linden, 2006). Bu faktörleri birlikte inceleyen bir çalışma henüz bulunmamaktadır ve bu çalışmamın amacı bunu gerçekleştirmektir.

Araştırmada kullanılan anket doldurduktan sonra herhangi bir rahatsızlık veya sıkıntı duyuyorsanız ve bir uzman ile konuşmak istiyorsanız, lütfen DAÜ Psikolojik Danışmanlık, Rehberlik ve Araştırma Merkezi (DAÜ-PDRAM) ile iletişim kurunuz.
Tel: +90 392 630 2251
e-mail: counsel.pdram@emu.edu.tr

Ayrıca, sorularınız için araştırmacı Şenel Özdilek (senel.ozdilek@emu.edu.tr) veya araştırmamın danışmanları Yrd.Doç.Dr. Burcu Kaya Kızılöz (burcu.kaya@emu.edu.tr) ve Yrd.Doç.Dr. Emre Han Alpay (emre.alpay@emu.edu.tr) ile iletişim kurabilirsiniz.

Araştırmaya yaptığınız değerli katkıdan ve katılımınızdan dolayı teşekkür ediyorum.

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Appendix K: Cue Word Selection Questionnaire (Pilot Study)

Kelimeler ve Çağırışım Değerleri

Aşağıda toplamda 20 adet kelime bulunmaktadır. Aynı zamanda seçtiğiniz kelimelerin size ne kadar ailenizi çağırştırdığını/hatırlattığını ve ne kadar olumlu veya olumsuz hissettirdiğini lütfen ölçekte belirtiniz.

“ARABA” kelimesi size aile kavramını ne kadar çağırştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“BAHAR” kelimesi size aile kavramını ne kadar çağırştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“BALKON” kelimesi size aile kavramını ne kadar çağırştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“BAL” kelimesi size aile kavramını ne kadar çağırştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“BAYRAM” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“ÇOCUK” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“DÜKKAN” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“EV” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“FİNCAN” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“FOTOĞRAF” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“KAHVALTI” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“KAPI” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“KONFOR” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu) “KÜLTÜR” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“LEZZET” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“MÜZİK” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“ÖĞRENCİ” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 6 7 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“SEVGİ” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“SOFRA” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)

“TATİL” kelimesi size aile kavramını ne kadar çağrıştırmaktadır?

(Hiç) 1 2 3 4 5 (Çok Fazla)

Bu kelime sizce ne kadar olumludur?

(Son derece olumsuz) 1 2 3 4 5 6 7 (Son derece olumlu)