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THE EFFECTS OF SOCIAL SUPPORT, PERCEIVED FAMILY ENVIRONMENT, LONELINESS AND EMOTION REGULATION DIFFICULTIES ON NONSUICIDAL SELF-HARM BEHAVIORS & SUICIDE IDEATION

Ph.D. DISSERTATION

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PREFACE

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ABSTRACT

The purpose of the present study was to examine the effects of social support, perceived family environment, loneliness and emotion regulation difficulties on nonsuicidal self-harm behaviors and suicide ideation among 414 Turkish college students, between the ages of 17 and 19. Demographic Questionnaire, Brief Symptom Inventory, The Difficulties in Emotion Regulation Scale, Cognitive Emotion Regulation Questionnaire, Family Assessment Device, Inventory of Statements about Self-injury, The Multidimensional Scale of Perceived Social Support, Suicide Ideation Scale, UCLA Loneliness Scale were used to collect data. The students with nonsuicidal self-injury behaviors reported more psychological problems and treatment history compared to the participants without nonsuicidal self-injury behaviors. Cutting, pinching, pulling hair, scratching, banging and hitting were found to be related with low socio-economic status. Females were found to show biting, pinching, pulling hair and scratching more frequently compared to men. Many nonsuicidal self-harm behavior functions were found to be positively correlated with self-blame, acceptance, rumination, putting into perspective and catastrophizing, suicide ideation, symptoms, emotion regulation difficulties and family dysfunction. The associations of nonsuicidal self-harm and suicide ideation with other study variables were investigated through regression analysis. Self-blame, catastrophizing, blaming others, positive reappraisal, loneliness, communication in the family, family support, impulsivity, limited access to emotion regulation strategy, lack of emotional clarity, depression, anxiety and negative-self predicted suicide ideation. Positive reappraisal, blaming others, family support, impulsivity and hostility were found to predict nonsuicidal self-harm behaviors. The mediating role of difficulties in emotion regulation on the relationship between loneliness and self-injury was supported in our study. The findings of the present study were discussed in the light of the relevant literature with clinical implications and future suggestions.

Keywords: nonsuicidal self-harm, suicide ideation, social support, family environment, loneliness, emotion regulation difficulties.

ÖZET

Bu çalışmanın amacı, sosyal destek, algılanan aile ortamı, yalnızlık ve duygu regülasyon zorluklarının intihar amacı gütmeyen kendine zarar verme davranışları ile intihar düşüncesine etkisini 17 ve 19 yaş aralığındaki 414 lise öğrencileri arasında incelemektir. Demografik Bilgi Formu, Kısa Semptom Envanteri, Duygu Düzenlemede Güçlükler Ölçeği, Bilişsel Duygu Regülasyon Ölçeği, Aile Değerlendirme Ölçeği, Kendine Zarar Verme Davranışı Değerlendirme Envanteri, Çok Boyutlu Algılanan Sosyal Destek Ölçeği, İntihar Düşünce Ölçeği, UCLA Yalnızlık Ölçeği kullanılmıştır. İntihar amacı gütmeyen kendine zarar verme davranışlarına sahip öğrenciler, bu davranışları sergilememiş öğrencilere kıyasla, daha fazla psikolojik problemlere ve tedavi geçmişine sahip olduklarını belirtmişlerdir. Kesmek, çimdiklemek, saç yolmak, cildini çizmek, kendine vurmak veya çarpmak gibi davranışların düşük sosyo-ekonomik statü ile ilişkili olduğu bulunmuştur. Kadınların erkeklere kıyasla daha çok ısırma, saçını yolma, çimdikleme ve cildini çizme davranışlarını gösterdiği bulunmuştur. Kendine zarar verme davranışlarının işlevlerinin çoğu, intihar düşüncesi, semptomlar, duygu regülasyon zorlukları, aile işlevsizliği, kendini suçlama, kabul, ruminasyon, perspektif içine alma ve felaketleştirme ile pozitif olarak korelasyon içinde olduğu tespit edilmiştir. Kendine zarar verme davranışları ve intihar düşüncesinin çalışmanın diğer değişkenleri ile olan ilişkisine regresyon analizleri ile bakılmıştır. Felaketleştirme, başkasını suçlama, kendini suçlama, olumlu yeniden değerlendirme, yalnızlık, aile içindeki iletişim, aile desteği, dürtüsellik, duygu regülasyon stratejilerine limitli erişilebilirlik, duygusal netlikten yoksunluk ve semptomlar intihar düşüncesini yordamıştır. Olumlu yeniden değerlendirme, başkasını suçlama, aile desteği, dürtüsellik ve düşmanlığın kendine zarar verme davranışını yordadığı saptanmıştır. Yalnızlık ile intihar amacı gütmeyen kendine zarar verme davranışları arasındaki ilişkide duygu regülasyon zorluklarının aracı rol üstlendiği desteklenmiştir. Bu çalışmanın sonuçları, ilgili literatür ışığında tartışılmış ve önerilere yer verilmiştir.

Anahtar kelimeler: İntihar amacı gütmeyen kendine zarar verme, intihar düşüncesi, sosyal destek, aile ortamı, yalnızlık, duygu regülasyon zorlukları.

TABLE OF CONTENTS

LIST OF TABLES

1. INTRODUCTION

"When war is waged against pain, sometimes innocent bystanders are killed like love."

— Khang Kijarro Nguyen

"Jesus, I wondered, what do you do with pain so bad it has no redeeming value? It cannot even be alchemized into art, into words, into something you can chalk up to an interesting experience because the pain itself, its intensity, is so great that it has woven itself into your system so deeply that there is no way to objectify or push it outside or find its beauty within. That is the pain I'm feeling now. It's so bad, it's useless. The only lesson I will ever derive from this pain is how bad pain can be."

— Elizabeth Wurtzel, Prozac Nation

Nonsuicidal self-harm is simply defined as 'harming of one's own body intentionally and resulting in physical damage' (Cipriano, Cella, & Cotrufo, 2017; Fliege, Lee, Grimm, & Klapp, 2009; Levenkron, 1999; Nock, 2010). Some examples of nonsuicidal self-harm behaviors are cutting, scratching, burning, biting, carving, pinching, pulling hair, banging or hitting self, interfering w/ wound healing, rubbing skin against rough surface and sticking self with needles. The location of the physical damage is usually on the hidden part of the body and veins, arteries, tendons or ligaments are not damaged. Most of the self-injurers report that they do not feel physical pain during nonsuicidal self-harm behaviors. Usually, they don't even remember the process exactly (Cipriano, Cella, & Cotrufo, 2017; Fliege, Lee, Grimm, & Klapp, 2009; Levenkron, 1999; Nock, 2010).

High rates of nonsuicidal self-harm behaviors show us that many young people have emotional problems in their lives and they cannot cope with the negative emotions by thought and talk (Levenkron, 1999; Nock, 2008; Nock, 2010; Shaw, 2002). It seems that nonsuicidal self-harm behavior is the silent language of young people to give some messages to others and cry for help. It has special meanings for the self-injurers, and every meaning is so subjective and special for each of the self-injurers. Regardless of culture, religions, income levels, habitation settings, nonsuicidal self-harm behaviors are observed among many diverse groups of young people around the world. It shows that nonsuicidal self-harm behaviors reflects some aspects of human nature and it may be one of the universal defense mechanisms (Levenkron, 1999; Nock, 2008; Nock, 2010).

Talking about nonsuicidal self-harm, making research on nonsuicidal self-harm and working with nonsuicidal self-harm in the therapy room are usually difficult and fearful issues for many of us (Levenkron, 1999; Shaw, 2002). As talking about violence against others in human species is hard to tolerate, talking about the violence against our 'bodies' seems to be an unbearable issue that might evoke fear, anger, guilt, shock and frustration among many people. In addition, media shows self-injurers as freak and insane people, but it should not be forgetten that a person's mental problem is not his/her personality and cannot explain all his/her existence (Levenkron, 1999; Shaw, 2002; Straiton, Roen, Dieserud, & Hjelmeland, 2012). Moreover, in Turkey, arabesque culture seems to reinforce the idea that a person should be so powerful to handle all emotional and physical pain, and self-injurers justify how much invulnerable they are. So, it is obvious that nonsuicidal self-harm is both psychological and social phenomena.

Understanding how population views self-harm and what kind of emotional reactions and misconceptions to self-harm are carried by population is important to understand self-harm behaviors. Nielsen and Townsend (2017) presented case vignettes, which show an adolescent engaging in self-harm behavior, to 355 adults and analyzed their attitudes about self-harm behaviors. They found that when people think that self-harm behavior can be controlled but when it is not controlled it can lead to dangers to others; people started to blame the person for his/her self-harm behaviors. In addition, personal or professional familiarity with self-harm behaviors increases the sympathy and the intention to help. As a result, it was found that 'empathy' and 'sympathy' decreased the anger and fear response to the person who engages in self-harm behaviors, whereas blaming the person with self-harm behaviors increased the avoidance and isolation of the self-injurer. Isolation and rejection of people with self-harm behaviors in society are risky factors in self-harm behaviors because social rejection decreases the likelihood of taking treatment (Nielsen and Townsend, 2017). Studying self-harm behaviors becomes difficult because public discrimination leads to many unreported self-harm cases.

Nonsuicidal self-harm seems to be a dark phenomenon and therapists are responsible to feel comfortable about nonsuicidal self-harm. Hopefully, more clinicians will feel courageous to talk about nonsuicidal self-harm and more researchers will volunteer to work on this phenomenon although they will probably face with some difficulties, especially in our culture. So, hopefully many self-injurers can disclose who

they are, what they feel, and how they try to deal with their problems without a fear of stigmatization.

In literature it is still unclear in which point the non-suicidal self-harm behaviors might turn to 'self-harm behaviors with suicidal intention'. The relationship between suicidal ideation, suicide attempts and self-harm behaviors should be studied for clear concept definitions. In addition, there are no specific results about what kind of factors lead to suicidal and non-suicidal self-harm behaviors separately (Fliege, Lee, Grimm & Klapp, 2009; Germain & Hooley, 2012; Mars, Heron, Crane, Hawton, Kidger, Lewis, Macleod, Tilling & Gunnell, 2014).

Some researchers found that adolescents and young adults, who engage in non-suicidal self-harm behaviors or have suicide ideation, experience difficulties in identifying, understanding and expressing their emotions, and emotion regulation problems were found as the most important risk factors (Adrian, Zeman, Erdley, Lisa and Sim, 2011; Andrews, Martin, Hasking and Page, 2013; Anestis, Bagge, Tull, & Joiner; 2011; Barr, Fulginiti, Rhoades, & Rice, 2016; Bresin, 2014; Emery, Heath and Mills, 2016; Fliege, Lee, Grimm & Klapp, 2009; Forkmann, Scherer, Böcker, Pawelzik, Gauggel, & Glaesmer, 2014; Hamza & Willoughby, 2015; Hasking, Coric, Swannell, Martin, Thompson & Frost, 2010; Howe-Martin, Murrell, & Guarnaccia, 2012; Jenkins & Schmitz, 2012; Jutengren, Kerr & Stattin, 2011; Kranzler, Fehling, Anestis & Selby, 2016; Miller, McLaughlin, Busso, Brueck, Peverill, & Sheridan, 2017; Miranda, Tsypes, Gallagher & Rajappa, 2013; Rajappa, Gallagher & Miranda, 2012; Selby & Joiner, 2009; Voon, Hasking & Martin, 2014; Wang, Lai, Hsu, and Hsu, 2011). Some studies showed that loneliness is one of the difficult emotions which sometimes cannot be handled and create depressive mood leading to self-harm behaviors and suicide ideation (Chang, Wan, Li, Guo, He, Gu, Wang, Li, Zhang, Sun, Batterbee, Chang, Lucas & Hirsch, 2017; Endo, Ando, Shimodera, Yamasaki, Usami, Okazaki, Sasaki, Richards, Hatch, & Nishida, 2017; Gandhi, Luyckx, Goossens, Maitra and Claes, 2018; Giletta, Scholte, Engels, Ciairano and Prinstein, 2012; Lasgaard, Goossens, Bramsen, Trillingsgaard and Elklit, 2011; Lasgaard, Goossens & Elklit, 2011; Pervin & Ferdowski, 2016; Schinka, Van Dulmen, Bossarte, & Swahn, 2012; Wang, Rubin, Laursen, Booth-LaForce and Rose-Krasnor; 2013).

Late adolescence and young adulthood are important developmental periods for building intimate, secure relationships and some studies underlined that young adults who engage in self-harm behaviors and/or have suicide ideation take less social support compared to others (Christoffersend, Mohl, DePanfilisc & Vammenda, 2015; Giletta, Prinstein, Abela & Gibb, 2015; Muehlenkamp, Brausch, Quigley, & Whitlock, 2013; Tseng & Yang; 2015; Wilcox, Arria, Caldeira, Vincent, Pinchevsky & O'Grady, 2010; Wolff, Frazier, Esposito-Smythers, Becker, Burke, Cataldo and Spirito, 2014). In addition, most of them don't share their problems or take any help. This situation may lead to the fact that many self-harm cases cannot be noticed and given treatment (Evans, Hawton & Rodham, 2005; Levenkron, 1999; Straiton, Roen, Dieserud & Hjelmeland, 2012; Shaw, 2002).

Relationship with parents seem to play a less important role during late adolescence and young adulthood, compared to other developmental periods but the quality of parent-child relationships and family environment might be still important factors which affect self-concept and relationships in this period, and some studies highlighted that the quality of family relationships affect emotion regulation capacity and self-harm tendencies with/without suicide ideation (Baetens, Claes, Martin, Onghena, Grietens, Van Leeuwen, Pieters, Wiersema, & Griffith, 2014; Buresova, Bartosova & Cernak, 2015; Cassels, van Harmelen, Neufeld, Goodyer, Jones, & Wilkinson, 2018; Fortune, Cottrella & Fife, 2016; Jantzer, Haffner, Parzer, Resch, & Kaess, 2015; Kelada, Hasking, & Melvin; 2016; Palmer, Welsh, and Tiffin, 2016; Ren, Lin, Liu, Zhang, Wu, Hu, You; 2017). It seems to be that non-suicidal self-harm behavior becomes a way to communicate in the family and/or social environment when other health communication styles/patterns are useless and hopelessness is so high (Nock, 2008).

The co-occurrence of nonsuicidal self-harm behaviors with many psychopathologies shows the 'transdiagnostic nature of nonsuicidal self-harm'. In the metaanalysis study of Bentley, Cassiello-Robbins, Vittorio, Sauer-Zavala, Barlow (2015) the relationships between depression, anxiety disorders, obsessive–compulsive disorder, post-traumatic stress disorder and nonsuicidal self-harm behaviors were assessed, and it was found that nonsuicidal self-harm behaviors were more frequently observed among people with emotional disorders compared to people without these disorders (Bentley et.al, 2015). Thus, understanding nonsuicidal self-harm and suicide ideation is important

to understand many comorbid clinical pictures in a detailed way.

In our study, the relationship between loneliness, social support, family functioning, emotion regulation difficulties and nonsuicidal self-harm behaviors and suicide ideation was examined among a sample of 414 technical and industrial vocational high school students who were between the ages of 17-18 and about to finish their high school education in their final year. After definitions and brief literature reviews of nonsuicidal self-harm behaviors and suicide ideation will be presented, the method and result sections will be shared.

2. LITERATURE REVIEW

2.1. Definition of Non-Suicidal Self-Harm

Defining self-harm among practitioners and researchers is very difficult and there is a need of clear-cut definitions of self-harm behaviors. From a clinical psychology perspective, Nonsuicidal Self-Injury Disorder was included into The Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM–5; American Psychiatric Association, 2013) under the category of 'Disorders Requiring Further Research'. Non-Suicidal Self Injury Disorder is characterized by the occurrence of self-initiated physical harm behaviors to the surface of body to induce bleeding, bruising or pain without any suicide intention for more than 4 days. Cutting, burning, stabbing, hitting, excessive rubbing are some examples of self-harm behaviors. The intention of non-suicidal self-injury behaviors is related to the occurrence of negative intense emotional states such as such as sadness, anxiety, anger, distress, or self-criticism just before the non-suicidal self-harm behavior takes place. And, a period of preoccupation with the intended behavior and urge to engage in self-harm behavior is difficult to resist before self-harm behavior takes place. The patient gets relief from negative intense emotions or positive feeling state is created during or immediately after the self-injurious behaviors. Non-suicidal harm behaviors lead to impairments in interpersonal, academic, or other important areas of functioning. These behaviors are not observed as the consequences of 'psychosis, delirium, or intoxication' and cannot be explained by another mental or medical disorders (The Diagnostic and Statistical Manual of Mental Disorders, 5th ed.; DSM–5).

Non-Suicidal Self-Injury Disorder, Not Otherwise Specified (NOS) (Type 1) is a clinical picture in which the patient shows all properties of Nonsuicidal Self-Injury Disorder, but has injured himself or herself fewer than 5 times in the past 12 months. This clinical picture includes individuals who think about showing self-harm behaviors frequently although they rarely harm themselves. Non-Suicidal Self-Injury Disorder, Not Otherwise Specified (NOS) (Type 2) is a clinical picture in which although the patient has the characteristics of Nonsuicidal Self-Injury Disorder, he/she has also an intention to commit suicide too (The Diagnostic and Statistical Manual of Mental Disorders, 5th ed.; DSM–5).

The classification system in DSM-V is a useful tool for clinical application and usage of common language among practitioners, but in real life many patients' experiences cannot be put into clear-cut categories. In addition, the critical question which waits for a clear answer in the literature is: 'Are nonsuicidal self-harm behaviors and suicide attempts different variations of a single concept in a continuum?' The intention to attempt suicide is associated with an individual's understanding of lethality which can be different among many people, and it seems to be a subjective definition and decision. In addition, a person can engage in some self-harm behaviors without an intention of suicide in some cases, but same person can harm himself/herself with an intention of suicide in other circumstances secretly. The basic truth is that self-harm behaviors and suicide attempts are very personal experiences. Another question is; 'Are clinicians usually so overprotective and have tendencies to overemphasize the risks so much, and label patients as 'suicidal'? In contrast, some practitioners sometimes view self-harm and suicide attempts as different concepts and they sometimes fail to notice the probability of suicide attempts among the people with self-harm behaviors and they don't give importance to the possible suicidal feelings of patients with self-harm behaviors. All practitioners have unique observations about the stress levels and intentions of patients, and practitioners' observations are critical to define a behavior as self-harm or suicide attempt. Thus, although DSM-V brings clear and systemic definitions, it seems that the definition of self-harm and suicide attempt also becomes a personal issue among therapists in clinical practice (James and Stewart, 2017). In addition, how the adolescents and young adults define nonsuicidal self-harm behaviors should be studied by researchers, because in many research designs self-report scales are used to gather information. For example, in the study of Laye-Gindhu and Schonert-Reichl (2005), adolescents aged at around 15 defined 'eating disorders and non-suicidal pill-abuse' as 'self-harm behaviors'.

In the literature, interpersonal, communicative, regulatory and opioid functions of nonsuicidal self-harm behaviors are underlined by many researchers and clinicians. Interpersonal models explain the urge of nonsuicidal self-harm in terms of relational conflicts such as rejection, isolation, and loss. Before the occurrence of nonsuicidal self-harm behaviors, interpersonal stress increases the negative emotions and coping with negative emotions becomes very difficult. As a result, the tendency to engage in nonsuicidal self-harm behaviors increases. After the occurrence of nonsuicidal self-harm

behaviors, the tension of the negative emotions decreases. Following the nonsuicidal self-harm behaviors, in the interpersonal environment, 'support and care' are sometimes given by others to help the person who engage in nonsuicidal self-harm behavior. Thus, the nonsuicidal self-harm behaviors are reinforced by the interpersonal environment and function as the best way to meet interpersonal needs. As a result, the probability of nonsuicidal self-harm behaviors increases in the future (Turner, Cobb, Gratz and Chapman 2016).

Through daily diary research methods, the relationship between non-suicidal self-harm, interpersonal conflicts and social support were examined; and parallel to interpersonal conflict models, it was found that if there is interpersonal stress, taking support and care following nonsuicidal self-harm behaviors increase the urge and the likelihood of these behaviors in following days, especially if they are revealed to others in the interpersonal environment. It doesn't mean that the interpersonal problems decrease or disappear and the person sometimes is not aware of the changes in the relational context following his/her nonsuicidal self-harm behaviors; but it is obvious that some interpersonal factors reinforce nonsuicidal self-harm behaviors (Turner, Cobb, Gratz and Chapman, 2016).

Consistent with the emphasis of Interpersonal Models, Turner and his colleagues (2017) found that young adults with nonsuicidal self-harm behaviors report less social support from their peers, contact less with their families and seek less support from others compared to the young adults without nonsuicidal self-harm behaviors. Interestingly, it was found that young adults with nonsuicidal self-harm behaviors make contact with their romantic partners more frequently compared to others and it was interpreted that taking support from only one source might create risk for the occurrence of nonsuicidal self-harm behaviors, especially when the romantic relationship is full of conflicts and stressful. Both excessive reassurance seeking and social avoidance seem to increase the risk for the development of nonsuicidal self-harm behaviors (Turner, Wakefield, Gratz and Chapman, 2017).

Nonsuicidal self-harm is viewed as a dysfunctional way to regulate intense emotions by many researchers (Hamza and Willoughby, 2015). Many studies have found that before nonsuicidal self-harm behaviors, self-injurer experiences intense negative

emotions and physical arousal, and after harming himself-herself without a suicide intension, he/she feels better and the distress of negative emotions and physical arousal decreases (Hamza and Willoughby, 2015; Laye-Gindhu and Schonert-Reichl, 2005). In contrast, some studies found that negative emotions stay stable after nonsuicidal self-harm behaviors but positive emotions increase slightly. In addition, some researchers emphasize not all negative emotions but only specific negative emotions such as sadness, self-anger, feeling of rejection, self-hatred, depression, loneliness increase the risk of nonsuicidal self-harm behaviors. Lastly, it is supported that people with nonsuicidal self-harm behaviors experience lower levels of positive emotions and higher levels of negative emotions compared to the people without nonsuicidal self-harm behaviors in daily life. Thus, this situation increases the risk of self-injurers' harming themselves to cope with their emotions (Hamza and Willoughby, 2015). Although there is a need for more research to gather detailed information about emotion regulation functions of nonsuicidal self-harm behaviors in certain stages and processes, the regulatory function of nonsuicidal self-harm behaviors is accepted in the literature by many researchers and clinicians.

The relation between endogenous opioid system, emotion regulation and nonsuicidal self-harm behaviors is also studied in the literature (Bresin and Gordon, 2013). Bresin and Gordon (2013) emphasized that in the brain, regulation of physical and emotional pain is directed by similar regions and endogenous opioid system plays an important role to regulate reward, pain and affective states (Bresin and Gordon, 2013). Thus, it can be assumed that during nonsuicidal self-harm behaviors, a person tries to regulate negative emotions and the brain regions which regulate physical pain created by nonsuicidal self-harm behavior also regulate the negative emotions present at that time. Lower resting levels of opioids are observed among people with nonusicidal self-harm behaviors and it seems that nonsuicidal self-harm behavior becomes a way to increase the opioid levels too. As a result, eliciting pain leads to regulation of negative affect through similar neurobiological ways and as the opioid levels increase, positive emotions can also increase. Not only for intrapersonal functions of nonsuicidal self-harm behaviors but also for interpersonal functions, endogenous opioid system might play an important role through reinforcing mechanism. Through nonsuicidal self-harm behaviors, people sometimes take attention, care and support from the social context and their self-harm behaviors might be reinforced through the endogenous opioid system (Bresin and

Gordon, 2013).

In the literature there are many models which try to create a clear frame and take into account of all these possible functions of nonsuicidal self-harm behaviors.

2.2. Models to Explain the Dynamics of Nonsuicidal Self Harm Behaviors

2.2.1. Social signaling hypothesis (Nock, 2008)

Nock (2008) does not deny the intra-psychic dynamics rooted in nonsuicidal self-harm behaviors but put an emphasis on the social functions of nonsuicidal self-harm behaviors by 'Social Signaling Hypothesis'. It is obvious that behaviors are more effectual on people and reflect the ideas and feelings of a person more accurately compared to words. According to this perspective, nonsuicidal self-harm behavior is an honest signal to reflect intense psychological stresses such as traumas in early period, negative intense emotions, every-day stresses instead of crying, yelling or talking which can be sometimes inadequate ways of communication. Thus, through nonsuicidal self-harm behaviors, a person tries to make others understand that he/she is really in a difficult situation. When language and gestures are no more useful to get desired social response, aggressive and destructive ways like nonsuicidal self-harm behaviors are chosen and intensity of communication increases. Though nonsuicidal self-harm behaviors, care, reassurance and attention are taken by others and demands, responsibilities and tasks that are expected by social environment can be eliminated. In addition, through nonsuicidal self-harm behaviors a person shows how she/he is strong and resilient. And, nonsuicidal self-harm behavior becomes a way of protection from especially victimization and bullying in the social environment. Lastly, in some social groups, harming one's own body shows his/her bonding and loyalty to the group and strengthen his/her membership in this group. The intensity and costs of nonsuicidal self-harm behaviors changes according to the purposes of these behaviors and environmental factors. To summarize, nonsuicidal self-harm behaviors can be viewed as ways to show stress and/or strength (Nock and Prinstein, 2004; Nock, 2008).

Nock (2009) also added some components such as genetic predispositions to emotional/cognitive reactivity, early traumatic experiences in the family and family dysfunctions to the model to integrate the findings from empirical studies. Thus, he

integrated both intrapsychic and interpersonal vulnerabilities to picture the functions and underlying dynamics of nonsuicidal self-hark behaviors in this model.

2.2.2. General Strain Theory

General Strain Theory underlines the important effects of strains on deviant behaviors (Agnew, 1992). As the stressors and strains increase, a person experience negative feelings such as upset, anger and hopeless, and engage in risky and delinquent behaviors to cope with stressors. From the perspective of General Strain Theory, it can be assumed that showing nonsuicidal self-harm behaviors is a deviant way to cope with the strains.

Parallel with the assumptions in General Strain Theory, Hay and Meldrum (2010) found that bullying among peers is one of the critical strains for both nonsuicidal self-harm behaviors and suicidal ideation. It was found that the severity of bullying and the intensity of negative emotions predict the risk of nonsuicidal self-harm behaviors. Lastly, self-control capacity and authoritative parenting in the family were found as both protective and moderating factors on the relationship between bullying and self-harm behaviors (Hay and Meldrum, 2010). In our study, support from peers, family and others, and loneliness are selected to analyze whether social strains in the social environment such as lack of peer and family support affects nonsuicidal self-harm behaviors and suicidal ideation.

2.2.3. Emotional Cascade Theory

Selby and Joiner (2009) define nonsuicidal self-harm behavior as a way of attention distraction from aversive negative mood and emotional avoidance strategy. From the perspective of Emotional Cascade Theory, people with nonsuicidal self-harm behaviors get into rumination process about their negative emotions, they feel worse, their negative mood becomes unbearable, they can’t distract their attention from their affective state and as a result they harm themselves with the intension of avoiding their negative emotional cascade. At the end, the intensity of their negative emotions decrease. Consistent with this model, there are many studies which found that self-injurers have more emotional

regulation difficulties compared to people without nonsuicidal self-harm behaviors (Hamza & Willoughby, 2015).

Experiential Avoidance Model (Chapman et al., 2006) emphasizes similar facts with Emotional Cascade Theory. According to Experiential Avoidance Model, both nonsuicidal self-harm behaviors and clinical pictures such as binge eating, addictions, suicidal ideation and dissociation are ways used to avoid intense, negative, stressful and overwhelming inner bodily and emotional experiences. A person can use many kinds of cognitive, emotional or behavioral avoidance strategies for 'short-circuiting'. In parallel with this model some studies show that especially female adolescents with nonsuicidal self-harm behaviors use thought suppression and alexithymia more frequently compared to adolescents without a nonsuicidal self-harm history (Howe-Martin, Murrell and Guarnaccia, 2012). In addition, Howe-Martin and his colleagues (2012) found that adolescents with nonsuicidal self-harm behaviors report more binge eating, addictions and suicidal ideation compared to the control group.

There is a probability that the opponent-process theory (Solomon, 1980) and Emotional Cascade Theory (Selby & Joiner, 2009) are hand in hand. Self-injurers with emotion regulation difficulties need to distract away from negative intense emotions and engagement in nonsuicidal self-injurious behaviors lead to relief from emotional cascade through an opponent-process.

2.2.4. Opponent-Process Theory

According to this theory, if a stimulus creates instability in the equilibrium, a person shows a reaction to restore equilibrium and homeostasis is retrieved after stimulus (Solomon, 1980). In nonsuicidal self-harm behaviors, pain is induced intentionally, opponent process starts and after nonsuicidal self-harm behaviors the decrease of physical and emotional pain creates relief (Hamza & Willoughby, 2015). The reinforcing effect of this process increases the likelihood of nonsuicidal self-harm behaviors though increased pain tolerance. From Opponent-Process Theory perspective, it is expected that self-injurers would show self-harm behaviors more frequently to feel relief as they would habituate the pain, but the findings show that the frequency of self-harm behaviors is also associated with many other factors. It seems that Opponent-Process Theory is only

explanatory for the reinforcing effect of nonsuicidal self-harm behaviors but not enough to explain the full picture comprehensively (Hamza & Willoughby, 2015).

2.2.5. Four-Factor Model

Nock and Prinstein (2004) developed this model from a behavioral perspective and underlines four functions of nonsuicidal self-harm behaviors. Functions are grouped into two dimensions; 'contingencies' (automatic versus social) and 'reinforcements' (negative versus positive). In automatic negative reinforcement functions of nonsuicidal self-harm behaviors, a person harms himself/herself to get rid of unpleasant emotions. In automatic positive reinforcement functions, through nonsuicidal self-harm behaviors a person feels positive emotions, such as feeling tough and strong. In social negative reinforcement functions, the avoidance of unpleasant interpersonal expectations and requests occurs as a result of nonsuicidal self-harm behaviors. In social positive reinforcement functions of nonsuicidal self-harm behaviors, the aim is to attract others' attention and manipulate the environment to take acceptance, understanding and care (Cipriano, Cella and Cotrufo, 2017; Nock and Prinstein, 2004). The automatic reinforcement functions of nonsuicidal self-harm behaviors were found as basic functions and social reinforcement functions were found to be used less frequently compared to automatic reinforcement functions among nonsuicidal self-injurers (Nock and Prinstein, 2004).

2.2.6. Self-Determination Theory

Self-Determination Theory underlines that people have innate tendencies for growth and mastery (Deci and Ryan, 2000). Throughout development, every person has three basic universal needs for growth and improvement. One of these basic needs is the feeling of 'autonomy', meaning the feeling that we choose our actions according to our values and belief without any pressure. Other basic need is 'competence', which reflects the feeling that we are effective and competent in our social environment. Last basic need is 'relatedness', reflecting our need of feeling belonging and having connections with significant others in a supportive way. If some of these basic needs cannot be fulfilled over a long period, a person feels frustrated and choose some maladaptive compensatory behaviors to handle negative emotions evoked by this nonfulfillment. Because these

compensatory behaviors would not satisfy the basic needs, frustration increases more and vicious cycle evolves. From this perspective, nonsuicidal self-harm behavior is a compensatory way to acquire self-control in the absence of satisfying universal basic need/s (Deci and Ryan, 2000 and 2008).

Parallel with the assumptions in this theory, family dysfunction in which the need of autonomy is ignored, low self-esteem and lack of social support are found as risk factors in the emergence of nonsuicidal self-harm behaviors among young adults (Emery, Heath and Mills, 2016). Parallel with this theory, many self-injurers report that they feel themselves less autonomous, inadequate and less belonging to their social environment, and experience greater emotion regulation difficulties compared to non self-injurers (Emery, Heath and Mills, 2016). Emery, Heath and Mills (2016) emphasized that especially the need of competence is the critical need which predicts the risk of nonsuicidal self-harm behaviors independent of emotion regulation difficulties in young adulthood. They underline (2016) that young adults with inability to access adaptive emotion regulation strategies might feel incompetent to cope with their negative emotions and their feelings of incompetency, inadequacy and worthlessness also have adverse effects on them. Thus, nonsuicidal self-harm behaviors are used to handle all negative feelings (Emery, Heath and Mills, 2016).

2.2.7. Self-Punitiveness Model

Self-Punitiveness Model (1983) emphasizes the roles of three factors namely 'self-criticism, overgeneralization and high standards' in the development of depression (Carver and Ganellen, 1983). This model summarizes that people with excessive expectations from themselves, severe self-criticism and overgeneralizing the failure as a huge part of his/her self are under the risk of depression. Flett and his colleagues (2012) underlined that Self-Punitiveness Model (1983) is a useful perspective to understand self-harm because self-punishment is one of the risk factors for the development of self-harm behaviors. They added 'shame' (feeling ashamed of body, identity and behaviors) and 'perfectionism' (parental criticism and desire to be perfect according to social rules and expectations) as other components into the model. They found in their research that especially among young adult women, as their perfectionist standards,

overgeneralization, shame and self-criticism increase, their tendency to harm themselves also increases (Flett et. al, 2012). The findings in their study also shed light on different social development processes among men and women, and it seems that women feel much more under the pressure of social expectations compared to men. In general, it is obvious that viewing self in a negative way creates a risk for nonsuicidal self-harm behaviors for all genders (Flett et. al, 2012). Self-Punitiveness Model (1983) cannot explain all dimensions of nonsuicidal self-harm behaviors but include some of the important factors to understand nonsuicidal self-harm behaviors comprehensively.

2.3. The Definition of Suicide Ideation

There are many terms in the literature to understand suicide and sometimes different definitions are used by researchers and clinicians (Klonsky, May, and Saffer, 2015). In general, desire for suicide is a term which shows that a person wish to die but he/she does not attempt a suicide. Suicidal intent reflects that a person has plans for suicide. Suicidal ideation means people bear in their minds suicide as an escape from unbearable side of life, think about and plan suicide but they don't act on their suicidal thinking process. Suicide attempt is a nonfatal behavior with the desire of death, which aims to injure one's self. If we look at all these phases in a continuum of suicidality, suicide attempt is the ultimate point in this continuum and many researches show a significant association between suicide ideation and attempts. And, there is a consensus that the underlying mechanisms and basic risk and protective factors which lead to suicidal intent, suicide ideation and attempts are distinct concepts and they should be studied in a detailed way (Klonsky, May, and Saffer, 2015; O'Conner and his colleagues, 2012).

In researches, significant correlations were found between some mental disorders such as mood disorders, posttraumatic stress disorder, conduct disorder, eating disorders and substance abuse, and suicide ideation (Klonsky, May, and Saffer, 2015; May and Klonsky, 2015). Especially depression and anxiety disorders are the significant clinical pictures which are observed widely among the people with suicide ideation independent of other mental disorders (Klonsky, May, and Saffer, 2015; Thibodeau, Welch, Sareen and Asmundson, 2013). But, it is obvious that there is no unique psychological problem associated with only suicidal behaviors, and general psychopathology liability is

associated with suicide ideation and attempts independent of gender, socio-economic level and history of suicidal behaviors (Hoertel, Franco, Wall, Oquendo, Kerridge, Limosin and Blanco, 2015). Eichen and his colleagues (2016) underline that the comorbity of nonsuicidal self-harm behaviors and suicide ideation increases the risk of general psychopathology, depression and eating disorders among women who are students in college. In addition, women who only harm themselves without suicide intent are at less risk for the development of any psychopathology compared to women who have suicidal ideation. These findings support the idea that nonsuicidal self-harm and suicidal ideation are different points in the same continual dimension (Eichen, Kass, Fitzsimmons-Craft, Gibbs, Trockel, Taylor, and Wilfley, 2016).

In the longitudinal study of Reinherz, Tanner, Berger, Beardslee and Fitzmaurice (2006) the individuals were traced from the age of 15 to 30 to understand whether the suicide ideation in adolescence predicts social and occupational functioning, psychological problems and suicidal tendencies in adulthood. Adolescents at age 15 with suicide ideation were found to be at greater risk for anxiety and mood disorders, poorer general functioning and more suicide attempts at age 30, compared to the adolescents without suicide ideation. As expected, socio-economic status of the adolescents with suicide ideation is lower at age of 30 compared to the adolescents without suicide ideation (Reinherz, Tanner, Berger, Beardslee and Fitzmaurice, 2006). It shows that the suicide ideation in adolescence is a crucial problem to which we have to pay attention.

Interpersonal Theory of Joiner (2005) underlines that perceived burdensomeness and low belongingness lead to suicide ideation and if the fear of death and pain decrease, the person's capacity to attempt suicide will increase. Joiner and his colleagues (2010) support that the lack of reciprocal and caring relations and unmet need of belongingness have important effects on suicidal behaviors. Parallel with the model and findings in the literature, they underline that risk factors such as loneliness, social isolation, loss, seasonal variations, childhood abuse, family conflicts, violence and lack of social support have adverse effects on suicidal behaviors. In addition, negative life experiences such as unemployment, physical illness, incarceration and homelessness might increase the idea that 'I'm a burden and/or useless' and lead to suicidal behaviors through self-hate, self-blame and physical agitation. The capacity to attempt suicide is the critical component of the model which differentiates people with suicide ideation from suicide attempters.

Through many exposures to pain and fear, the pain tolerance of a person with suicide ideation increases and they feel no more fear about dying. Thus, from this perspective, suicide ideation is related to 'thwarted belongingness' and 'burdensomeness' (Joiner, Van Orden, Witte, Cukrowicz, Braithwaite, and Selby, 2010).

O'Connor's (2011) Integrated Motivational-Volitional Theory emphasizes that suicide ideation develops because the feelings of entrapment and defeat are overwhelming and hopelessness is inescapable, and, as the impulsivity increases and suicide plans get clear, the risk of suicide attempt increases. As results of negative life events, environmental disadvantages and internal vulnerabilities such as perfectionism, pessimism and low serotonin levels, the feelings of entrapment and defeat become unbearable through lack of social-cognitive problem solving skills, cognitive deficits and biases. Suicide ideation and intention come to the scene as these negative feelings become intense and social support, future-directed goals and hopes are unavailable. After this motivational phase, the impulsivity, accessibility to plans, knowledge and tools for suicide, learning through one's own past suicide attempts and/or self-harm behaviors, having a close family member of friend who have committed suicide, fearlessness, imagining suicide visually, and capacity to attempt suicide lead to lethal suicidal behaviors through volitional process (O'Connor's, 2011; O'Connor and Kirtley, 2018).

Three-Step Theory (2015) puts an emphasis on the emotional and psychological pain and hopelessness in life to understand suicide ideation (Klonsky, May, and Saffer, 2015). If a person has unendurable pain regardless of its source and has no hope about his/her pain will stop one day and his/her life will get better, then he/she starts to idealize suicide. According to Three-Step Theory (2015), connectedness is the basic concept which differentiates suicide ideation and attempt. Connectedness means attachment to significant others in the social environment, attachment to a significant meaning of life or any goal about life, such as interest, role or enterprise. If the sense of connectedness is smashed by overwhelming pain and strong suicide ideation, then a person will be close to attempt suicide. And finally, 'low pain sensitivity' and 'habituation' and 'capacity' that are required through repeated experiences of pain lead to the ideas of death. Accessibility to the lethal things and knowledge to plan suicide make it easy to attempt suicide (Klonsky, May, and Saffer, 2015).

2.4. The Prevalence of Nonsuicidal Self-Harm Behaviors & Suicide Ideation

Prevalence rates of suicide ideation and nonsuicidal self-harm behaviors in both normal and clinical samples show that self-destructive behaviors are important problems in adolescence and young adulthood (Amare, Woldeyhannes, Haile, & Yeneabat, 2018; Begum, Rahman, Rahman, Soares, Khankeh & Macassa, 2017; Canbaz & Terzi, 2018; Chan, Lim, Tee, Kee, Ghazali, Lim, Khoo, Tee, Ahmad, and Ibrahim, 2016; Cipriano, Cella and Cotrufo, 2017; Gillies, Christou, Dixon, Featherston, Rapti, Garcia-Anguita, Villasis-Keever, Reebye, Christou, Al Kabir and Christou, 2018; McKinnon, Gariepy, Sentenac, & Elgar, 2016; Muehlenkamp, Claes, Havertape, and Plener, 2012; O'Connor, Wetherall, Cleare, Eschle, Drummond, Ferguson, O'Connor and O'Carroll, 2018; Pawlowska, Potembska, Zygo, and Olajossy, 2015; Swannell, Martin, Page, Hasking and St John, 2014; Taylor, Jomar, Dhingra, Forrester, Shahmalak and Dickson, 2018). In Poland, %25 of the adolescents age of 13 to 19 reported that they harmed themselves without suicide intention, whereas % 48 of them reported that they idealized suicide. It was found that especially in the age of 17, the rates of self-harm behaviors and suicide ideation increased compared to other ages, and the rates decreased at the age of 18 (Pawlowska, Potembska, Zygo, and Olajossy, 2015). The meta-analysis of Muehlenkamp, Claes, Havertape, and Plener (2012) included the studies between the years of 2005-2011 and showed that %18 of the adolescents age of 13 to 18 harmed themselves without suicide ideation. They added that assessing nonsuicidal self-harm with one item or more than one item with emphasis on specific nonsuicidal-self harm behaviors makes a difference on the calculated prevalence rates. O'Connor and his colleagues (2018) found similar prevalence rate of nonsuicidal self-harm behaviors as % 16.2 among young adults between the age of 18 to 34. In addition, % 57.3 of the suicide attempters also showed nonsuicidal self-harm behaviors, and % 39.7 of the self-injurers also reported that they attempted suicide throughout their lives. % 22.8 of the young adults also reported that they idealized suicide one time in their lives. Gillies and her colleagues (2018) picked up the studies which collected their data from normal population from 41 countries between the years of 1990 to 2015, and found that the nonsuicidal self-harm behaviors were prevalent among % 17 of the adolescents age of 12 to 18. Parallel with the findings in literature, the onset age of nonsuicidal self-harm behaviors was found as 13 on the average and most of the adolescents harmed themselves to get rid of their

negative intense emotions. Lastly the lifetime prevalence rate of suicide ideation was found as around %5. Likewise, Swannell and her colleagues (2014) found that lifetime prevalence rate of nonsuicidal self-harm behaviors was around %17 in adolescence. In the review of Cipriano, Cella and Cotrufo (2017) the average onset age of nonsuicidal self-harm behaviors was found to be around 12 to 14 among both clinical and population samples and the prevalence rates of nonsuicidal behaviors were between % 7.5 and 46.5% for colleague students. Many adolescents show nonsuicidal self-harm behaviors with different urges and Taylor and his colleagues (2018) found in their meta-analysis that around %66-81 of the self-injurers who are college or university students harm themselves for emotion-regulation, whereas around %33-56 of the self-injurers harm themselves for self-punishment and creating ways to communicate stress. In summary, the lifetime prevalence rate of nonsuicidal self-harm behaviors was found around % 16 – 25 and the average onset age of nonsuicidal self-harm behaviors was found as 12-14.

2003–2012 Global School-Based Health Surveys in Europe and North America found that a-year prevalence rate of suicide ideation is around %16 among the adolescents age of 13 to 17 (McKinnon, Gariepy, Sentenac, & Elgar, 2016). In Northwest Ethiopia, the lifetime prevalence rate of suicide ideation among the students age of 15 to 19 was found as %22,5 and %16 of the adolescents reported that they attempted suicide throughout their lives (Amare, Woldeyhannes, Haile, & Yeneabat, 2018). In Bangladesh, among the adolescents age of 14-19, the lifetime prevalence of suicide ideation was found as % 5 and especially the age of 18 and 19 were found as riskier ages compared to the age of 14-15 (Begum, Rahman, Rahman, Soares, Khankeh & Macassa, 2017). In addition, it was found that living without parents, having a high educational level and unemployment increase the tendency for suicide ideation. In Malaysia, the prevalence rate of suicide ideation in the last one year among adolescents age of 16 to 17 was found as % 6.2 (Chan et al, 2016). In Turkey, among the adolescents age of 15 to 18, a one-year prevalence rate of suicide ideation was found as % 18 (Canbaz & Terzi, 2018). To sum up, lifetime and one-year prevalence rates of suicide ideation seem to be between % 5 and % 20. Loneliness, low social support, alcohol and/or drug use and peer victimization were found as basic risk factors which increased the tendency to have suicide ideation in the mentioned studies (Amare, Woldeyhannes, Haile, & Yeneabat, 2018; Begum, Rahman, Rahman, Soares, Khankeh & Macassa, 2017; Canbaz & Terzi, 2018; Chan et

al., 2016; McKinnon, Gariepy, Sentenac, & Elgar, 2016). Because of different assessment tools, cultural beliefs and nature of samples in the studies such as university-based, community-based and college-based samples; different prevalence rates of nonsuicidal self-harm behaviors and suicide ideation were found. The prevalence rates of nonsuicidal self-harm behaviors and suicide ideation seem not to increase over years but these problems are tried to be highlighted by more researchers and more open to be disclosed and discussed compared to past years (Swannell et al., 2014).

2.5. The Relationship Between Age of Onset, Severity and Frequency of Nonsuicidal Self-Harm Behaviors and Suicide Ideation and Attempts

The gender differences in nonsuicidal self-harm is inconsistent among the studies in the literature. In some studies, female adolescents were found to harm themselves without the intention of suicide more frequently compared to males (Bresin and Schoenleber, 2015; Fitzgerald and Curtis, 2017; Laye-Gindhu and Schonert-Reichl, 2005; Sornberger and his colleagues, 2012). Overt behaviors such as hitting, biting, banging, burning or punching themselves are the nonsuicidal self-harm behaviors used by male adolescents more frequently compared to female adolescents (Laye-Gindhu and Schonert-Reichl, 2005). Unlike males, females were found to choose scratching and cutting as covert nonsuicidal self-harm behaviors (Fitzgerald and Curtis, 2017; Sornberger and his colleagues, 2012). Males reported that they harm their chest, face, or genitals whereas females reported that they select their arms and legs to injure themselves (Sornberger and his colleagues, 2012). It can be viewed as males create ‘battle scars’ through harming themselves and take approval, appreciation and attraction from the social environment, and show their strength, instead of being seen as ‘victim’ by the peer environment (Sornberger and his colleagues, 2012). Females reported that they harm themselves to regulate their emotions whereas males reported that they harm themselves to feel excitement or express their anger (Fitzgerald and Curtis, 2017). The gender differences in nonsuicidal self-harm behaviors may reflect different developmental patterns among genders. It seems that females have tendencies to internalizing problems compared to males’ tendencies to externalizing problems (Bresin and Schoenleber, 2015; Crick and Zahn-Waxler, 2003). Lastly, consistent with these findings, Bresin and

Schoenleber (2015) found the same gender differences in clinical groups as in community and colleague groups. In their meta-analysis, more females reported nonsuicidal self-harm behaviors compared to men in clinical samples.

There are many researches which shows a strong positive correlation between the frequency of nonsuicidal self-harm and suicide attempts and suicidal ideation (Guan, Fox, and Prinstein, 2012; Howe-Martin and his colleagues, 2012; Roley-Roberts and his colleagues, 2017; Wester, Ivers, Villalba, Trepal, & Henson, 2016). 'What kind of mechanism affects this relationship in what ways?' is a critical question. Nonsuicidal self-harm behaviors seem to increase the capacity to attempt suicide through exposure and decrease of fear and increase of pain tolerance (Joiner, 2005; O'Connor, 2011).

Ammerman and his colleagues (2018) studied the relationship between age of onset and severity of nonsuicidal self-harm behaviors, and they found that an earlier onset age of self-harm, more severe self-harm behaviors and more hospital visits are observed compared to the participants who started to harm themselves without suicide intention on later ages. In addition, they emphasized that young undergraduates who started to harm themselves without suicide intention before the age of 12 are at greater risk to show more severe nonsuicidal self-harm behaviors compared to the people whose nonsuicidal self-harm age of onset is later than 12. Lastly, it was found that there was no relationship between the age of onset in nonsuicidal self-harm behaviors and suicidal ideation and attempts. The relationship between onset age of nonsuicidal self-harm and mental preparation process for suicide attempt might be studied qualitatively. In addition, for further studies it should be studied whether as the age of onset decreases, a person has more time to experience nonsuicidal self-harm behaviors more frequently or whether a person gets habituated to cope through nonsuicidal self-harm behaviors, uses one basic nonsuicidal self-harm method and explore other methods to feel the pain more (Ammerman and his colleagues, 2018).

Another question that comes to the researchers' mind is whether the number of non-suicidal self-harm methods have a moderator effect on the relationship between the frequency of nonsuicidal self-harm and suicide attempts (Anestis & his colleagues, 2015). It is believed that as a person uses different methods to harm himself/herself, he/she gets habituated to physical pain. As the pain tolerance increases, a person needs to explore

other self-harm methods to regulate negative affect and feel comfortable with bodily pain. As the comfort with bodily pain increases, this cycle might lead to a decrease in the fear of getting bodily injury and fear of death which is defined as 'the acquired capability for suicide' in the literature. As a result, suicide risk increases. Parallel with this explanation, Anestis and his colleagues (2015) found that the frequency of nonsuicidal self-harm behaviors predicts lifetime suicide attempts depending on the number of methods used to make nonsuicidal self-injury. Thus, it seems that the number of nonsuicidal self-harm methods has a moderator effect on the relationship between the number of nonsuicidal self-harm behaviors and suicide attempts (Anestis & his colleagues, 2015).

Parallel with these findings, Wester, Ivers, Villalba, Trepal, & Henson (2016) found that the number of nonsuicidal self-harm methods in current time and lifetime, and the lifetime frequency of nonsuicidal self-harm behaviors are posivitively related to suicidal ideation. The frequency of current nonsuicidal self-harm behaviors and number of nonsuicidal self-harm methods in the current time mediates the relationship between the lifetime nonsuicidal self-harm and suicide ideation. Locus of control, the feeling that the life is out of control, and connectedness in the family were found as another factors which increased only the frequency of current nonsuicidal self-harm behaiviors, not suicide ideation. Thus, although nonsuicidal self-harm behaviors and suicide ideation are two interconnected concepts, the dynamic between nonsuicidal self-harm behaviors and suicide ideation seem to be complex and like a snowball effect.

The relationship between the functions of nonsuicidal self-harm behaviors and suicide ideation and attempts is also studied (Roley-Roberts et. al, 2017). Roley-Roberts and his colleagues (2017) searched which functions of nonsuicidal self-harm behaviors according to Four-Factor Model predict suicide ideation among the young adults who had childhood trauma. Only social negative reinforcement function of nonsuicidal self-harm behaviors was found to be associated with suicide ideation. In addition, only automatic negative reinforcement function of nonsuicidal self-harm behaviors was found to be associated with suicide attempts in the past. Thus, these findings show that all self-harm behaviors are ways to get rid of aversive experiences inside of the person or in the social environment (Roley-Roberts et. al, 2017).

Victor, Styer and Washburn (2015) found that especially intrapersonal functions of nonsuicidal self-harm behaviors are associated with suicide ideation, instead of interpersonal functions. It seems that when a person cannot avoid his/her negative emotions through nonsuicidal self-harm behaviors any more, he/she might choose suicide as a sharp way not to feel intense negative emotions any more. Consistent with the other findings, they found that as the methods and severity of nonsuicidal self-harm behaviors increase, suicide ideation also increases. In addition, people with the diagnosis of Nonsuicidal Self-Harm Behaviors Disorder according to DSM-V were found to be at greater risk for having suicide ideation compared to others (Victor, Styer and Washburn, 2015).

2.6. Relationships between Emotion Regulation Difficulties, Social Support, Family Functioning, Loneliness, and Nonsuicidal Self-Harm Behaviors

2.6.1. Emotion Regulation Difficulties and Nonsuicidal Self Harm Behaviors

In the past decades, 'emotion regulation' is one of the most popular issues studied by many researchers and the inability to regulate emotional states has been found as one of the important factors in the development of psychological problems (Bradley, 2000; Eftekhari, Zoellner and Vigil, 2009; Tortella-Feliu, Balle and Sese, 2010).

Social researcher James Gross (1998) defines emotion regulation as 'the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions'. According to Gross (1998), emotion regulation can be a conscious or unconscious, and automatic or controlled process. His definition includes individuals' abilities to decrease and increase positive and negative emotions; emphasizes the roles of different neural circuits on emotion regulation; underlines the role of 'self' in emotion regulation and does not categorize emotion regulation as good or bad, but as adaptive process. Thompson (1994) also made a comprehensive definition of emotion regulation as a process which includes monitoring, evaluating and modifying emotional reactions to accomplish one's goals.

In literature, emotion regulation and affect regulation are used interchangeably and in general, emotion regulation means our capacity to differentiate, tolerate, modulate and control our affective responses (Bradley, 2000; Fonagy, et al., 2004). There is an

agreement among the definitions that emotion regulation is adaptive and have both interpersonal and intrapersonal functions.

Watson, McMullen, Prosser and Bedard (2011) emphasized basic affective and cognitive processes for adaptive emotion regulation. Their emotion regulation process model includes; (a) being aware of the emotions, (b) labeling the emotions accurately, (c) accepting the emotions, (d) modulating the degrees and expressions of emotions to achieve the goals, (e) reflecting on the emotions to clarify the meanings of the emotions and gain insight about and goals. From this perspective, emotion regulation often involves multiple processes through both preconscious and conscious levels. Watson and his colleagues (2011) emphasized reflection, reappraisal, positive thinking, acceptance, putting into perspective, cognitive and behavioral problem solving strategies, seeking social support, positive self-soothing strategies as effective emotion regulation strategies (Watson, 2011; Watson, McMullen, Prosser and Bedard, 2011).

Many methods such as retrospective self-report data, guided imagery, acute pain and moment sampling have been used in the studies which examined the relationship between emotional regulation difficulties and nonsuicidal self-harm behaviors (Emery, Heath and Mills, 2016; Hamza & Willoughby, 2015; Howe-Martin, Murrell and Guarnaccia, 2012; Voon, Hasking and Martin, 2014). Howe-Martin, Murrell and Guarnaccia (2012) found that especially female adolescents with nonsuicidal self-harm behaviors have emotional difficulties and use 'thought suppression' and 'alexithymia' more frequently compared to adolescents without a nonsuicidal self-harm history. Nicolai and his colleagues (2016) found rumination as a maladaptive emotion regulation strategy which predicts the frequency of nonsuicidal self-harm behaviors among young adults and also mediates the relationship between negative affect trait and nonsuicidal self-harm behaviors.

Similar to these findings, Adrian, Zeman, Erdley, Lisa and Sim (2011) found 'emotion regulation problems' as basic risk factors for the development of nonsuicidal self-harm behaviors. In addition, relational problems in the familial and peer environment have adverse effects on nonsuicidal self-harm behaviors, and family dysfunction and poor relations with peers increase the risk of nonsuicidal self-harm behaviors through dysfunctional emotion regulation processes among adolescents (Adrian, Zeman, Erdley,

Lisa and Sim, 2011). And lastly, Emery, Heath and Mills (2016) supported the predictive role of inability to access healthy ways to regulate emotions in the occurance of nonsuicidal self-harm behaviors among young adults.

Likewise, in a three-year longitudinal study of Voon, Hasking and Martin (2014) it was found that especially cognitive reappraisal is a critical emotion regulation strategy which differentiates the adolescents nonsuicidal self-harm behvaiors from the adolescents without nonsuicidal self-harm behaviors. They emphasized that in preventive studies, the cognitive reappraisal capacity of adolescents should be supported by social workers, psychologists and psychiatrists (Voon, Hasking and Martin, 2014).

Bresin (2014) found that young adults with nonsuicidal self-harm behaviors reported higher levels of negative emotions and lower levels and inertia of positive emotions compared to people without nonsuicidal self-harm behaviors. In addition, among the young adults who are self-injurers many fluctuations in their negative affective states were observed whereas their low levels of positive affective state stayed at similar levels.

Kranzler, Fehling, Anestis & Selby (2016) found that especially internalizing symptoms mediated the association between emotion regulation difficulties and nonsuicidal self-harm baheviors. They (2016) emphasized that when there is a stressor, a person with emotion regulation difficulties cannot cope with the stressor, internalize the distress and as a result internalizing symptoms increase the tendency to show nonsuicidal self-harm behaviors. Thus, a person chooses nonsuicial self-harm behaviors as ways to escape from distress and this dysfunctional coping way is negatively reinforced (Kranzler, Fehling, Anestis & Selby, 2016). They also found that emotion regulation difficulties could only predict suicide attempts through nonsuicidal self-harm behaviors. If a person has internalizing symptoms with emotion regulation difficulties and show nonsuicidal self-harm behaviors, risk for suicide attempt increases.

Andrews, Martin, Hasking and Page (2013) did a longitudinal study to analyze the factors which differentiate the adolescents who continue self-harm behaviors from the adolescents who stop their self-harm behaviors. They found that as the frequency, severity and lethality of nonsuicidal self-harm behaviors increase, it becomes difficult to stop nonsuicidal self-harm behaviors. In addition, the group which stopped self-harm

behaviors was found to have more functional ways to regulate their emotions such as making reappraisal, compared to the group who continued their self-harm behaviors. Adolescents who still harm themselves were also found to have frequent use of emotional suppression (Andrews, Martin, Hasking and Page, 2013).

2.6.2. Social Support and Nonsuicidal Self Harm Behaviors

The importance of social support on the emergence of nonsuicidal self-harm behaviors is studied by many researches and the results are complicated based on the developmental stages, methods and groups (Wolff, Frazier, Esposito-Smythers, Becker, Burke, Cataldo and Spirito, 2014). The young adulthood and adolescence are two important stages in which socialization, constructing an identity in the society and taking support and approval from family, friends and romantic others are critical for growth. Wolff and his colleagues (2014) found that social support from only family mediates the association between aggression and nonsuicidal self-harm behaviors. In addition, they underline that as aggression increases in adolescence, adolescents face rejection, insult, isolation from their social environments and they cannot take social support anymore. As a result, the risk of nonsuicidal self-harm behaviors increases. Lastly, in parallel with the study findings in literature, negative self-talk and dysfunctional cognitive thinking styles were also found as another risk factor which increased the frequency of nonsuicidal self-harm behaviors (Wolff, Frazier, Esposito-Smythers, Becker, Burke, Cataldo and Spirito, 2014).

Why peer support doesn't predict nonsuicidal self-harm behaviors and whether peer support reinforces nonsuicidal self-harm behaviors are important questions in the literature. Giletta and his colleagues (2015) found that peer bullying increases the risk of both nonsuicidal self-harm behaviors, suicide ideation and attempts among Chinese tenth-grade students regardless of depression, in their 2-year longitudinal study. Parallel with the findings in literature, they also highlighted that as nonsuicidal self-harm behaviors and suicide ideation increase, the risk for suicide attempts also increase. Lastly, it was underlined that nonsuicidal self-harm behaviors and suicidal thoughts and behaviors co-occur in adolescence (Giletta, Prinstein, Abela, Gibb, Barrocas, & Hankin2015). Similar to these findings, Wilcox and his colleagues (2010) also found that low social support is

risky for suicide ideation. In addition, especially depression was found as a critical risk factor for both suicide ideation and attempt independent of social support and emotion regulation difficulties. The interplay between mental disorders and social support is crucial to understand the risk factors in the development of nonsuicidal self-harm behaviors and suicide ideation (Wilcox, Arria, Caldeira, Vincent, Pinchevsky & O'Grady, 2010).

Christoffersen and his colleagues (2015) found having an abuse and trauma history in childhood and peer bullying as important risk factors which increased the risk of nonsuicidal self-harm behaviors in teenagers and young adults. Social support decreased the risk of nonsuicidal self-harm behaviors under the conditions of trauma history, low self-esteem and peer victimization. In sum, if a teenage or young adult feels himself/herself socially supported, although he/she has early traumatic experiences or peer bullying at school, he/she has lower tendencies to harm herself/himself compared to the group of youths who was socially supported less (Christoffersen, Møhl, DePanfilis & Vammen, 2015).

Muehlenkamp and her colleagues (2013) found that young adults with nonsuicidal self-harm behaviors reported lower social support and having fewer significant others to share their self-harming behaviors and take advice, compared to young others without nonsuicidal self-harm behaviors. They also underlined that internal motives, such as the need of regulating aversive emotions, play more important role for especially engaging in nonsuicidal self-harm behaviors over and over again, whereas interpersonal motives such as taking care, acceptance, support and attention from others, punishing or imitating others play an important role for especially the initiation of nonsuicidal self-harm behaviors. It can be assumed that young adults cannot take social support, care, attention and acceptance because of deficits in their interpersonal skills. They carry aversive negative emotions and they cannot both take social support and regulate their emotions. It seems that interpersonal problems create negative emotions and initiate nonsuicidal self-harm behaviors to gain some social reinforcements, but as the relational and emotional stress increases, nonsuicidal self-harm behaviors are repeated over and over again to regulate intense aversive emotions (Muehlenkamp, Brausch, Quigley, Whitlock, 2013).

Tseng and Yang (2015) investigated the relationship between nonsuicidal self-harm behaviors, the source of social support, internet use and online communication. Firstly, they found that as internet use increase, the probability of nonsuicidal self-harm thoughts and behaviors also increase among male adolescents aged between 12 to 18. Social support from family, not friends and significant others, was found to protect the adolescents from the development of nonsuicidal self-harm behaviors. In addition, in boys, family support was found to decrease the negative effects of depression on suicide ideation. Among female adolescents, support from friends was underlined as important protective factor in the development of suicide plans. Lastly, it was shown that social support from significant others and depression increase the risk of suicide plans among females. Whether the significant other is depressive, have mental problems or show nonsuicidal or/and suicidal self-harm thoughts and behaviors shouled be included to understand the picture better (Tseng and Yang; 2015).

2.6.3. Family Functioning and Nonsuicidal Self-Harm Behaviors

Unhealthy family functioning is one of the risk factors which can lead to the occurrence of nonsuicidal self-harm behaviors (Cassels and his colleagues, 2018; Fortune, Cottrella & Fife, 2016). Cassels and his colleagues (2018) found that family dysfunction especially at the age of 14 has an adverse effect on adolescents and is associated with the onset age of nonsuicidal self-harm between 14-17. This result is also consistent with the findings that especially chronic family dysfunction and cumulative relational problems in the family have critic effects for the development of nonsuicidal self-harm behaviors (Cassels and his colleagues, 2018; Fortune, Cottrella & Fife, 2016). Thus, in late adolescence the family relationships are still important to prevent some risky behaviors such as nonsuicidal self-harm behaviors.

Likewise, both the acceptance of adolescents' emotions and the presence of secure emotional environment to express emotions openly in the family seem to be important characteristics of a healthy family climate, and Sim and his colleagues (2009) found an association between nonsuicidal self-harm behaviors and family environment. They found that only for girls, emotional invalidation in the families put them in risk to harm themselves without the intention of suicide through the emotion regulation difficulties

(Sim, Adrian, Zeman, Cassano & Friedrich, 2009). Family functioning might affect the risk of nonsuicidal self-harm behaviors depending on gender differences because of different parenting practices among females and males.

Palmer, Welsh and Tiffin (2016) assessed how the adolescents, who were hospitalized because of nonsuicidal self-harm behaviors, perceive their family functioning and found that they experience their family environment as 'dysfunctional' in areas such as giving nurture, solving problems, putting behavioral boundaries, sharing responsibility and expressing emotion. In addition, the disagreements about family functioning among family members were found and this situation might be the reflection of the dysfunction in the family (Palmer, Welsh, and Tiffin, 2016).

Buckholdt and his colleagues (2009) analyzed the effects of parental responses to sadness on nonsuicidal self-harm behaviors and examined the mediator role of emotion regulation difficulties among the young adult population in a colleague. It was found that parental responses to sadness such as accepting, punishing, ignoring and overriding the sadness are associated with the frequency of nonsuicidal self-harm behaviors. As accepting sadness in the family increased, the frequency of nonsuicidal self-harm behaviors decreased; and as punishing, ignoring and overriding the sadness in the family increased, the frequency of nonsuicidal self-harm behaviors also increased. The emotion regulation difficulties (especially difficulties in evaluating the emotions) were also found to be directly associated with more frequent ignoring and punishing of sadness in the family and more frequent nonsuicidal self-harm behaviors. Difficulties in evaluating emotions was underlined as another important mediator in the association between parental responses to sadness and nonsuicidal self-harm behaviors. Thus, it seems that if the emotional climate in the family is dysfunctional to handle negative emotions, this situation puts the young adult individuals into risk for the development of nonsuicidal self-harm behaviors (Buckholdt and his colleagues, 2009).

However, Baetens and his colleagues (2014) found that in the families of female self-injurers at the age of 12, behavioral control, such as harsh punishing and neglect, and psychological control levels were found as higher than the families of adolescents without nonsuicidal self-harm behaviors. Especially if behavior control is high and support is low in the family, parental controlling behaviors become cold-hearted, and the risk for the

development of nonsuicidal self-harm behaviors also increases. In addition, low income and low education level were underlined as another familial risk factors for the occurrence of nonsuicidal self-harm behaviors (Baetens, Claes, Martin, Onghena, Grietens, Van Leeuwen, Pieters, Wiersema, Griffith, 2014).

Different findings came from the study of Jantzer and his colleagues (2015) who analyzed the relationship between parental monitoring, peer bullying, nonsuicidal self-harm behaviors and suicide behaviors among the students between the ages of 9 to 18. Firstly, they found that bullying is itself damaging for adolescents and social bullying, occasional bullying and cyber bullying are risk factors for nonsuicidal self-harm behaviors and suicide behaviors. Especially cyber bullying was found to be in relation with repetitive nonsuicidal self-harm behaviors. Parental monitoring was found to decrease the risk of suicide behaviors among non self-injurer adolescents who experienced peer victimization at school occasionally, but not for the adolescents with nonsuicidal self-harm behaviors. Thus, they underlined that in the presence of peer victimization, we cannot talk about the protective role of parental monitoring for the occurrence of nonsuicidal self-harm behaviors (Jantzer, Haffner, Parzer, Resch, Kaess; 2015).

In addition to the findings mentioned above, the study of Ren and his colleagues (2017) among Taiwanese adolescents with the average age of 15 underlined that especially avoidance and emotion-focused coping strategy mediated the relation between family functioning and nonsuicidal self-harm behaviors. They emphasized that adolescents with a dysfunctional family environment develop unhealthier coping strategy, such as experiencing high affective distress and avoiding these negative and intensive affects; and they have more tendencies to harm themselves without a suicide intention (Ren, Lin, Liu, Zhang, Wu, Hu, You; 2017).

Kelada, Hasking and Melvin (2016) also found that poor family functioning was observed frequently among the adolescents at the age of 12-17 with nonsuicidal self-harm behaviors. They found that half of the adolescents with nonsuicidal self-harm behaviors did not share this situation with their families and their families did not know. The family functioning reports of adolescents and parents were found to be inconsistent in the self-harm group. Adolescents with nonsuicidal self-harm behaviors reported family

functioning as poorer and dysfunctional compared to their families. The families who knew that their children harm themselves showed greater tendency to seek professional help compared to the families who were not aware of their children's nonsuicidal self-harm behaviors. The frequency and severity of nonsuicidal self-harm behaviors were found to be higher among the adolescents whose families knew their nonsuicidal self-harm behaviors. Adolescents with nonsuicidal self-harm behaviors reported poorer family functioning when their families were aware of their harming behaviors, compared to the adolescents with nonsuicidal self-harm behaviors whose parents did not know their children's harming behaviors. And, if parents were not aware of their children's nonsuicidal self-harm behaviors, then both parents and adolescents reported similar and better family functioning (Kelada, Hasking and Melvin; 2016).

2.6.4. Loneliness and Nonsuicidal Self-Harm Behaviors

Loneliness is a concept which is studied less compared to social support, family functioning and emotion regulation problems to understand its relationship with self-harm behaviors. Some studies underlined that loneliness should be understood according to its sources and loneliness in social context, loneliness in family environment and loneliness in romantic relationships are different notions (Gandhi, Luyckx, Goossens, Maitra and Claes, 2018; Giletta, Scholte, Engels, Ciairano and Prinstein, 2012; Lasgaard, Goossens, Bramsen, Trillingsgaard and Elklit, 2011; Wang, Rubin, Laursen, Booth-LaForce and Rose-Krasnor; 2013).

Gandhi, Luyckx, Goossens, Maitra and Claes (2018) underlined that loneliness in parental and peer relations, and positive beliefs about being alone are in association with lifetime nonsuicidal self-harm behaviors. In addition, they found that the automatic functions of nonsuicidal self-harm behaviors are significantly correlated with both parent-related and peer-related loneliness and positive attitudes about loneliness. It might be the fact that adolescents who feel lonely and prefer loneliness have tendencies to harm themselves without suicide intent or/and adolescents with nonsuicidal self-harm behaviors prefer loneliness because of their interpersonal skill deficits and unsupportive social environment and need loneliness to harm themselves and regulate their negative intense emotions (Gandhi, Luyckx, Goossens, Maitra and Claes, 2018).

Lasgaard, Goossens, Bramsen, Trillingsgaard and Elklit (2011) also analyzed the relationship between loneliness and psychopathology among adolescents with the average age of 17. It was found that compared to feeling lonely in the social circle of peers, feeling lonely in the family is in stronger relation with suicide ideation. In addition, only loneliness in familial context predicts nonsuicidal self-harm behaviors, not loneliness in peer relations. Peer-related loneliness and loneliness in romantic relationship were found to be associated with social anxieties. Similar to these findings, Giletta, Scholte, Engels, Ciairano and Prinstein (2012) found that loneliness in family and peer victimization increased the risk for the development of nonsuicidal self-harm behaviors among adolescents with the average age of 16 in different countries. It was found that as the loneliness in familial context and depression increased, the tendency for nonsuicidal self-harm behaviors increased. Again, it was underlined that the loneliness in family environment seems to be the important indicator of nonsuicidal self-harm behaviors and suicide ideation. Peer victimization and substance abuse were found as another important risk factors which increase the likelihood of nonsuicidal self-harm behaviors (Giletta, Scholte, Engels, Ciairano and Prinstein, 2012).

Differently, Wang, Rubin, Laursen, Booth-LaForce and Rose-Krasnor (2013) studied the concept of 'preference-for-solitude' in early and late adolescence. Preference-for-solitude was found as the predictor of emotional problems, low self-esteem and emotion regulation difficulties in early adolescence, but not in late adolescence. It can be assumed that in early adolescence, being preferred by peers and significant others is more important issue compared to late adolescence and as age increases, preference-for-solitude also increases because adolescents in late period may need time to find solutions to their problems, plan their lives and feel independent from their peers as an individual being (Wang, Rubin, Laursen, Booth-LaForce and Rose-Krasnor; 2013). But, in this study, the relationship between preference-for-solitude and self-harm behaviors was not analyzed and there is a need of more research to understand the relationship between preference-for-solitude, emotional regulation difficulties and self-harm behaviors in different developmental periods in adolescence. To sum up, loneliness is a concept which is not studied enough to understand its affetcs in the development of nonsuicidal self-harm behaviors.

2.7. Relationships between Emotion Regulation Difficulties, Social Support, Family Functioning, Loneliness, and Suicide Ideation

2.7.1. Emotion Regulation Difficulties and Suicide Ideation

Many studies found a strong association between emotion regulation difficulties and suicide ideation in literature (Forkmann and his colleagues, 2014; Rajappa, Gallagher & Miranda, 2012). The adverse effects of emotion regulation difficulties on suicidal ideation regardless of mental disorders were also supported by studies (Forkmann and his colleagues, 2014; Miranda, Tsypes, Gallagher & Rajappa, 2013; Rajappa, Gallagher & Miranda, 2012). In addition, another question that waits for answers is 'which specific strategies to regulate emotions have an important role on suicide ideation.' Especially, coping negative emotions by 'expressive suppression' frequently is found as a risk factor for the increase of suicide ideation and desire (Forkmann and his colleagues, 2014). Another finding which underlines that especially, difficulties to find functional emotion regulation strategies and nonacceptance of negative emotions lead to suicide ideation and attempts came from the study of Rajappa, Gallagher & Miranda (2012). In addition, 'hopelessness' was found as a risk factor which mediates the relationship between emotion regulation difficulties and suicide ideation and attempts among young adults (Rajappa, Gallagher & Miranda, 2012). In their longitudinal study, they found not only hopelessness but also 'rumination' as another mediating factor (Miranda, Tsypes, Gallagher & Rajappa, 2013).

It also seems that adolescents with suicide ideation experience different neural activation during emotion regulation processes, compared to the adolescents without suicide ideation. In the study of Miller, McLaughlin, Busso, Brueck, Peverill and Sheridan (2017), during the Functional Magnetic Resonance Imaging (fMRI) scan, adolescents, aged between 13 to 20, completed a cognitive reappraisal task in which the neutral markers of emotion regulation were investigated. According to self-report measurements, although there was no significant difference between the adolescents with and without suicide ideation in terms of their emotion regulation difficulties; different prefrontal cortex functions were observed. The dorsolateral prefrontal cortex (dlPFC) activation was observed greater among the adolescents with suicide ideation, compared to the adolescents without suicide ideation (Miller, McLaughlin, Busso, Brueck, Peverill

and Sheridan; 2017). There is a need of more researches to understand neural functioning underlying the emotion regulation difficulties among adolescents with suicide ideation.

Likewise, the protective role of emotion regulation skills in decreasing suicide ideation and attempts among homeless youths with many traumas was supported by the study of Barr, Fulginiti, Rhoades and Rice (2016). Especially having awareness about emotions and emotional control were found to have negative correlations with suicide ideation among youths and young adults aged 13–28. It seems that strengthening emotion regulation capacity among disadvantaged groups can be very beneficial to eliminate suicide ideation.

Similar to the findings of studies above, mothers' and peers' suicide ideation, being female, depression and peer victimization at school were found as risk factors for the development of suicide ideation among Taiwanese high school students aged between 15 to 19; and self-esteem and emotional adaptation, as an emotion regulation ability, were found as protective factors which decreased the risk of suicide ideation (Wang, Lai, Hsu, and Hsu, 2011). Thus, it seems that very similar risk and protective factors are found in different cultural backgrounds.

Another result came from the study of Anestis, Bagge, Tull and Joiner (2011) among college students with mean age of 19. They analyzed the relationship between specific emotion regulation abilities and suicide ideation and desire. Distress tolerance was found to be negatively correlated with suicide ideation; negative urgency was found to be positively correlated with suicide ideation. In addition, distress tolerance could predict physical pain tolerance, whereas negative urgency could predict acquired capability for suicide significantly. According to the authors, the association between distress tolerance and physical pain tolerance protect college students from attempting suicide, because they cannot tolerate lethal levels of physical pain that they have to face in suicide and fear from attempting suicide. And youths with high levels of negative urgency acquire courage to commit suicide in an impulsive way and avoid the aversive emotions. Thus high negative urgency seems to bring high tolerance for discomfort and fear about death, and should be studied in future researches (Anestis, Bagge, Tull and Joiner; 2011).

2.7.2. Social Support and Suicide Ideation

Social support is one of the protective factor which is analyzed by the studies in the literature Amare, Woldeyhannes, Haile & Yeneabat, 2018; Arria, O'Grady, Caldeira, Vincent, Wilcox & Wish, 2009; Cenkseven-Önder, 2017; Cui, Cheng, Xu, Chens & Wang, 2010; Kerr, Preuss & King, 2006; Miller, Esposito-Smythers & Leichtweis, 2015; Savitha & Srimathi 2017; Shaheen and Jahan, 2017). Miller and his colleagues (2015) analyzed the interplay between suicide ideation and social support from school, family and peers among the adolescents aged between 12-18. It was found that support from school and family is so crucial to prevent suicide ideation independent of sex and depression. Although peer relations are important in this developmental stage, especially low support from school and family were found as salient risk factors for the development of suicide ideation and associated with the history of suicide attempts (Miller, Esposito-Smythers and Leichtweis, 2015). As the support from all different domains (such as school, family, friends) diminishes at the same time, the adolescents' tendencies for suicide ideation and/or attempts seem to increase.

Parallel to these findings, Shaheen and Jahan (2017) studied the association between stress, social support and suicide ideation among adolescents aged 13 to 21, and they found that as social support from peers, family, and significant others decreases, the tendency to idealize suicide increases. Most importantly, especially social support from family and stress have dominant roles on predicting suicide ideation. Especially for boys, as stress level increases, low family support increases suicide ideation more, compared to low stress group. Thus, especially support from family has a moderator role in the interplay between stress and suicide ideation, and come to the scene as the most important protective factor in adolescence (Shaheen and Jahan, 2017).

Kerr, Preuss and King (2006) underlined gender-based differences in the relationship between social support, psychopathology and suicidal ideation among adolescents aged 12 to 18. They found that among females, as family support decreases, their depressive symptoms, hopelessness and idealization of suicide increase but among male adolescents, low level of perceived peer support was found to be associated with high levels of hopelessness, depression, externalizing problems and suicide ideation. It emphasizes that having a bonding with peers who are probably also suicidal and

depressive has a more adverse effect on male adolescents compared to females. Whereas peer support seems to play an important role to predict males' suicidal ideation and both internalizing and externalizing tendencies, family support seems to have a protective effect on females to decrease their depressive symptoms and suicidal ideation. But, it is important to identify the quality of family and peer relations to make general conclusions in the future studies (Kerr, Preuss and King; 2006). Similar gender-specific findings came from the study of Mackin, Perlman, Davila, Kotov and Klein (2016). They conducted a study on the relationship between social support, life stress and suicidal ideation among female adolescents aged 13.5 to 15.5 and found that low parental support and high level of interpersonal stress increase suicide ideation among female adolescents. Again, parental support was underlined as critical factor for the development of suicide ideation under the conditions of stressful relations.

The study of Cenkseven-Önder (2017) studied the relationship between perceived social support, suicidality and coping strategies among Turkish adolescents aged between 14 and 18. Suicidality was found to be more prevalent among female adolescents, and females reported higher perceived social support from peers and significant others compared to males. Among girls, low social support from friends and significant others was found to be related to high suicidality and high dysfunctional coping styles such as helpless and submissive styles. In general, low perceived support from family and use of dysfunctional coping styles were found to predict suicidality among all adolescents. Lastly, it was emphasized that male adolescents rarely seek social support compared to female adolescents and this situation puts male adolescents at greater risk for suicidality compared to female adolescents. It seems that this finding shows the effect of social roles on male adolescents' social behaviors (Cenkseven-Önder, 2017). And, similar to the findings above, Winfree and Jiang (2010) underlined that parental support, especially parental love and care, and feeling safe at school are important protective factors in suicide attempts among adolescents aged between 11–18. They also added that a friend's and family member's suicide attempts increase the risk for suicide ideation.

Savitha and Srimathi (2017) also analyzed the relationship between the intensity of suicide ideation and social support, and parallel to the findings in literature they found that among adolescents aged between 16 and 19, as the severity of suicidal ideation and tendency to attempt suicide increase, the perceived social support also decreases. The

adolescents with low suicide ideation reported that they receive more social support and have more satisfying social relationships compared to the adolescents with severe and moderate suicide ideation and suicide attempts (Savitha and Srimathi; 2017).

Arria, O'Grady, Caldeira, Vincent, Wilcox, & Wish (2009) studied the effects of social support, emotion regulation difficulties, parental and peer relationships and depression on suicide ideation among a young adult group who started their first year in college. Social support was found as the most critical factor which predicts the suicide ideation, in spite of depression, emotion regulation problems and problems in parental relations. That result supports that in young adulthood, belongingness and taking support from both peers and family, especially in transitions like starting a new college, are important to manage stress and go through changes. Parallel with this result, family conflict was found as another risk factor which increases suicide ideation. In addition to social support, emotion regulation problems were found as another prominent factors in the occurance of suicide ideation, regardless of depression and family conflicts (Arria, O'Grady, Caldeira, Vincent, Wilcox & Wish, 2009).

Similarly, Amare and his colleagues (2018) found that poor social support, such as having no close friend and/or being hurt physically by others, is a risk factor for suicide ideation and attempt among adolescents in Ethiopia. In addition, feeling lonely and hopeless were found to put the adolescents risk for suicide attempt. Lastly, violence was found as another negative experience which increases the tendency toward suicide ideation (Amare, Woldeyhannes, Haile, and Yeneabat, 2018). In addition to these findings, the study of Cui, Cheng, Xu, Chens, and Wang (2010) found that loneliness moderates the relationship between peer relationships and suicidal ideation among adolescents in China. In addition, peer bullying, having no close friend, the hurtful and rude behaviors of peers were again found to put the adolescents at risk of idealizing suicide.

2.7.3. Family Functioning and Suicide Ideation

There are many studies which analyzed the effects of family environment on suicide ideation and suicide attempts in literature (Chiu, Tseng & Lin; 2017; Kwok, 2011; Kwok & Shek, 2008; Lipschitz, Yen, Weinstock & Spirito, 2012; Machell, Rallis & Esposito-

Smythers, 2016; Oppenheimer, Stone & Hankin, 2018; Saffer, Glenn & Klonsky, 2015). Saffer and his colleagues (2015) tried to understand whether parental bonding such as parental care and overprotection in the family can prevent suicide ideation and suicide attempts. They found that adolescents who attempted suicide reported lower parental care compared to adolescents with suicide ideation, but no significant difference was found among adolescents with suicide ideation and adolescents without any suicide attempts and ideation in terms of their reported parental overprotection (Saffer et. al, 2015). Emotion dysregulation and loneliness were also found to be associated with both suicide ideation and suicide attempts. Especially, parental care was found as a significant factor which distinguish adolescents with suicide ideation and attempts when the effects of emotion dysregulation, loneliness and self-worth were also controlled.

Perceived family functioning and hopelessness were emphasized as important predictors of suicide ideation among university students aged between 18 to 25 in the study of Kwok (2011). All family functioning domains such as mutuality, communication and harmony in the family, parental care and control were found to be negatively correlated with suicide ideation, independent of hopelessness levels among the college students. Hopelessness was underlined as a mediator in the relationship between parental control and suicide ideation. It showed that as the control of parents increases, hopelessness also increases and suicide ideation becomes inevitable. In addition, hopelessness moderated the association between family functioning and suicide ideation. As the family dysfunction and hopelessness increased, suicide ideation increased much more compared to the high levels of family functioning circumstances.

In the study of Kwok and Shek (2008), same finding above was supported among Chinese adolescents aged between 11 to 19. As family functioning decreased, suicide ideation increased too, and as hopelessness increased, suicide ideation increased too. Especially, conflict and harmony, parental concern and parental control, as family functioning domains, were found to be associated with suicide ideation, and to have moderator effects in the relationship between hopelessness and suicide ideation.

Lipschitz and her colleagues (2012) paid attention to gather both adolescents' and their parents' perceived family functioning. Adolescents' family functioning scores were found to be higher than their parents' family functioning scores. They (2012) put a light

on the important role of adolescents' perceived family functioning on predicting suicide ideation and attempts; while the discrepancy between the adolescents' and parents' perceieved family functioning did not predict the risk of suicide ideation (Lipschitz, Yen, Weinstock and Spirito, 2012).

Likewise, the study of Oppenheimer, Stone and Hankin (2018) underlined that the quality of parent-child relationship and having parents who had suicide ideation increased the risk for suicide ideation among adolescents who were followed from the age of 8 to 15. Adolescents whose parents had suicide ideation reported their parent-child relationship more negatively compared to the adolescents whose parents had no suicide ideation. Having a negative parent-child relationship was found to be a risk factor which leads to the early onset of suicide ideation among the adolescents with no parent history of suicide ideation. But, having a negative parent-child relationship did not exacerbate the tendency to develop suicide ideation at early onset among adolescents with parental history of suicide ideation. The occurrence of suicide ideation at early ages was more prevalent among the adolescents with parent history of suicide ideation.

Similar to the findings above, Machell, Rallis and Esposito-Smythers (2016) underlined that perceived family support and family conflict with parents are associated with suicide ideation among the adolescents with anxiety disorder diagnosis/symptoms too. As family support increased, suicide ideation decreased and as family conflict increased, suicide ideation increased among adolescents whose mean age was 15. Under unsupportive family environment conditions, higher level of anxiety symptoms was found to be riskier for the development of suicide ideation compared to the adolescents who reported high levels of family support. Both high levels of anxiety symptoms and lack of of family support were found to predict suicide ideation hand in hand (Machell, Rallis and Esposito-Smythers, 2016).

Chiu, Tseng and Lin (2017) analyzed the relationship between family conflict and suicide ideation in a more detailed way with their longitudinal study. Perceived family conflict and suicide ideation were measured at the age of 15, 18, and 20 to understand the differences in developmental phases. The adolescents' conflicts with their parents decreased as they grew up. In all ages, females were found to be at greater risk for the development of suicide ideation compared to men, and both cigarette or alcohol use and

having family quarrels were found to increase the tendency of suicide ideation. Regardless of psychological distress, having family conflicts, peer conflicts and cigarette or alcohol use were found to be important risk factors in the development of suicide ideation at the age of 15. Having conflicts with parents was still risk factor at the age of 18, but at the age of 20, only alcohol and cigarette use was found as risk factor for the emergence of suicide ideation. Only in early and middle adolescence, females who experienced conflicts with their families were found to be more prone to have suicide ideation compared to males. It seems that especially in Asian countries, females pay more attention to parental issues and males pay more attention to peer-related issues and cigarette and alcohol use. And, as adolescents grow up, the effects of family conflicts on suicide ideation decreases (Chiu, Tseng and Lin; 2017).

2.7.4. Loneliness and Suicide Ideation

Basically, loneliness is an undesirable feeling which reflects the discrepancy between the quality and quantity of social relationships that are experienced in reality and the quality and quantity of social relationships that a person needs in her/his life (Gierveld, Tilburg, Dvkstra, 2006). There are many definitions of loneliness in the literature and loneliness can be emotional, psychological, social and/or existential. And, it is obvious that level of loneliness is higher among adolescents compared to adults, among some ethnic minority groups and cultural backgrounds (Gierveld, Tilburg, Dvkstra, 2006; Kalemi, Bali, Douzenis, 2015). There are some studies in the literature which analyzed the relationship between loneliness, as a feeling of isolated and disconnected from others, and suicide ideation among adolescents and young adults (Lasgaard, Goossens & Elklit, 2011).

Pervin and Ferdowski (2016) studied the relationship between depression, loneliness, hopelessness and suicide ideation among university students aged 19 to 25. They found that as depression, hopelessness and loneliness increase, suicide ideation increases too. Both depression, loneliness and hopeliness are three crucial variables which predict suicide ideation all together, and it is noteworthy to target depressive symptomology, hopelessness and loneliness in the treatment of young adults with suicide ideation.

Again, loneliness was found as a critical factor which increases the suicide ideation among young adults who are students in college in the study of Chang, Wan, Li, Guo, He, Gu, Wang, Li, Zhang, Sun, Batterbee, Chang, Lucas & Hirsch (2017). Future orientation, meaning that believing that a person will feel better in the future and negative things will change in the future, was found as another important factor which is also in association with suicide ideation. But beyond these results, most importantly, the interaction between loneliness and future orientation was found as an explanation to understand suicidal ideation among young adults. If a person feels lonely and does not believe that his/her future will be better in many areas, then suicide ideation increases more, compared to the increase of suicide ideation as loneliness increase or the increase of suicide ideation as the negative future orientation increases. Thus it seems to be important to understand the interaction of loneliness with other social, cognitive and emotional variables to get a better picture of mechanisms in suicide ideation (Chang, Wan, Li, Guo, He, Gu, Wang, Li, Zhang, Sun, Batterbee, Chang, Lucas & Hirsch, 2017). Lasgaard, Goossens & Elklit (2011) also analyzed the association between similar variables and found that as depression levels increase, loneliness also increases but loneliness by itself cannot predict suicide ideation. If loneliness and depression are together in a clinical picture, likelihood of suicide ideation increases (Lasgaard, Goossens & Elklit, 2011).

Understanding the different effects of preference for solitude and unwanted/unpleasant loneliness on suicide ideation seems to be an important issue, and Endo and his colleagues (2017) searched the relationship between preference for solitude, social isolation, suicide ideation and self-harm among adolescents aged 12 to 18. Preference of solitude was found to increase as suicide ideation and self-harm increased, independent of social isolation. Adolescents who have preferred solitude reported that they feel socially isolated more compared to the adolescents who have not preferred solitude. And, if adolescents experience both preference for solitude and social isolation, then the risks for self-harm and suicide ideation increase much more, compared to adolescents with only prefer for solitude and adolescents with feeling of only social isolation (Endo, Ando, Shimodera, Yamasaki, Usami, Okazaki, Sasaki, Richards, Hatch, and Nishida, 2017).

Schinka, Van Dulmen, Bossarte and Swahn (2012) explored the relationship between loneliness and suicide ideation from middle childhood to adolescence in a longitudinal design. The participants were followed from birth to age of 15. They found that loneliness among adolescents who are fifteen years-old predicted their suicide ideation and behaviors in a current time. And, loneliness during middle childhood predicted suicide behaviors at the adolescence but not suicide ideation (Schinka, Van Dulmen, Bossarte and Swahn, 2012). The relation between loneliness and suicide ideation might be different depending on the developmental stages and needs.

2.8. The Hypotheses of the Present Study

In the light of the literature, the aim of this present study is to understand the relationship between family functioning, emotion regulation, social support, loneliness, psychopathology tendencies and nonsuicidal self-harm behaviors and suicide ideation. In addition, the relation between frequency, onset age and last time passed since the last nonsuicidal self-harm behaviors and suicide ideation are analyzed among the participants aged between 17-19.

1. The research hypotheses related to Nonsuicidal Self-Harm are as the following:

   It was hypothesized that:

   a. There would be no difference among men and females in terms of the frequency of non-suicidal self-harm behaviors but a significant difference among men and women is expected in terms of the method they harm themselves. Women are expected to be found as harming themselves by covert behaviors such as scratching and cutting, whereas males are expected to be found as harming themselves by overt behaviors such as hitting, biting, banging, burning or punching consistent with the existing literature.

   b. Higher frequency of nonsuicidal self-harm behaviors would be associated with higher levels of psychopathology.

   c. Higher frequency of nonsuicidal self-harm behaviors would be associated with lower socio-economic level.

   d. Higher frequency of nonsuicidal self-harm behaviors would be associated with higher levels of emotion regulation difficulties.

e. Higher frequency of nonsuicidal self-harm behaviors would be associated with lower levels of social support from peers, family and significant others.

f. Higher frequency of nonsuicidal self-harm behaviors would be associated with higher levels of loneliness.

g. Higher frequency of nonsuicidal self-harm behaviors would be associated with lower levels of family functioning, including lower levels of communication, problem solving, mutual affective responses and general functioning in the family.

h. Higher frequency of nonsuicidal self-harm behaviors would be associated with higher levels of rumination, self-blame, others-blame, catastrophizing and lower levels of acceptance, positive refocusing, refocus on planning, positive reappraisal, putting into perspective as indictors of cognitive emotion regulation abilities.

2. Regarding the suicide ideation, it was hypothesized that:

a. Higher frequency of non nonsuicidal self-harm behaviors would be associated with higher levels of suicide ideation.

b. Higher levels of suicide ideation would be associated with higher levels of psychopathology.

c. Higher levels of suicide ideation would be associated with higher levels of emotion regulation difficulties.

d. Higher levels of suicide ideation would be associated with lower levels of social support from peers, family and significant others.

e. Higher levels of suicide ideation would be associated with higher levels of loneliness.

f. Higher levels of suicide ideation behaviors would be associated with higher levels of rumination, self-blame, others-blame, catastrophizing and lower levels of acceptance, positive refocusing, refocus on planning, positive reappraisal, putting into perspective as indictors of cognitive emotion regulation abilities.

3. It was hypothesized that there would be a significant negative correlation between onset age of nonsuicidal self-harm and suicide ideation. It was also expected that as the onset age of nonsuicidal self-harm would decrease, the frequency of nonsuicidal self-harm would increase.

4. In our study, ‘mediator’ role of emotion regulation difficulties in the relationship between loneliness and nonsuicidal self-harm behaviors was evaluated. It was hypothesized that higher levels of loneliness would predict higher levels of emotion regulation difficulties, and higher levels of emotion regulation difficulties would predict higher probability of nonsuicidal self-harm behaviors

5. In our study, ‘mediator’ role of emotion regulation difficulties in the relationship between social support and nonsuicidal self-harm behaviors was evaluated. It was hypothesized that higher levels of social support would predict lower levels of emotion regulation difficulties, and lower levels of emotion regulation difficulties would predict lower probability of nonsuicidal self-harm behaviors.

3. METHOD

3.1. Participants

The study was conducted with 414 technical and industrial vocational high school students who were about to finish their high school education in their final year. The data were collected between the dates of April and May, 2016 which was a close time period before university exam. The names of the schools are 'İzmit Vocational and Technical High School, Yahya Kaptan Vocational and Technical High School, Atatürk Vocational and Technical High School, İzmit Zübeyde Hanım Vocational and Technical High School, and Derince Vocational and Technical High School. It was a convenience sample. The participants attended the study on an individual basis voluntarily and were required to fill in the questionnaires. Every data was given a participant number in order to match their questionnaires.

3.2. Instruments

In our study, the instruments, namely Demographic Form (see Appendix I) which aims to obtain general information about the participants such as age, education, socioeconomic status, family background, the presence of psychological problems and the history of psychological treatment; Turkish standardized versions of UCLA Loneliness Scale (Peplau and Ferguson, 1978) (see Appendix II), The Difficulties in Emotion Regulation Scale (Gratz and Roemer, 2004) (see Appendix III), Family Assessment Device (Epstein, Bolwin & Bishop, 1983) (see Appendix IV), The Multidimensional Scale of Perceived Social Support (Zimmet and his colleagues, 1988) (see Appendix V), Inventory of Statements about Self-injury (ISAS) (Klonsky & Glenn, 2009) (see Appendix VI), Suicide Ideation Scale (Levine, 1989) (see Appendix VII), Brief Symptom Inventory (Derogatis, 1992) (see Appendix VIII) and Cognitive Emotion Regulation Scale (Garnefski, Kraaij, & Spinhoven, 2001) (see Appendix IX) were used.

3.2.1. Demographic Questionnaire (Demografik Bilgi Formu)

The demographic questionnaire was prepared by the researcher and used to obtain the following information: the participant's age, education, socioeconomic status, family background, the presence of psychological problems and the history of psychological treatment. The form consists of 16 questions.

3.2.2. UCLA Loneliness Scale (UCLA Yanlızlık Ölçeği)

Russel Peplau and Ferguson (1978) (cited in Peplau and Perlman, 1982) developed this scale to assess how much individuals feel themselves lonely in social relationships. It is a 20-item and 4-point Likert type scale. The internal consistency Cronbach alpha value was found to be .94 and test-retest reliability was found to be .73. Demir (1989) adapted this scale and found its internal consistency Cronbach alpha value as .96. Test-retest reliability was also found to be .94. In our study, its internal consistency Cronbach alpha value was found to be .91.

3.2.3. The Difficulties in Emotion Regulation Scale (Duygu Düzenlemede Güçlükler Ölçeği)

Gratz and Roemer (2004) developed 'The Difficulties in Emotion Regulation Scale' in order to measure emotion regulation difficulties in emotional awareness, emotional clarity, accepting negative emotions, strategy building, having control on impulsive behaviors, and behaving according to goals under negative emotions'. This scale is a 5-point Likert type scale and consists of 36 items. The internal consistency was found to be α =.93 and test-retest reliability was found to be r =.88.

Rugancı (2008) found the internal consistency of the scale as 'α =.94' and test-retest reliability 'r = .95'. In the present study, the Cronbach alpha values for the internal consistency of 6 factors were found as α = .78 for difficulties in accepting negative emotions, α = .80 for difficulties in behaving according to the goals under negative emotions, α = .83 for difficulties in having control on impulsive behaviors, α = .84 for difficulties in strategy building, α = .76 for difficulties in emotional clarity, and α = .64 for difficulties in emotional awareness. The internal consistency of The Difficulties in

Emotion Regulation Scale was found as ‘α =.91’.

3.2.4. Family Assessment Device (Aile Değerlendirme Ölçeği)

Family Assessment Device assess family functioning and was designed by Epstein, Bolwin and Bishop (1983). It is a 4-point Likert type scale with 60 items. ‘Problem solving, communication, roles, affective responsiveness, affective involvement, behavior control and general functioning’ are 7 subscales in this device. Bulut (1990) adapted the Turkish version of the scale and the test-retest reliability of subscales were found as r=.90 for problem solving subscale; r=.84 for communication, r=.82 for roles, r=.78 for affective responsiveness, r=.62 for affective involvement, r=.80 for behavior control and r=.89 for general functioning. In our study, internal consistency of the device was found to be significantly moderately high (α =.76 for problem solving subscale; α =.78 for communication subscale, α =.61 for roles subscale, α =.74 for affective responsiveness subscale, and α =.89 subscale for general functioning). Because of low Cronbach alpha values of affective involvement (α =.16) and behavior control (α =.14), these subscales were not included into analysis.

3.2.5. The Multidimensional Scale of Perceived Social Support (Çok Boyutlu Algılanan Sosyal Destek Ölçeği)

The Multidimensional Scale of Perceived Social Support measures the social support from multiple sources such as family, friends and significant others and includes 12-item in 7-point Likert type. It was developed by Zimmet and his colleagues (1988) and adapted to our culture by Eker and Arkar (1995). Three sources of social support were found as the structure of the scale, and internal reliability estimates of the scale were found as .93 for the total score and .91, .89, and .91 for the family, friends, and significant others subscales. In our culture its reliability values were found in the range of ‘r= .80-.95’ (Eker and Arkar, 1995). In our study, internal consistency of Multidimensional Scale of Perceived Social Support was found to be significantly high (α =.92 for perceived support from family, α =.92 for perceived support from peers and α =.82 for perceived support from significant other).

3.2.6. Inventory of Statements about Self-injury (ISAS) (Kendine Zarar Verme Davranışı Değerlendirme Envanteri)

Inventory of Statements about Self-injury was developed by Klonsky and Glenn (2009). In the first part of the inventory, the frequency of 12 non-suicidal self-harm behaviors and 5 basic questions are asked to gather descriptive information. In the second part, 39 items are used to understand the functions of non-suicidal self-injury. This part assesses 13 potential functions of nonsuicidal self-harm behaviors: affect-regulation, anti-dissociation, anti-suicide, autonomy, interpersonal boundaries, interpersonal influence, marking distress, peer-bonding, self-care, self-punishment, revenge, sensation seeking, and toughness. Internal consistency of each subscale was found to be around α = .80 - .88.

This inventory was adapted to our culture by Bildik and his colleagues (2012). The internal consistency was found to be α = .79 and test-retest reliability was found to be r=. 66 for the first part in the inventory. The internal consistency was found to be α = .93 and test-retest reliability was found to be r=. 64 for the second part in the inventory. Same thirteen functions were found as the factors in the second part.

In our study the internal consistency value of each subscale measuring the functions of nonsuicidal self-injury was found to be around α = .45 - .81. The internal consistency value of autonomous functions was found as .88 and internal consistency value of social functions was found as .89'. The internal consistency value of this second section was found as .93.

3.2.7. Suicide Ideation Scale (İntihar Düşünce Ölçeği)

This scale was developed by Levine (1989) and adapted to our culture by Dilbaz and his colleagues (1993). Suicide Ideation Scale consists of 17 items which are true-false questions. The test-retest reliability was assessed as r=. 88 (Dilbaz, 1995). In our study, internal consistency of Suicide Ideation Scale was assessed as significantly high (α =.85).

3.2.8. Brief Symptom Inventory (Kısa Semptom Envanteri)

Derogatis (1992) developed Brief Symptom Inventory to assess the symptoms of psychological disorders, including 53 items. The Turkish version of the inventory was adapted by Şahin and Durak (1994). The inventory consists of 5 groups, namely 'anxiety, depression, negative self, somatization and anger/aggressiveness.' The inventory asks for the symptoms observed in the last week. The internal consistency of the inventory was assessed as α = .95. In this present study, the Cronbach alpha values for the internal consistency of 5 factors were calculated as α = .88 for anxiety, α = .92 for depression, α = .89 for negative self, α = 86 for somatization, and α = .79 for hostility.

3.2.9. Cognitive Emotion Regulation Questionnaire (Bilişsel Duygu Regülasyon Ölçeği)

Cognitive Emotion Regulation Scale was developed by Garnefski, Kraaij, & Spinhoven (2001-2002) in order to understand the cognitive strategies used to regulate negative emotions. The questionnaire measures nine factors, 'self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing, other-blame.' This scale is a 5-point Likert type scale, including 36 items. The internal consistency rates of subscales were found as 'α = .68 - .86'among adolescents and elders. The scale was adapted to our culture by Öngen (2010) and the internal internal consistency rates of subscales were found as 'α = .68 - .84'

In this present study, the internal consistency values of 9 factors were found as α = .71 for self-blame, α = .65 for acceptance, α = .76 for rumination, α = .80 for positive refocusing, α = .74 for refocus on planning, α = .73 for positive reappraisal, α = .77 for putting into perspective, α = .65 for catastrophizing, and α = .72 for other-blame. The internal consistency value of positive cognitive emotion regulation abilities (acceptance, positive refocusing, refocus on planning, positive reappraisal, putting into perspective) was assessed as α = .84, whereas the internal consistency value of negative cognitive emotion regulation abilities (self-blame, rumination, catastrophizing, other-blame) was assessed as α = .82.

3.3. Procedure

Between January and February 2016, the ethical committee at Doğuş University confirmed this study. The government correspondence was started for the approval of this study and the ethical committee in the Ministry of Education confirmed the application of the study among final year high school students on March, 2016. Among 5 technical and industrial vocational high schools, firstly the informed consent forms were signed and approved by both the parents and the final year students. The questionnaires were filled by the students during their class time when their teachers approved the researcher's use of class time for the application of the study, and the assessment process was applied by the researcher or a psychologist who was informed about the study.

4. RESULTS

4.1. Data Analyses Strategy

Prior to the analysis, data were tested for univariate and multivariate outliers. Multivariate outliers in the data were detected using Mahalonabis distance. Accordingly, nine participants were deleted from the data (χ^2 (50) = 79.490, $p < .001$). Descriptive and inferential statistics were conducted on 405 participants. Assumptions for further analyses were met.

Before main analyses, descriptive statistics for the demographic variables were evaluated. Afterwards, descriptive statistics for self-injury variables were assessed. Then, a series of Chi-square tests were conducted to test if self-injury variables were associated with descriptive variables. Subsequently, correlations between study variables were examined.

Following descriptive analyses, a series of group comparisons were conducted self-injury behaviors using time passed since last self-injury, self-injury behaviour frequency, onset age of self-injury. Besides, group comparisons were tested on suicide ideation based on self-injury groups. Further, self-injury behaviors were predicted using study variables with a series of multiple linear regression and logistic regression analyses. Finally, hypotheses were tested with path analyses.

4.2. Descriptive Statistics for the Demographic Variables

Descriptive statistics for gender, SES, living condition, residential place, parental education, marital status of parents, number of children, birth order, psychological condition, and medical treatment history are shown in the Table 4.1. Information on demographic variables were organized based on the self-injury variables. Besides, those demographics were cross tabulated with self-injury variables using Pearson's Chi-square to test whether there were significant differences among self-injury and no self-injury group. Since the responses on the demographic questions violated the adequacy of sample size on each cell and because of the unequal sizes of cells (i.e., over 1:5) (Tabachnik & Fidell, 2013), some of the data on demographic questions were regrouped based on the cell sizes.

Table 4.1. Demographic information based on self-injury

Variables		Self-Injury (*N*)	Control (*N*)	Total (*N*)	χ^2	*p*
Gender					.57	.257
	Male	94	95	189		
	Female	115	100	215		
SES					3.52	.172
	Low	29	16	45		
	Middle	137	135	272		
	High	40	43	83		
Living Condition					2.32	.090
	With Family	186	184	370		
	Other	20	11	31		
Residential Place						
	Village	24	14	38	2.79	.426
	Town	44	39	83		
	City	53	54	107		
	Metropol	83	87	170		
Number of Children					2.22	.329
	1	79	82	161		
	2	76	57	133		
	3≥	54	55	109		
Maternal Education					.160	.923
	Primary≤	116	107	223		
	Elementary	46	45	91		
	High ≥	45	39	84		
Paternal Education					1.03	.597
	Primary ≤	77	67	144		
	Elementary	49	54	103		
	High ≥	81	71	152		
Mother					.274	.524
	Alive	204	192	396		
	Deceased	2	1	3		
Father					.013	.561
	Alive	196	184	380		
	Deceased	7	7	14		
Parent’s R.ship Status					.982	.202
	Together	178	173	351		
	Other	28	20	48		
Psychological Problem					14.27	.001
	Yes	34	9	43		
	No	170	180	350		
Treatment History					5.63	.017
	Yes	17	5	22		
	No	162	155	317		
Current Treatment					3.23	.072
	Yes	6	1	7		

	No	193	182	375		
Medication					3.29	.070
	Yes	6	3	9		
	No	193	179	372		
School						
	Yahya Kaptan	49	53	102		
	Zubeyde Hanım	41	22	63		
	Izmit	61	64	125		
	Derince	30	26	56		
	Atatürk	28	31	59		
Age					*t*	p
	Mean	17.85	17.74		-1.58	.114
	SD	.612	.678			

Based on the comparisons between self-injury and no self-injury group using non-parametric chi-square test revealed significant results only for psychological problems (χ^2 (1) = 14.27, $p < .001$) and treatment history (χ^2 (1) = 5.63, $p < .05$). Accordingly, more participants in the self-injury group as compared to no self-injury group reported more psychological problems and treatment history. Remaining comparisons revealed non-significant results.

4.3. Descriptive Statistics for Self-Injury

Frequencies for the descriptive part of the Self-Injury Scale are presented in Table 4.2. Since the frequencies were too low and non-normally distributed for the self-injury types, variables were dichotomized in terms of showing that specific behavior or not. Furthermore, data were recoded to merge all self-injury behaviors into single variable which was labelled as self-injury. If a participant reported any kind of self-injury behaviour, s/he was coded as 1 and remaining of the participants were coded as 0.

Table 4.2. Descriptive statistics for the self-injury behaviors

	Yes	*No*	*Missing*
Cutting	58	335	12
Biting	71	326	8
Burning	20	370	15
Carving	88	304	13
Pinching	77	316	12
Pulling Hair	57	335	13

Severe Scratching	57	338	10
Banging or Hitting Self	76	316	13
Interfering with Wound Healing	142	243	20
Rubbing Skin Against Rough Surface	39	352	14
Sticking Self with Needles	52	340	13
Swallowing Dangerous Substances	42	350	13
Other	16	374	15
Overall Self-Injury	209	196	
Do you want to stop self-harming?	130	66	207
	Mean	*SD*	
Age at First Harm	12.41	5.47	
Time Passed from Recent Harm (days)	687.44	844.15	
	No	*Sometimes*	*Yes*
Do you experience physical pain during harm?	54	93	58
When you self-harm, are you alone?	37	67	97

Means, standard deviation, minimum, and maximum values for self-injury functions are shown in Table 4.3. Besides the 13 subscales of self-injury scale, autonomous and social functions as broad categories and overall scale score are also presented.

Table 4.3. Descriptive statistics for the self-injury functions

	Mean	*SD*	*Minimum*	*Maximum*
Affect Regulation	2.57	1.81	.00	6.00
Interpersonal Boundaries	1.67	1.61	.00	6.00
Self-punishment	1.40	1.53	.00	6.00
Self-care	1.42	1.41	.00	6.00
Anti-dissociation	1.30	1.48	.00	6.00
Anti-suicide	1.58	2.02	.00	6.00
Sensation Seeking	1.03	1.28	.00	6.00
Peer Bonding	.49	1.06	.00	6.00
Interpersonal Influence	.80	1.91	.00	6.00
Toughness	1.50	1.68	.00	6.00
Marking Distress	1.56	1.70	.00	6.00
Revenge	1.24	1.40	.00	6.00
Autonomy	.88	1.36	.00	6.00
Autonomous	8.36	6.66	.00	28.00
Social	7.72	7.18	.00	32.00
Total Score	16.85	13.53	.00	61.00

4.4. Analyses on Demographic Variables and Self-Injury Types

In order to explore self-injury behaviour differences on demographic variables, dummy coded self-injury types and overall self-injury variable –composed of various self-injury behaviors- were cross-tabulated with categorical demographic variables as gender, parents' education level, parents' relationship status, socio-economic status, living condition, residence place, number of brothers/sisters, parents' education level, parents' relationship status, number of children, psychological problems, medication, and treatment history. Analyses were conducted using Pearson's Chi-square. Since, chi-square test is a non-parametric test, it allows to test hypothesized relationships under non-normal distributions and unequal cell sizes.

Based on the comparisons on cutting behaviour, significant difference was found on SES (χ^2 (2) = 9.45, $p < .01$). Accordingly, participants who cut themselves tend to belong to lower SES group as compared to participants who didn't cut themselves. Furthermore, cutting behaviour and psychological problem cross tabulation revealed significant results (χ^2 (1) = 42.13, $p < .001$). Accordingly, while only 19 participants out of 326 reported psychological problems in the no self-injury group, 19 participants out of 56 reported psychological problems, implying that participants showing cutting behaviour tend to have psychological problems. Similarly, frequency of treatment history was significantly higher for cutting behaviour as compared to participants who didn't cut themselves (χ^2 (1) = 10.96, $p < .001$). Furthermore, participants showing cutting behaviour more frequently reported taking treatment currently (χ^2 (1) = 10.36, $p < .001$) and psychiatric medication (χ^2 (1) = 8.62, $p < .001$).

Analyses on biting behaviour revealed that frequency of female participants were higher than males on biting category as compared to no biting category (χ^2 (1) = 6.25, $p < .05$). Remaining comparisons on biting behaviour were nonsignificant.

Chi-square tests on burning behaviour and demographic variables revealed that frequency of psychological problems was higher for burning group as compared to no burning group (χ^2 (1) = 5.25, $p < .05$). Similarly, frequency of psychological problems was higher for carving group as compared to no carving group (χ^2 (1) = 7.47, $p < .05$).

Pinching behaviour was more frequent among females as compared to males (χ^2 (1) = 4.30, $p < .05$). Furthermore, participants who pinch themselves reported slightly lower SES as compared to participants who didn't pinch themselves (χ^2 (1) = 6.14, $p < .05$). Moreover, frequency of psychological problems was slightly higher for pinching group (χ^2 (1) = 4.45, $p < .05$).

Results yielded that pulling hair was much more frequent among females as compared to males (χ^2 (1) = 22.94, $p < .001$). Besides, participants who reported pulling hair were more likely to belong lower SES as compared to participants who didn't reported pulling hair (χ^2 (1) = 18.60, $p < .001$). Furthermore, pulling hair group as compared to no pulling hair group reported more psychological problems (χ^2 (1) = 17.85, $p < .001$).

Similar to pulling hair, scratching is much more frequent among females as compared to males (χ^2 (1) = 13.71, $p < .001$). Further, lower levels SES was more frequent among scratching group (χ^2 (2) = 7.26, $p < .05$). Finally, psychological problems (χ^2 (1) = 18.83, $p < .001$), treatment history (χ^2 (1) = 11.91, $p < .001$), and receiving current treatment (χ^2 (1) = 10.45, $p < .001$) were more frequent among scratching group as compared to no scratching group.

Regarding the analyses on banging or hitting themselves, lower to middle SES was more frequent for participants who bang or hit themselves (χ^2 (1) = 18.98, $p < .001$). Besides, psychological problems are more frequent among participants who bang or hit themselves (χ^2 (1) = 12.01, $p < .001$).

Analyses on interfering with wound healing behaviour revealed significant results only for psychological problems (χ^2 (1) = 5.45, $p < .05$) and treatment history (χ^2 (1) = 4.17, $p < .05$). Accordingly, participants who interfere with wound healing tend to have psychological problems and psychological treatment history as compared to participants who didn't report such behaviour.

Similar to other self-injury behaviours, participants who reported rubbing skin against rough surfaces were more likely to have psychological problems as compared to participants who didn't report such behaviors (χ^2 (1) = 4.96, $p < .05$). Other analyses on this behaviour were nonsignificant. Analyses on sticking self with needles revealed the

same pattern. Accordingly, participants who stick themselves with needles were more likely to have psychological problems (χ^2 (1) = 3.86, $p < .05$).

Finally, parallel to other self-injury behaviors swallowing dangerous substances yielded significant results only for psychological problems (χ^2 (1) = 22.05, $p < .001$) and treatment history (χ^2 (1) = 7.97, $p < .01$).

4.5. Correlational Analyses on Self-Injury Functions

In this section, bivariate correlations between self-injury functions and study variables were examined. Analyses were conducted only on self-injury group including 209 participants. Results are presented in Table 4.4.

Results showed that affect regulation subscale of self-injury functions was significantly correlated with self-blame ($r = .16$, $p < .05$), acceptance ($r = .21$, $p < .05$), rumination ($r = .18$, $p < .05$), putting into perspective ($r = .15$, $p < .05$), and catastrophizing ($r = .20$, $p < .05$) scales of the cognitive emotion regulation. Furthermore, affect regulation was significantly related to family dysfunction in areas such as communication ($r = .16$, $p < .05$), roles ($r = .17$, $p < .05$), emotional response ($r = .52$, $p < .05$), and general functioning.

Interpersonal boundaries subscale was significantly associated with self-blame ($r = .20$, $p < .05$), acceptance ($r = .20$, $p < .05$), putting into perspective ($r = .25$, $p < .05$), and catastrophizing ($r = .27$, $p < .001$) dimensions.

Regarding the self-punishment subscale, significant relationships were found between self-blame ($r = .38$, $p < .001$), rumination ($r = .18$, $p < .05$), refocus on planning ($r = -.16$, $p < .05$) and catastrophizing ($r = .32$, $p < .001$) of cognitive emotion regulation. It also showed significant positive correlations with family dysfunction in problem solving ($r = .16$, $p < .05$), communication ($r = .27$, $p < .001$), emotional response ($r = .23$, $p < .001$), and general functioning ($r = .22$, $p < .05$). Within the cognitive emotion regulation and family functioning, self-care showed significant correlation only with catastrophizing ($r = .20$, $p < .05$) and self-blame ($r = .21$, $p < .05$) dimensions.

Table 4.4. Correlations among Study Variables and Self-Injury Functions

Variables	*AR*	*IB*	*SP*	*SC*	*AD*	*AS*	*SS*	*PB*	*II*	*T*	*MD*	*R*	*A*	*F1*	*F2*	*Total*
Self-blame	.16*	.20*	.38**	.11	.20*	.19*	.10	-.04	.11	.09	.24**	.15*	.08	.30**	.14	.22*
Acceptance	.21*	.20*	.13	.05	.25**	.22*	.18*	-.03	.11	.13	.19*	.22*	.03	.26**	.14*	.19*
Rumination	.18*	.11	.18*	.11	.17*	.19*	.02	-.08	-.02	.05	.18*	.12*	.05	.23**	.05	.13
Positive Refocusing	-.04	-.01	-.09	.13	.04	.04	.19*	.20*	.02	-.05	-.06	-.05	.08	-.03	.09	.03
Refocus on Planning	-.05	.02	-.16*	-.01	.01	.01	.11	.03	-.03	.09	-.02	-.04	.09	-.04	.06	.01
Positive Reappraisal	-.02	.04	-.10	-.09	.07	.08	.19*	.06	-.03	.10	-.01	-.02	.04	.01	.09	.05
Putting into Perspective	.15*	.15*	.03	.15	.19*	.19*	.26**	.06	.04	.07	.17*	.10	.07	.19*	.15*	.17*
Catastrophizing	.20*	.27**	.32**	.20*	.27**	.19*	.20*	.13	.20*	.15*	.26**	.25*	.21*	.31**	.27**	.31**
Other Blame	.12	.09	.10	.21*	.11	.11	.23**	.09	.12	.20*	.15*	.18*	.25**	.15*	.23**	.22**
Problem Solving	.08	.07	.16*	-.07	.05	.09	-.05	-.02	.04	-.12	.07	.10	-.10	.11	-.05	.03
Communication	.16*	.12	.27**	.01	.11	.18*	-.04	-.04	.05	-.10	.14	.24**	-.02	.22*	-.01	.13
Roles	.17*	.07	.14	.01	.06	.14	.03	-.04	.02	.01	.15*	.12	.06	.17*	.03	.11
Emotional Response	.15*	.07	.23**	.01	.05	.08	-.02	-.03	.09	-.03	.13	.23**	.04	.16*	.02	.12
General Functioning	.20*	.07	.22**	-.03	.06	.14*	-.05	-.09	.06	-.02	.17*	.21*	-.02	.20*	-.01	.12
Family	-.09	-.14	-.18*	.12	-.12	-.14*	.01	.11	-.01	.05	-.15*	-.09	-.03	-.17*	.01	-.09
Friends	-.06	-.09	-.10	-.02	-.04	-.12	-.05	.02	-.04	-.08	-.17*	-.03	-.02	-.12	-.05	-.09
Significant Other	-.09	-.12	-.08	-.01	-.06	-.05	-.01	.03	-.07	-.04	-.14*	-.11	-.06	-.10	-.05	-.09
Suicide Ideation	.33**	.37**	.51**	.17*	.35**	.37**	.21*	.10	.21*	.14*	.36**	.38**	.22*	.49**	.28**	.42**
Loneliness	.07	.10	.20*	.07	.10	.13	-.04	-.03	.06	.04	.11	.15*	.02	.15*	.04	.10
Nonacceptance	.25**	.11	.25**	.17*	.17*	.12	.10	.04	.11	.02	.26**	.27**	.13	.26**	.13	.22*
Awareness	-.05	.03	.03	-.09	-.01	-.17*	-.11	-.04	.01	-.04	-.07	.04	-.03	-.08	-.05	-.05

Goals	.21**	.10	.15*	.08	.12	.17*	.13	-.05	.07	.15*	.15*	.16*	.09	.20*	.11	.17*
Impulse	.24**	.13	.21*	.14*	.14	.22**	.13	-.02	.12	.09	.22**	.26**	.13	.27**	.14*	.22**
Strategies	.28**	.27**	.33**	.15*	.27**	.28**	.18*	-.01	.16*	.14	.37**	.33**	.19*	.39**	.21*	.32**
Clarity	.14*	.14*	.23**	.02	.11	.09	.09	-.07	.05	.08	.20*	.11	-.01	.20**	.07	.14*
DERS total	.29**	.21*	.32**	.14	.22*	.21*	.15*	-.03	.13	.11	.31**	.31**	.14*	.34**	.17*	.27**
Anxiety	.38**	.41**	.47**	.22*	.41**	.36**	.34**	.05	.23**	.23**	.42**	.44**	.24**	.52**	.34**	.46**
Depression	.33**	.38**	.43**	.13	.36**	.37**	.29**	.02	.18*	.21*	.40**	.41**	.22*	.48**	.29**	.41**
Negative Self	.35**	.40**	.47**	.16*	.38**	.41**	.31**	.01	.26**	.16*	.41**	.41**	.24**	.52**	.30**	.44**
Somatization	.21*	.29**	.28**	.13	.29**	.30**	.24**	.03	.14	.15*	.27**	.36**	.15*	.34**	.22*	.31**
Hostility	.36**	.39**	.37**	.21*	.36**	.34**	.31**	.01	.21*	.20*	.44**	.46**	.21*	.48**	.30**	.43**

*Note. *p < .05; **p < .01. AR:* Affect Regulation, *IB:* Interpersonal Boundaries, *SP:* Self-punishment, *SC:* Self-care, *AD:* Anti-dissociation, *AS:* Anti-suicide, *SS:* Sensation Seeking, PB: Peer Bonding, *II:* Interpersonal Influence, *T:* Toughness, *MD:* Marking Distress, *R:* Revenge , *A:* Autonomy, *F1:* Autonomous Function, *F2:* Social Function, *Total:* Total Score

Furthermore, anti-dissociation was significantly correlated with self-blame (r = .20, p < .05), acceptance (r = .25, p < .001), rumination (r = .17, p < .05), putting into perspective (r = .19, p < .05), catastrophizing (r = .27, p < .001) dimensions of cognitive emotion regulation. Similarly, anti-suicide dimension was significantly positively correlated with those dimensions (r =.19, p < .05; r =.22, p < .05; r =.19, p < .05; r = .19, p < .05; r = .19, p < .05; respectively) and also family dysfunction in communication (r = .18, p < .05) and general functioning (r = .14, p < .05).

Sensation seeking showed a different pattern in that it was correlated with acceptance (r = .18, p < .05), positive refocusing (r = .19, p < .05), positive reappraisal (r = .19, p < .05), putting into perspective (r = .26, p < .001), catastrophizing (r = .20, p < .005), and other blame (r = .23, p < .001) dimensions of cognitive emotion regulation.

Marking distress function of self-injury showed significant positive correlations with self-blame (r = .24, p < .001), acceptance (r = .19, p < .05), rumination (r = .18, p < .05), putting into perspective (r = .17, p < .05), catastrophizing (r = .26, p < .001), and other blame (r = .15, p < .05) dimensions of cognitive emotion regulation. Moreover, it was significantly associated with family dysfunction in roles (r = .15, p < .05) and general functioning (r = .197, p < .05). Peer bonding, interpersonal influence, toughness, and autonomy showed no significant correlation with cognitive emotion regulation and family functioning dimensions.

Correlational analyses on self-injury functions revealed that only support perceived from family showed significant negative correlations with self-punishment (r = -.18, p < .05), anti-suicide (r = -.15, p < .05), and marking stress (r = -.17, p < .05) functions. Support received from significant others and friends revealed nonsignificant correlations with self-injury functions.

Suicide ideation showed moderate to strong positive correlations with all of the self-injury functions except for peer bonding. On the other hand, loneliness yielded significant positive correlations only with self-punishment (r = .20, p < .05) and revenge (r = .15, p < .05).

Regarding the difficulties in emotion regulation, correlations were in general weak to moderate. Overall, emotion regulation scores were significantly correlated with affect regulation (r = .29, p < .001), interpersonal boundaries (r = .21, p < .05), self-punishment

(r = .32, p < .001), anti-dissociation (r = .22, p < .05), anti-suicide (r = .21, p < .05), sensation seeking (r = .15, p < .05), marking distress (r = .31, p < .001), revenge (r = .31, p < .001), and autonomy (r = .14, p < .05).

Finally, correlational analyses between symptoms and self-injury functions revealed strong relationships for most of the pairs. Correlations between self-care and symptoms revealed moderate correlations while peer bonding yielded nonsignificant correlations with symptoms.

Overall, self-injury functions are moderately associated with cognitive emotion regulation, family dysfunction, perceived support from family, and emotion regulation difficulties. On the other hand, they revealed strong positive correlations with suicide ideation and symptoms.

4.6. Group Comparisons Based on Acceptance and Putting into Perspective Scores of Participants Showing Self-Injury Behaviors

In this section, a series of Independent Samples t-tests were conducted to compare low and high acceptance groups among self-injurers on study variables as family functioning dimensions, dimensions of emotion regulation problems, loneliness, and social support dimensions, as well as low and high putting into perspective groups among self-injurers on the same variables. In order to run analyses, two groups were created as -1 SD away from the mean (Nacceptance = 84; Nputting into perspective = 71) and +1 SD away from the mean (Nacceptance = 72; Nputting into perspective = 71). Grouping procedures and t-tests were conducted only on participants who reported self-injury behaviors. Results of the analyses were shown in Table 4.5.

Table 4.5. Group comparisons based on acceptance and putting into perspective scores

	Acceptance					Putting into Perspective				
	Low		High			Low		High		
	M	*SD*	*M*	*SD*	*t*	*M*	*SD*	*M*	*SD*	*t*
Problem Solving	2.19	.72	2.23	.74	-.36	2.35	.76	2.12	.72	1.90
Communication	2.05	.54	2.14	.66	-.89	2.19	.59	2.00	.61	1.92

Affective Responses	2.08	.65	2.23	.67	-1.45	2.16	.69	2.07	.62	.893
General Functioning	1.86	.61	2.02	.71	-1.46	2.08	.71	1.81	.68	2.25*
Loneliness	2.92	.39	3.01	.34	-1.52	2.98	.36	2.99	.32	-.270
Nonacceptance	1.94	.83	2.45	.97	-3.56**	2.24	.95	2.15	.93	.577
Awareness	2.52	.68	2.36	.67	1.43	2.71	.80	2.36	.62	2.95*
Goals	3.08	1.18	3.65	.93	-3.30**	3.51	1.02	3.18	1.12	1.83
Impulse	2.72	1.04	2.96	1.04	-1.42	3.13	1.03	2.71	1.04	2.50*
Strategies	2.44	.94	2.78	.94	-2.24*	2.91	.82	2.39	.90	3.63**
Clarity	2.24	.73	2.55	.96	-2.32*	2.58	.80	2.38	.94	1.36
DERS total	2.48	.61	2.77	.61	-3.01*	2.84	.54	2.51	.64	3.41**
Family	5.08	1.83	5.02	1.87	.199	4.77	1.95	5.23	1.74	-1.49
Friends	5.08	1.98	5.33	1.80	-.799	5.31	1.84	5.28	1.87	.122
Significant Other	5.54	1.60	5.38	1.73	.597	5.30	1.69	5.62	1.56	-1.19

*Note. *p < .05; **p < .001*

According to the results of the group comparisons based on acceptance scores, significant group differences were found on emotion regulation problems. Correspondingly, participants with higher acceptance scores (*M* = 2.45, *SD* = .97) reported higher levels of nonacceptance as compared to participants with lower acceptance scores (*M* = 1.94, *SD* = 83; *t* (153) = -3.56, *p* < .001). Likewise, participants with higher acceptance scores reported higher levels of difficulties engaging in goals (*M* = 3.65, *SD* = .93), limited access to strategies (*M* = 2.78, *SD* = .94), lack of emotional clarity (*M* = 2.55, *SD* = .96), and overall emotion regulation problems (*M* = 2.77, *SD* = .61) as compared to participants with lower acceptance scores (*M* = 3.08, *SD* = 1.18; *t* (153) = -3.30, *p* < .001; *M* = 2.44, *SD* = .94; *t* (153) = -2.24, *p* < .05; *M* = 2.24, *SD* = .73; *t* (153) = -2.32, *p* < .05; *M* = 2.48, *SD* = .61; *t* (153) = -3.01, *p* < .05, respectively).

Results of independent samples t-tests on group comparisons based on putting into perspective revealed significant results on general family functioning and dimensions of emotion regulation problems. Accordingly, group with low putting into perspective scores (*M* = 2.08, *SD* = .71) reported higher levels of general family dysfunctioning as compared to group with high putting into perspective scores (*M* = 1.81, *SD* = .68; *t* (153) = 2.25, *p* < .05). Furthermore, low putting into perspective group (*M* = 2.71, *SD* = .80) reported higher levels of lack of emotional awareness as compared to high putting into perspective group (*M* = 2.36, *SD* = .62; *t* (153) = 2.95, *p* < .05). Similarly, low putting into perspective group yielded higher levels of impulse control difficulties (*M* = 3.13, *SD*

= 1.03), limited access to strategies strategies (M = 2.91, SD = .82), and overall emotion regulation problems (M = 2.84, SD = .54) as compared to high putting into perspective group (M = 2.71, SD = 1.04; t (153) = 2.50, $p < .05$; M = 2.39, SD = .90; t (153) = 3.63, $p < .001$; M = 2.51, SD = .64; t (153) = 3.41, $p < .001$, respectively).

4.7. Correlational Analyses on Suicide Ideation

In this section, bivariate correlations between suicide ideation and study variables were examined. Analyses were conducted for self-injury and no self-injury group separately. Results are shown in Table 4.6. Suicide ideation was significantly correlated with almost all of the study variables especially for self-injury group. Those relationships were particularly stronger for emotion regulation difficulties and symptoms.

Table 4.6. Correlations among study variables and suicide ideation

	Suicide Ideation		
	No Self-Injury	Self- Injury	Total Sample
Self-blame	.26**	.46**	.41**
Acceptance	.09	.22**	.19**
Rumination	.04	.22**	.19**
Positive Refocusing	-.20**	-.15*	-.20**
Refocus on Planning	-.24**	-.20**	-.22**
Positive Reappraisal	-.26	-.18**	-.24**
Putting into Perspective	-.10	-.04	-.06
Catastrophizing	.24**	.44**	.40**
Other Blame	.14	.17*	.24**
Problem Solving	.33**	.39**	.42**
Communication	.39**	.45**	.48**
Roles	.34**	.35**	.39**
Emotional Response	.42**	.39**	.44**
General Functioning	.42**	.44**	.49**
Family	-.33**	-.42**	-.46**
Friends	-.06	-.22*	-.21**
Significant Other	-.18*	-.29**	-.31**
Loneliness	.29**	.25**	.29**
Nonacceptance	.48**	.30**	.40**
Awareness	.09	.05	.09
Goals	.29**	.31**	.35**
Impulse	.51**	.48**	.53**
Strategies	.49**	.52**	.55**
Clarity	.37**	.34**	.37**
DERS total	.56**	.53**	.58**
Anxiety	.58**	.58**	.64**
Depression	.60**	.62**	.67**

Negative Self	.63**	.66**	.69**
Somatization	.48*	.45**	.54**
Hostility	.57**	.62**	.67**

*Note. *p < .05; **p < .001*

4.8. Analyses on Self-Injury Descriptives

In order to assess the mean differences on study variables based on time passed since the last self-injury behaviour was tested using a series of One-way ANOVAs on the participants who reported self-injury behaviors. Significant group differences were further evaluated with Bonferroni post-hoc comparisons. For this aim, time variable was grouped into three categories as last month (*N* = 40), last month to last year (*N* = 37), and before last year (*N* = 64). Means, standard deviations, and results of the ANOVA analyses were presented in Table 4.7.

Table 4.7. Group comparisons based on time passed since the last self-injury behavior

Variables	*Last Month*		*Last Year*		*Before Last Year*		
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*	*F*
Self-blame	2.74	.97	2.72	.84	2.44	.77	2.04
Acceptance	2.74	.96	2.94	.85	2.63	.84	1.47
Rumination	3.32	1.13	3.26	.88	3.22	.98	.13
Positive Refocusing	2.72	1.24	2.19	.95	2.67	1.05	2.79
Refocus on Planning	3.51	.89	3.13	1.00	3.59	.99	2.74
Positive Reappraisal	3.71	.91	2.88	1.00	3.32	1.08	2.27
Putting into Perspective	3.18	.98	2.82	1.06	3.29	1.03	2.42
Catastrophizing	2.54	.93	2.49	.99	2.40	.95	.27
Other Blame	2.58	.92	2.29	.89	2.21	.70	2.53
Problem Solving	2.50[a]	.75	2.53[a]	.65	2.12[b]	.71	5.58*
Communication	2.37[a]	.67	2.39 [a]	.51	2.04 [b]	.59	5.93*
Roles	2.24	.48	2.34	.53	2.14	.45	2.12
Affective Responses	2.32[a]	.67	2.41[a]	.65	2.10[b]	.66	3.09*
General Functioning	2.17[ab]	.78	2.30[a]	.69	1.87[b]	.58	5.32*
Family (Support)	4.53[ab]	1.91	4.26[a]	1.91	5.29[b]	1.82	4.17*
Friends (Support)	5.04	2.01	4.68	1.86	5.30	1.79	1.27
Significant Other (Support)	5.03[ab]	1.78	4.68[a]	1.86	5.61[b]	1.48	3.99*
Suicide Ideation	6.65[ab]	4.68	7.94[a]	4.06	5.33[b]	3.79	4.74*
Loneliness	2.94	.41	3.04	.32	3.01	.30	.83
Nonacceptance	2.08	.78	2.38	.91	2.15	.90	1.28
Awareness	2.59	.64	2.60	.87	2.48	.76	.43
Goals	3.23	1.01	3.62	.91	3.26	1.10	1.78

Impulse	2.79	1.06	3.08	.82	2.71	1.05	1.63
Strategies	2.63	.93	2.90	.88	2.51	.89	2.25
Clarity	2.53	.86	2.55	.98	2.53	.81	.01
DERS Total	2.63	.55	2.85	.54	2.59	.65	2.37
Anxiety	18.51	12.22	20.08	11.63	18.31	11.76	.28
Depression	22.49	14.04	25.11	13.27	19.75	12.47	1.97
Negative Self	17.36	13.35	20.37	12.21	14.81	10.49	2.55
Somatization	11.59	8.89	12.17	8.6	11.00	8.03	.23
Hostility	14.53	7.41	15.52	6.32	12.53	6.46	2.41

*Note. *p < .05; **p < .001*

According to the results, family dysfunction in problem solving was significantly found to be different across groups (F (2, 139) = 5.58, $p < .05$). Further comparisons revealed that participants who injured themselves before last year (M = 2.12, SD = .71) reported lower levels of family dysfunction in problem solving as compared to last month (M = 2.50, SD = .75) and last year groups (M = 2.53, SD = .65). Analysis on communication variable revealed similar results (F (2, 139) = 5.93, $p < .05$). Accordingly, participants in the before last year group (M = 2.04, SD = .59) reported significantly lower levels of family dysfunction in communication strategies as compared to last month (M = 2.37, SD = .67) and last year groups (M = 2.39, SD = .51). Based on the group comparisons using family dysfunction in affective responses (F (2, 139) = 3.09, $p < .05$), again participants who injured themselves before last year (M = 2.10, SD = .66) had lower family dysfunction in affective responses compared to last month (M = 2.32, SD = .67) and last year groups (M = 2.41, SD = .65). General functioning dimension also yielded significant results (F (2, 139) = 5.32, $p < .05$). Besides, only participants who injured themselves before last year (M = 1.87, SD = .58) had lower general family dysfunction than participants who injured themselves last year (M = 2.30, SD = .69).

Regarding the comparisons on social support yielded significant results for family support (F (2, 139) = 4.17, $p < .05$) and significant other support (F (2, 139) = 3.99, $p < .05$). Post-hoc comparison revealed similar results that participants who injured themselves before last year (M = 5.29, SD = 1.82; M = 5.61, SD = 1.48, respectively) reported higher levels of social support than participants who injured themselves last year (M = 4.26, SD = 1.91; M = 4.68, SD = 1.86, respectively).

Finally, group comparisons were significant for suicide ideation (F (2, 139) = 4.74, $p < .05$). Correspondingly, participants who injured themselves before last year (M = 5.33, SD = 3.79) had lower suicide ideation scores than participants who injured themselves last year (M = 7.94, SD = 4.06).

4.9. Analyses on Self-Injury Behavior Frequency

In this section, group differences based on self-injury frequency were investigated on study variables on the participants who reported self-injury behaviors. In order to run tests, frequency of any kind self-injury behaviors were summed. Then, two group were created as -1 SD away from the mean (N = 76) and +1 SD away from the mean (N = 76). Afterwards, a series of Independent Samples t-tests were conducted. For all t-tests, normality assumptions were considered.

According to the results, significant differences were found on suicide ideation (t (150) = -2.91, $p < .05$). As expected, participants who frequently injure themselves (M = 4.92, SD = 3.72) reported higher levels of suicide ideation than participant who rarely injure themselves (M = 6.82, SD = 4.29).

Moreover, significant group differences were found for dimensions of symptoms. Accordingly, participants injuring themselves frequently (M = 18.79, SD = 12.18) reported higher levels of anxiety than participants injuring themselves rarely (M = 15.15, SD = 10.32; t (150) = -1.98, $p < .05$). Similarly, frequently injuring group reported higher levels of negative self (M = 17.89, SD = 12.51), somatization (M = 12.37, SD = 9.05), and hostility (M = 14.28, SD = 6.32) as compared to rarely injuring group (M = 13.52, SD = 10.05; t (150) = -2.34, $p < .05$; M = 8.49, SD = 6.64; t (150) = -2.99, $p < .05$; M = 11.54, SD = 6.28; t (150) = -2.68, $p < .05$, respectively).

Relationship between onset age and self-injury types were also investigated to explore if different self-injury types start at different age groups. For this aim, participants were grouped based on onset age into three groups; 9-12 (N = 47), 13-15 (N = 67), 16-19 (N = 27). Afterwards, those three groups were cross tabulated with dichotomized (0 = no self-injury; 1 = self-injury) 13 self-injury variables and overall self-injury behaviour. Analyses were conducted with Pearson Chi-square.

Results revealed significant results only for cutting behaviour (χ^2 (2) = 6.56, p < .05). Accordingly, majority of the participants (22 out of 25) in the 16-19 age group didn't reported cutting behaviour while cutting behaviour occurs more frequently for the 13-15 age group (24 out of 60) and for 9-12 group (17 out of 46). In general, cutting behaviour seems to occur at early ages. Remaining tests on the relationship between age and self-injury type revealed nonsignificant results.

In this section, besides previous analyses, relationship between frequency of self-injury behaviour and onset age of self-injury behaviour was investigated using Pearson Chi-square for categorized versions and Pearson correlation for continuous versions of the variables. Both of the analyses revealed nonsignificant results (χ^2 (4) = 8.98, *ns; r* (205) = .054, *ns*); there was no relationship between the starting age and frequency of self-injury behaviors.

4.10. Analyses on Self-Injury Behaviors and Suicide Ideation

4.10.1. Analyses on Self-Injury Type and Suicide Ideation

In this section, relationship between dummy coded self-injury types and suicide ideation was investigated. Since self-injury behaviors had unequal sample size, a nonparametric group comparison test was used. Thus, using a series Mann-Whitney U tests, suicide ideation levels of each self-injury behaviour was compared. Results are presented in Table 4.8.

Table 4.8. Self-injury type comparisons on suicide ideation

	Suicide Absence of Self-Injury	*İdeation Presence of Self-Injury*	
	Mean Rank	*Mean Rank*	*Mann-Whitney U*
Cutting	183.27	272.17	5114.50**
Biting	188.39	243.42	8113.00**
Burning	190.73	263.80	2294.00**
Carving	184.29	235.13	9653.50**
Pinching	188.42	227.95	9454.00*
Pulling Hair	184.29	260.96	5759.00**
Severe Scratching	184.52	270.57	5382.50**

Banging or Hitting Self	175.09	282.66	5242.50**
Interfering with Wound Healing	164.98	238.38	10521.00**
Rubbing Skin Against Rough Surface	186.60	274.93	3554.50**
Sticking Self with Needles	187.15	249.80	5964.50**
Swallowing Dangerous Substances	184.55	288.67	3334.50**
Other	190.61	291.17	1347.50**
Overall Self-Injury	149.91	251.32	10076.00**

Note. *$p < .05$; **$p < .001$*

According to the results, on all of the self-injury types and on overall self-injury variable, participants who injured themselves reported significantly higher levels of suicide ideation as compared to participants who didn't injure themselves.

4.10.2. Analyses on Self-Injury Descriptives and Suicide Ideation

Three One-way ANOVAs were conducted to investigate group differences on suicide ideation. Independent variables were onset of the self-injury behaviour, time passed since last self-injury behaviour, and frequency of self-injury behaviors.

According to the results, no significant differences were found between different age groups for the onset of the self-injury behaviour. In terms of time passed since last self-injury, results yielded significant results (F (2, 229) = 7.30, $p < .001$). Further post-hoc comparisons using Bonferroni adjustment revealed that participants who injured themselves before last year (M = 5.21, SD = 3.82) had lower suicide ideation as compared to participants who injured themselves last year (M = 7.85, SD = 4.05). Remaining comparisons were nonsignificant.

Finally, groups comparison using categorized self-injury frequency on suicide ideation yielded significant results (F (2, 229) = 4.15, $p < .05$). Accordingly, participants who frequently injure themselves (M = 6.82, SD = 4.29) had higher levels of suicide ideation as compared to participants who rarely injure themselves (M = 4.92, SD = 3.72).

4.11. Predicting Self-Injury Behaviors

As main analyses, a series of regression analyses were conducted on the main dependent variables of the study as suicide ideation and self-injury behaviors. Since the

number of independent variables were too high, separate regression analyses for each dependent variable were conducted for four different sets of independent variables based on theoretical relevancy. For suicide ideation, multiple linear regression analyses were conducted. Since, self-injury variables are dummy-coded dichotomous variables, multiple logistic regressions were conducted.

First analysis was conducted on suicide ideation using cognitive emotion regulation strategies as independent variable. Overall model was significant (F (9, 404) = 19.79, p < .001). Variables in the equation explained 31% of the variance on suicide ideation. Considering the individual effects, while higher levels of self-blame (β = 0.31, p < .001), catastrophizing (β = 0.17, p < .001), and blaming others (β = 0.14, p < .05) predicted higher levels of suicide ideation, positive reappraisal (β = -0.24, p < .001) predicted lower levels of suicide ideation.

Second analysis was conducted using loneliness, family functioning dimensions, and social support dimensions. Overall model test yielded significant results (F (8, 404) = 19.40, p < .001) with an explained variance of 31%. Among the independent variables, loneliness (β = 0.14, p < .05) and family dysfunction in communication dimension predicted higher levels of suicide ideation (β = 0.18, p < .05). Even though results were nonsignificant, family support seems to decrease suicide ideation with a marginally significant effect.

Thirdly, a multiple linear regression analysis was conducted on suicide ideation using emotion regulation difficulties. Overall model was significant with an explained variance 37% (F (6, 404) = 39.26, p < .001). Considering the main effects, higher levels of impulsivity (β = 0.29, p < .001), limited access to emotion regulation strategy (β = 0.32, p < .001), and lack of emotional clarity (β = 0.11, p < .05) predicted higher levels of suicide ideation.

In the final multiple linear regression, symptoms were used as predictors on suicide ideation. Overall model yielded significant results with an explained variance of 54% (F (5, 404) = 93.49, p < .001). Specifically, while lower levels of anxiety (β = -0.19, p < .05) predicted higher levels suicide ideation, higher levels of depression (β = 0.23, p < .05), negative self (β = 0.38, p < .001), and hostility (β = 0.36, p < .001) predicted higher levels

of suicide ideation. Results of multiple linear regression analyses were presented at Table 4.9.

Table 4.9. Multiple linear regression analyses on suicide ideation

Variable	β	R^2
Self-blame	.31**	
Acceptance	.02	
Rumination	.04	
Positive Refocusing	.02	
Refocus on Planning	-.09	
Positive Reappraisal	-.24**	
Putting into Perspective	.03	
Catastrophizing	.16**	
Other Blame	.14**	
		31%
Loneliness	.14*	
Problem Solving	.02	
Communication	.17*	
Affective Responses	.08	
Roles	.05	
General Functioning	.10	
Family (Support)	-.13	
Friends (Support)	.02	
Significant Other (Support)	-.08	
		31%
Nonacceptance	.05	
Awareness	.06	
Goals	-.06	
Impulse	.29**	
Strategies	.32**	
Clarity	.11*	
		37%
Anxiety	-.19*	
Depression	.23*	
Negative Self	.38**	
Somatization	.02	
Hostility	.36**	
		54%

In order to predict self-injury types, four different independent variables were regressed on the 13 different self-injury types which resulted in 52 different logistic

regression analyses. All of the logistic regression analyses revealed non-significant results. Aim of the logistic regression is to detect independent variables which successfully and accurately predict whether a participant belongs to null group (no self-injury) or not. Afterwards, that prediction is compared against actual classification to check the success of the model. In the current study, for all of the self-injury types only 10% to 20% of the participants reported those specific behaviors. Thus, even though logistic regression is a non-parametric test which is robust against unequal cell sizes, there was nothing left in terms of variance. In other words, since almost all of the participants were in the no self-injury group, logistic regression failed to make prediction. Therefore, only analyses on overall self-injury behaviour which had comparable cell sizes are presented.

In the first analysis, logistic regression was conducted with overall self-injury (no self-injury, self-injury) as outcome and cognitive emotion regulation strategies as predictors. A test of full model against constant-only model indicated that the variable set reliably predicted the probability of committing self-injury behaviour (χ^2 (9) = 40.94, p < .001). A comparison of the observed cases with the predicted cases via Hosmer-Lemeshow test revealed that model provided good fit to the data (χ^2 (8) = 10.07, p = .26). Overall, model accounted for 13% of the variance in committing self-injury behavior. Using cut off probability of .5, 256 cases (63.2%) were correctly classified. Considering the proportional by chance accuracy criteria (62.5%), model classified the cases more than by chance. The model did a better job in classifying cases with self-injury (67.5%) than it did in classifying cases with no self-injury (58.7%). According to the results, positive reappraisal (*Wald* = 5.57, p < .05) and blaming others (*Wald* = 12.23, p < .001) significantly predicted self-injury. Specifically, the odds of committing self-injury behavior were increased by 1.18 times with a unit increase in positive reappraisal, by 1.75 times with a unit increase in blaming others.

In the second analysis, logistic regression was conducted with overall self-injury (no self-injury, self-injury) as outcome and loneliness, family functioning, and social support as predictors. A test of full model against null model yielded that the variable set significantly predicted self-injury (χ^2 (9) = 43.75, p < .001). Hosmer-Lemeshow test revealed that model provided good fit to the data (χ^2 (9) = 13.08, p = .11). The model explained 14% of the variance in the self-injury behaviors. Using the cut off probability

of .5, 252 cases (62.2%) were correctly classified. Considering the proportional by chance accuracy criteria (62.5%), model classified the cases around the by chance criteria. The model classified participants in the no self-injury group (65.8%) than self-injury group (58.9%) implying that those independent variables partly defines which participants didn't commit self-injury as a protective mechanism. Based on the results, only family support (*Wald* = 4.23, $p < .001$) significantly predicted self-injury. The odds of committing self-injury were 19% decreased with a unit increase in family support.

Third logistic regression was run with emotion regulation difficulties as predictors. A test of the full model with 11 predictors against constant-only model indicated that the variable set reliably predicted the probability of experiencing anxiety (χ^2 (6) = 38.92, $p <$ .001). Hosmer- Lemeshow test revealed that the model provided a good fit to the data (χ^2 (8) = 9.43, p = .31). Overall, the model accounted 12% of the variance on self-injury. Using cut off probability of .5, 242 (64.7%) of the participants were correctly classified. Furthermore, self-injury classification (67%) was slightly better than no self-injury classification (62.2%). According to the results, only impulsivity (*Wald* = 4.20, $p < .05$) significantly predicted self-injury. Specifically, odds of committing self-injury behaviors were increased by 1.30 times with a unit increase in impulsivity.

Final logistic regression analysis was conducted with symptoms as predictors. A test of full model against constant-only model yielded significant results (χ^2 (5) = 74.72, $p < .001$). Hosmer- Lemeshow test revealed that the model provided a good fit to the data (χ^2 (8) = 5.79, p = .62). overall model explained 23% of the variance in self-injury behaviors. Model classified 275 (67.9%) of the participants correctly which is above the by chance criteria. Classification success of no self-injury (67.3%) and self-injury (68.4%) group were similar. Based on the individual effects, only hostility significantly predicted self-injury (*Wald* = 14.42, $p < .001$). Therefore, probability of committing self-injury behaviors was increased by 1.12 times with a unit increase in hostility.

4.12. Model Testing

In order to assess the relationship between study variables in a comprehensive model, path analysis technique was used. For this aim, a series of hypothesized path models were tested using Lisrel 8.8.

In the first model, mediating role of difficulties in emotion regulation on the relationship between loneliness and self-injury was tested. Model test suggested a full-mediation model. In other words, full-mediation model revealed good fit to the data (χ^2 (1) = 1.03, p = .31, RMSEA = .01, GFI = .99, AGFI = .99, NNFI = .99, CFI = 1.00, PGFI= .17). According to the results, higher levels of loneliness predicted higher levels of difficulties in emotion regulation (β = .29, p < .001), and higher levels of difficulties in emotion regulation predicted higher levels of self-injury (β = .29, p < .001). Indirect effect was also significant (β = .12, p < .001) suggesting that loneliness itself is not predictive of self-injury behaviour, but loneliness increase self-injury behaviour via increased levels of difficulties in emotion regulation.

In the second model, mediating role of the difficulties in emotion regulation on the association between support received from family, friends, and significant other and self-injury was tested. Analysis yielded a full-mediation model and suggested model revealed acceptable fit to the data (χ^2 (3) = 18.91, p = .001, RMSEA = .12, GFI = .98, AGFI = .91, NNFI = .84, CFI = .95, PGFI= .19). Accordingly, higher levels of family support (β = -.30, p < .001) and significant other support (β = -.15, p < .05) predicted lower levels of difficulties in emotion regulation. Friends support failed to predict the mediator variable. Besides, difficulties in emotion regulation predicted higher levels of self-injury (β = .29, p < .001). Tests of indirect effects showed that difficulties in emotion regulation significantly mediated the relationship between family support and self-injury (β = -.03, p < .001). Moreover, difficulties in emotion regulation significantly mediated the relationship between support from significant other and self-injury (β = -.02, p < .05). In general, family and significant other support predicted self-injury via difficulties in emotion regulation.

In the third model, mediating role of the total difficulties in emotion regulation was tested on the relationship between family dysfunction in communication and dichotomous self-injury variable. Results suggested a partial mediation model. Accordingly, higher levels of family dysfunction in communication significantly predicted higher levels difficulties in emotion regulation (β = .42, p < .001) as well as directly predicting self-injury (β = .17, p < .05). Furthermore, difficulties in emotion regulation significantly predicted self-injury (β = .22, p < .001). Indirect effect was also significant (β = .08, p <

.05) suggesting that family dysfunction in communication increased difficulties in emotion regulation which in turn increased self-injury.

5. DISCUSSION

The effects of family functioning, social support, emotion regulation difficulties and loneliness on nonsuicidal self-harm behaviors and suicide ideation were analyzed in this study. Firstly, the findings of this present study will be summarized in light of relevant literature. Secondly, clinical implications will be presented and lastly, the limitations and future directions of this study will be explained.

5.1. Descriptive Statistics for Self-Injury

In our study, participants with nonsuicidal self-injury behaviors, such as cutting, burning, carving, pinching, scratching, pulling hair, banging or hitting, interfering with wound healing behavior, rubbing skin against rough surfaces and swallowing dangerous substances, reported more psychological problems and treatment history compared to the participants without nonsuicidal self-injury behaviors. It shows that youths with nonsuicidal self-harm behaviors have psychological problems and need psychological help. This finding is parallel with the study of Nixon, Cloutier and Jansson (2008), underlining that youths with nonsuicidal self-harm behaviors experience more mental problems such as depression, impulsivity, and attention problems, and seek for help to cope with their problems and self-harming behaviors. Nixon, Cloutier and Jansson (2008) found that youths with nonsuicidal self-harm behaviors do not prefer to take treatment from a psychologist or psychiatrist, but they seek social support to get help. Another finding comes from the study of Çimen, Coşkun, and Etiler (2017) who underlines that as the psychological problems of the adolescents between the grades of 7^{th} and 10^{th} increase, the risk of nonsuicidal self-harm also increases, but most of them seem to be not aware of their psychological problems. Many nonsuicidal self-harm cases are not reported to mental health consultants and many youths hide their problems because of social stigmatization. Thus, educating families and friends about how to break down the prejudices and support and guide their offsprings or friends with nonsuicidal self-harm behaviors seems to be important. As a result, the occurrence of chronic and deteriorative clinical pictures can be prevented.

Participants who chose cutting, pinching, pulling hair, scratching, banging or hitting as a way to injure themselves, were found to belong to lower SES group as compared to

participants who didn't choose these ways for nonsuicidal self-injury. In the literature there are studies which highlights socioeconomic disadvantage as a risk factor for the occurrence of self-harm behaviors (Cairns, Graham, & Bambra, 2017; Lodebo, Jette Möller, Jan-Olov Larsson, & Karin Engström, 2017). If parental economic level is low and parent's education is primary or secondary education, the frequency of nonsuicidal self-harm increases among adolescents (Lodebo, Jette Möller, Jan-Olov Larsson, & Karin Engström, 2017). In addition, it seems that especially when disadvantageous environmental circumstances and risk factors such as abuse history, poor parenting, mental health problems and feelings of despair and worthlessness are hand in hand, the risk of nonsuicidal self-harm behaviors increase. There is need for psychosocial support and governmental funding to prevent and treat self-harm behaviors in low socio-economic groups (Cairns, Graham, & Bambra, 2017).

The frequency rates of overall nonsuicidal self-harm behaviors among males and femas were found not to be significantly different. Some studies show that the prevalence rate of nonsuicidal self-harm behaviors is higher among females compared to males (Bresin and Schoenleber, 2015; Fitzgerald and Curtis, 2017; Laye-Gindhu and Schonert-Reichl, 2005; Sornberger and his colleagues, 2012). Especially, some studies which examine the relationship between nonsuicidal self-harm behaviors and psychopathology pictures such as eating disorder and borderline disorder underline higher frequency of nonsuicidal self-harm behaviors among females, but the findings in literature are inconsistent and findings should be analyzed according to the properties of sample cautiously

Females were found to show biting, pinching, pulling hair and scratching more frequently compared to men. It seems that females use less painful and less aggressive covert nonsuicidal self-harm behaviors compared to men. In our culture, becoming 'blood brothers' is a popular way of self-harming among men. In addition, some studies showed that males choose chronic, violent and impulsive nonsuicidal self-harm behaviors to increase their self-reliance, show power and dominance, get energy and regulate anger, hate, aggression and violence because of masculine gender socialization (Green & Jakupcak, 2015; Green, Kearns, Ledoux, Addis, & Marx, 2018; Laye-Gindhu and Schonert-Reichl, 2005).

5.2. Discussion of Findings Related to Functions of Nonsuicidal Self-Injury

In our study, the relationship between the functions of nonsuicidal self-harm behaviors and emotion regulation was analyzed. Our study is one of the rare studies which analyzed the association between the study variables and nonsuicidal self-harm functions. In literature, most of the studies did not use comprehensive inventories such as Nonsuicidal Self-Harm Inventory and they only asked some basic questions such as the frequency and onset age of nonsuicidal self-harm behaviors, the time passed since the last time the self-harm behavior occurred and the presence of pain and others.

Briefly, regulating overwhelming emotions and soothing, putting interpersonal boundaries, punishing oneself, marking distress and refraining from dissociation and suicide were the basic functions of nonsuicidal self-harm behaviors, which were found to be correlated with self-blame, acceptance, rumination, putting into perspective and catastrophizing dimensions of cognitive emotion regulation positively.

It showed that when the self-injurers' intent to regulate their negative emotions, put interpersonal boundaries, punish themselves, mark distress, refrain from dissociation and suicide increased, their rumination and catastrophizing dimensions of cognitive emotion regulation abilities also increased. In the literature, some studies underline that rumination and catastrophizing as maladaptive emotion regulation strategies increase the risk of nonsuicidal self-harm behaviors (Nicolai, Wielgus, & Mezulis, 2016; Voon, Hasking & Martin, 2014).

Different from the findings in literature, it was found that when the self-injurers' intent to regulate their negative emotions, punish themselves, mark distress, refrain from dissociation and suicide increased, their acceptance (e.g. 'I think that I have to accept that this has happened') and putting into perspective (e.g. 'I think that it all could have been much worse') scores also increased. Moreover, as self-injurers' urge to seek sensation increased, their cognitive ability to refocus and reappraise positively increased too. To understand the possible explanations behind these findings, the self-injurers' with low versus high scores in the acceptance and putting into perspective dimensions of cognitive emotion regulation scale were compared. Self-injurers with low and high acceptance scores were found not be significantly different in terms of social support, loneliness and family functioning. Self-injurers with high acceptance scores were found to have higher

emotion regulation difficulties, especially in the area of setting goals, strategies and emotional clarity, compared to the self-injurers with low acceptance scores. Thus, it seems that although one group of self-injurers report that they accept their emotions cognitively in a higher level, their difficulties to clarify their negative emotions and set goals and build strategies to handle their negative emotions might lead them to injure themselves with the need of regulate their negative emotions, punish themselves, mark distress and refrain from dissociation and suicide. On the other hand, self-injurers with low putting into perspective scores were found to have higher levels of overall emotion regulation problems, especially problems about emotional awareness, impulse control and access to strategies, and higher levels of family dysfunction as compared to self-injurers with high putting into perspective scores. Although self-injurers with high putting into perspective scores showed lower emotion regulation difficulties compared to the self-injurers with low putting into scores, they engaged in nonsuicidal self harm behaviors with much more need of regulating their negative emotions, punishing themselves, marking distress and refraining from dissociation and suicide. There might be another risk factor which increase their urge of regulate their negative emotions, punish themselves, mark distress and refrain from dissociation and suicide. In addition, Cognitive Emotion Regulation Questionnaire measures only the cognitive processes, but emotion regulation is an ongoing process including many cognitive, emotional and behavioral steps and should be viewed as a whole.

These contradictory findings bring an assumption that after nonsuicidal self-harm behaviors, as Four-Factor Model and Emotional Cascade Theory underlined, intense negative emotions might be relieved, then self-injurers might get calm, accept their emotions, refocus on stressors and put them into new perspectives. The self-injurers still experience emotion regulation difficulties such as rumination and catastrophizing, but can it be possible that they start to accept their emotions and try to find new ways of looking at negative events after exploding negative emotions through engaging in nonsuicidal self-harm behaviors? To sum up, as Four-Factor Model and Emotional Cascade Theory emphasized, it may be assumed that before the occurrence of nonsuicidal self-harm behaviors, rumination and catastrophizing come into scene, emotions such as anger, sadness, self-hate, disappointment, anxieties increase, and after the occurrence of nonsuicidal self-harm behaviors, these negative emotions decrease, and accepting

emotions and putting the events into new perspectives become easier. Self-injurers might be aware of their unhealthy emotion regulation processes, but although 'awareness is bliss', it is not sufficient. They may harm themselves in an impulsive way and after all they try to find new coping ways. Thus, we need qualitative studies which might include interviews with self-injurers to understand better the sequencing flow of emotion regulation processes and functions of their nonsuicidal self-harm behaviors.

Moreover, as acceptance and put the events into new perspectives scores increase among self-injurers, their urges to harm themselves to regulate their negative emotions, punish themselves, mark distress and refrain from dissociation and suicide increase, because they might suppress their thoughts and emotions, deny their problems and overrate their cognitive emotion regulation abilities better than their real emotion regulation processes in their daily life. Najmi and his colleagues (2007) found that as the adolescents' tendency to suppress unpleasant cognitions increase, the risk for engaging in nonsuicidal self-harm behaviors increases to regulate negative emotions. Parallel with this finding, Richmond, Hasking, & Meaney (2017) concluded that hiding negative emotions through suppression is one of the emotional regulation difficulties that self-injurer university students use when their stress levels are elevated, and inhibiting the expression of emotions increase the frequency of nonsuicidal self-harm behaviors. Likewise, some studies found that especially female adolescent self-injurers have emotional difficulties and use 'thought suppression' and 'alexithymia' more frequently compared to adolescents without a nonsuicidal self-harm history (Cerutti, Calabrese, & Valastro, 2014; Howe-Martin, Murrell and Guarnaccia (2012). The affective state, which comes into scene when unpleasant thoughts are suppressed, may be reported as being calm and accepting emotions by self-injurers in their scales because of their low consciousness and/ their tendencies of personality problems.

In the literature, 'low in self-consciousness' as a personality trait was found to increase the risk of nonsuicidal self-harm behaviors by many studies (Brown, 2009; Kiekens, Bruffaerts, Nock, Van de Ven, Witteman, Mortier, Demyttenaere, & Claes2015). In addition to low consciousness, neuroticism was found as the basic personality trait tendency leading to the occurrence of nonsuicidal self-harm behaviors (Brown, 2009; Kiekens, Bruffaerts, Nock, Van de Ven, Witteman, Mortier, Demyttenaere, & Claes2015; Perlman, Gromatsky, Lee Salis, Klein, & Kotov, 2018). In

the study of Brown (2009), among a nonclinical colleague population, it was found that the tendency for neuroticism is high among nonsuicidal self-harm group. In addition to neuroticism, Brown (2009) underlined that low levels of agreeableness and continuousness were observed among self-injurers and this situation might lead to experience problems in social relationships and impulsivity. Same findings came from the study of Kiekens and his colleagues (2015) among Dutch and Belgian adolescents age of 12-19 and they added that personality tendencies, such as high levels of neuroticism and low levels of agreeableness and continuousness, lead to difficulties to cope with daily life stressors and experiencing depressive symptoms as a result of elevated stress levels. Perlman and his colleagues (2018) also concluded that melancholia, sadness and negative self-evaluation, which are the basic properties of neuroticism, are risk factors for the occurrence of nonsuicidal self-harm behaviors among adolescent girls age of 13-15, independent of psychopathological problems. In parallel with these findings, Mullins-Sweat and his colleagues (2012) added that impulsivity is also another personality-trait which was found to be more common among nonsuicidal self-injurer youths compared to youths without nonsuicidal self-harm behaviors. Nonsuicidal self-harm behavior might be an impulsive attempt to regulate intense negative emotions but not wipe off positive ways of emotion regulation that an adolescence has. The personality trait tendencies are beyond the scope of our study but they have to be included to get a more comprehensive view in future studies and may bring new explanations to the contradictory findings about the self-injurers' reports of emotion regulation processes and functions of their nonsuicidal self-harm behaviors.

In our study, peer bonding, interpersonal influence, toughness, and autonomy functions of nonsuicidal self-injury behaviors were found not to have any significant correlation with cognitive emotion regulation and family functioning dimensions among self-injurers.

Only some functions of nonsuicidal self-injury were found to be correlated with family dysfunction positively among self-injurers. Affect regulation function was significantly related to dysfunction in communication, roles, emotional response, and general functioning. Likewise, as the self-punishment intention of nonsuicidal self-injury increased, the problems in family functioning, such as dysfunction in problem solving, communication, emotional response and general functioning also increased. Anti-suicide

dimension of nonsuicidal self-injury function showed significant positive correlations with only family dysfunction in communication and general functioning. Marking distress function of self-injury showed significant positive correlations with only dysfunctional family roles and general family dysfunctioning. To sum up, as the self-injurers' need of affect regulation, self-punishment, anti-suicide and marking distress increased, their family dysfunction scores also increased. It seems that in general, the functions of nonsuicidal self-harm is in relation with the problems in family functioning.

In parallel with the existing literature, suicide ideation, symptoms and emotion regulation difficulties were found to positively correlated with nearly all nonsuicidal self-harm functions among self-injurers. As the urge to harm themselves without any suicide intention increased among self-injurers, suicide ideation, emotion regulation difficulties and symptoms increased regardless of nonsuicidal self-harm behaviors' functions. Only support received from family showed significant negative correlations with self-punishment, anti-suicide, and marking stress functions. Thus, familial factors seem to be protective in the development of self-punishment, suicide ideation and emotion regulation functions of nonsuicidal self-harm behaviors.

5.3. Discussion of Findings Related to Suicide Ideation

Suicide ideation was found to be significantly correlated with loneliness, cognitive emotion regulation abilities, social support and symptoms, especially for self-injury group This finding is parallel with the existing literature and it shows that loneliness is a critical risky emotion in the development of suicide ideation, and as cognitive abilities decrease, suicide ideation increases, and the lack of supportive social environment plays an important role in suicide ideation. (Chang, Wan, Li, Guo, He, Gu, Wang, Li, Zhang, Sun, Batterbee, Chang, Lucas & Hirsch, 2017; Lasgaard, Goossens & Elklit, 2011; Pervin and Ferdowski, 2016; Schinka, Van Dulmen, Bossarte & Swahn, 2012).

In addition, the associations between suicide ideation and emotion regulation difficulties and symptoms were found to be stronger compared to other study variables. This finding is parallel with the view that difficulties in emotion regulation are important risk factors in the development of suicide ideation (Barr, Fulginiti, Rhoades & Rice, 2016; Forkmann and his colleagues, 2014; Miranda, Tsypes, Gallagher & Rajappa, 2013;

Rajappa, Gallagher & Miranda, 2012; Wang, Lai, Hsu, and Hsu, 2011). Again, parallel to existing literature, a positive correlation between family dysfunction and suicide ideation was found.

Some analyses were run to understand the relationship between time passed since the last self-injury and our study variables. Participants who injured themselves before last year reported lower levels of family dysfunction in all areas such as problem solving, communication strategies, affective responses and general family functioning compared to last year groups. Participants who injured themselves before last year reported higher levels of social support from family and significant others than participants who injured themselves last year. And, participants who injured themselves before last year had lower suicide ideation scores than participants who injured themselves last year. Thus, it seems that family functioning and social support are protective factors to discontinue nonsuicidal self-harm behaviors in an approximately one or more-year period among the adolescents transitioning to young adulthood. Andrews, Martin, Hasking and Page (2013) underlined that poor emotion regulation capabilities such as emotional suppression and difficulties in cognitive reappraisal lead to continuation of nonsuicidal self-harm behaviors among adolescents. Which factors lead the participants, who injured themselves before last year, to stop injure themselves is still a critical question which needs to be answered through further studies.

5.4. Discussion of Findings Related to Self-Injury Behavior Frequency, Onset Age and

In parallel with the findings in the literature, participants who frequently injure themselves reported higher levels of suicide ideation than participant who rarely injure themselves in this population. Also, participants who injured themselves, regardless of their nonsuicidal self-injury type, were found to have significantly higher levels of suicide ideation as compared to participants who didn't injure themselves. Participants injuring themselves frequently were found to have higher levels of anxiety, negative self, somatization and hostility compared to the participants who rarely injure themselves. Consistent with the literature, it is obvious that there is a positive correlation between the frequency of nonsuicidal self-harm behaviors, suicide ideation and psychological

symptoms, and as a result, the picture gets worse (Anestis & his colleagues, 2015; Guan, Fox, and Prinstein, 2012; Howe-Martin and his colleagues, 2012; Roley-Roberts and his colleagues, 2017; Wester, Ivers, Villalba, Trepal, & Henson, 2016).

In our study, the relationship between the type of self-injury behavior and onset age was investigated and it was found that only cutting behavior seems to occur at early ages and it was found to be more frequent among the participants who started to injure themselves at the age of 13-15. In early adolescence, socialization and acquiring group belonging are important as emphasized by some studies, cutting can be a popular self-harm behavior for 'blood brothers' to form an intimate peer relationship (Green & Jakupcak, 2015; Green, Kearns, Ledoux, Addis, & Marx, 2018; Laye-Gindhu and Schonert-Reichl, 2005). In contrast, no significant relationship between the starting age of nonsuicidal self-injury and frequency of nonsuicidal self-injury behaviors was found. Participants who started to harm themselves without any suicide ideation at an early age did not increase the frequency of their nonsuicidal self-harm. Probably, other protective factors such as healthy family environment and social support had a positive effect on nonsuicidal self-harm behaviors.

No significant relation was found between onset age of nonsuicidal self-injury and suicide ideation. As the onset age of nonsuicidal self-harm behavior decreases, increase in suicide ideation is not expected. Instead, a significant relationship was found between time passed since last self-injury and suicide ideation. The participants who injured themselves before last year were found to have lower suicide ideation as compared to participants who injured themselves last year. It can be surmised that as nonsuicidal self-harm behaviors are not observed in following years and disappear, suicidal ideation also decreases. 'How do these participants decrease their suicide ideation, and cope with their daily stressors, existing psychological problems and negative emotions without engaging in nonsuicidal self-harm behaviors? What kind of new coping strategies do they develop?' are important questions and future studies should be conducted to point out answers through qualitative studies.

5.5. Discussion of Findings Related to Regression Analyses of Suicide Ideation & Nonsuicide Self-Injury

To get a clear picture, multiple linear regression analyses were conducted for suicide ideation and multiple logistic regressions were conducted for nonsuicidal self-harm behaviors.

Whereas high levels of self-blame, catastrophizing, and blaming others as cognitive emotion regulation dimensions predicted high levels of suicide ideation, positive reappraisal predicted low levels of suicide ideation. In addition, loneliness and unhealthy communication in the family predicted the levels of suicide ideation and family support was also found as a protective factor to decrease suicide ideation with a marginally significant effect. Many studies underline that family support has a protective effect in decreasing suicide ideation and it is obvious that 'family' is still a critical environment for the healthy development of youth in late adolescence too (Arria, O'Grady, Caldeira, Vincent, Wilcox & Wish, 2009; Cenkseven-Önder, 2017; Miller, Esposito-Smythers & Leichtweis, 2015; Shaheen & Jahan, 2017; Winfree & Jiang, 2010). In addition, feeling lonely without a supportive social environment seems to be a risk factor to increase suicide ideation (Chang, Wan, Li, Guo, He, Gu, Wang, Li, Zhang, Sun, Batterbee, Chang, Lucas & Hirsch, 2017; Pervin & Ferdowski, 2016; Schinka, Van Dulmen, Bossarte and Swahn, 2012)

High levels of impulsivity, limited access to emotion regulation strategy and lack of emotional clarity predicted high levels of suicide ideation. In the literature, emotion regulation difficulties are underlined as increasing the risk for suicide ideation and especially, difficulties to find functional emotion regulation strategies, non-acceptance of negative emotions, impulsivity and lack of emotional awareness and control are found as basic emotion regulation problems leading to suicide ideation (Barr, Fulginiti, Rhoades, & Rice, 2016; Rajappa, Gallagher, & Miranda, 2012). In addition, parallel with these findings, Kudinova and his colleagues (2015) underlined that especially the lack of cognitive reappraisal ability after negative emotions are evoked is a critical risk factor leading to increase in suicide ideation tendencies.

Lastly, higher symptoms such as higher levels of depression, negative self, and hostility predicted higher levels of suicide ideation, whereas lower levels of anxiety

predicted higher levels of suicide ideation. Depression is the most important risk factor in suicide ideation and seem to elevate the tendency for suicide ideation among youths aged between 17-19, especially if they don't have any social support (Cukrowicz, Schlegel, Smith, Jacobs, Van Orden, Paukert, Pettit, & Joiner; 2011; Lamis, Ballard, May, & Dvorak; 2016). In addition, having negative self-image and hostility increase the risk of suicide ideation and attempts among youths (Akca, Yunca, & Aydın, 2018; Zhang, Roberts, Liu, Meng, Tang, Sun, & Yu, 2012). Likewise, Zhang and his colleagues (2012) found that high hostility and trait anger play crucial roles to predict the risk of suicide ideation in spite of self-esteem and the relationship quality in peer groups and family. Lack of death anxiety is one of the major factors which prepares a person for suicide and this result shows that decrease in anxiety is risky for suicide ideation and low levels of anxiety make youths fearless about thinking and perhaps attempting suicide (Joiner, Van Orden, Witte, Cukrowicz, Braithwaite, and Selby, 2010).

The multiple logistic regression analyses showed that cognitive emotion regulation dimensions, especially positive reappraisal and blaming others significantly predicted self-harm behaviors. The odds of committing self-injury behavior were increased by 1.18 times with a unit increase in positive reappraisal, by 1.75 times with a unit increase in blaming others. It seems that there might be a mental and emotional fluctuation between blaming others and attempting to reappraise the events positively and this situation increases the risk for nonsuicidal self-harm behaviors. This contradictory finding is very similar to the contradictory results which were found in the relation between the functions of nonsuicidal self-harm behaviors and cognitive emotion regulation abilities. Positive reappraisal might not be enough to prevent self-harm behaviors totally and there might be a need of both anger control and behavioral repertoire. As underlined in the study of Tang and his colleagues (2013), blaming others, hostility and both verbal and indirect aggression seem to be risk factors for nonsuicidal self-harm behaviors among adolescents. There is need of further studies to analyze the relationship between blaming others, anger towards others, impulsivity, self-hate, emotion regulation difficulties and nonsuicidal self-harm behaviors.

In addition, in our study the participants' pain tolerance levels, their threshold levels of the ability to hold the most intensive painful stimuli for a longest time, were not assessed and examined. Pain tolerance was underlined as one of the risk factors for the

maintenance of nonsuicidal self-harm behaviors in literature (Glenn, Michel, Franklin, Hooley, Nock; 2014; Kirtley, O'Carroll, & O'Connor, R., C., 2016). Most of the studies have found that adolescents with nonsuicidal self-harm behaviors have higher pain threshold and endurance compared to adolescents without nonsuicidal self-harm behaviors (Bunderla and Kumperščak, 2015; Glenn, Michel, Franklin, Hooley, Nock; 2014; Hamza, Willoughby, & Armiento, 2014; Kirtley, O'Carroll, & O'Connor, R., C., 2016). Pain analgesia is one of the basic features which discriminate self-injurer adolescents from non-self-injurers. Still, 'whether the adolescents have tendency to harm themselves because of their high physical pain tolerance, or, whether the adolescents increase their pain tolerance through repeated nonsuicidal self-harm behaviors' is still unclear in literature, but it seems that there is a unique relationship between pain tolerance, emotion dysregulation and self-criticism. As the self-hate and self-criticism increase, nonsuicidal self-harm behaviors come into scene to decrease difficult emotions and make self-punishment. Through altered pain tolerance, the need of self-punishment and the need of relief from the intense emotions evoke as the result of self-criticism lead to nonsuicidal self-harm behaviors (Glenn, Michel, Franklin, Hooley, Nock; 2014; Kirtley, O'Carroll, & O'Connor, R., C., 2016). As self-harm behaviors are chosen to punish himself-herself with self-hate, a self-injurer shows willingness to stay with pain as long as possible. In addition, self-criticism is usually found as the strongest predictor of pain tolerance compared to the dissociative experiences during nonsuicidal self-harm behaviors and habituation to pain as a result of repeated nonsuicidal self-harm behaviors among both adolescents and adults (Hamza, Willoughby, & Armiento, 2014; Hooley, Ho, Slater, and Lockshin, 2010). Our contradictory findings bring a new question; 'Can it be possible that the self-injurers with high pain tolerance criticize and blame themselves when they ruminate and catastrophize the negative triggering events, harm themselves and after their intensive emotions are released, they give themselves a chance to accept their emotions and try to gain new perspectives and reappraise the events positively?' There is a need of further studies to understand the possible reasons behind these contradictory findings.

Family support was found as a basic protective factor for nonsuicidal self-harm behaviors. The odds of committing self-injury were 19% decreased with a unit increase in family support. In parallel with the existing literature, family support is still an

important protective factor in this developmental period to decrease the risk of nonsuicidal self-harm behaviors.

Across emotion regulation difficulties, impulsivity was found to predict self-injury significantly. Specifically, odds of committing self-injury behaviors were increased by 1.30 times with a unit increase in impulsivity. Impulsivity is supported as risk factor in the occurrence of nonsuicidal self-harm behaviors by some studies (Lockwood, Daley, Townsend, and Sayal; 2017). Lockwood, Daley, Townsend, and Sayal (2017) underlined that especially 'a personality-based impulsivity', meaning a trait-based tendency towards rash or unplanned behaviors, sensation seeking and/or difficulty to maintain focus', is risky for chronic lifetime nonsuicidal self-harm behaviors, whereas cognitive properties of impulsivity as an inability to control behaviors is risky to maintain nonsuicidal self-harm behaviors. Lastly, hostility was found to predict self-injury significantly. Probability of committing self-injury behaviors was increased by 1.12 times with a unit increase in hostility.

The fact that emotion regulation difficulties mediate the relationship between loneliness and nonsuicidal self-harm behaviors was supported in our study. Higher levels of loneliness predicted higher levels of difficulties in emotion regulation, and higher levels of difficulties in emotion regulation predicted higher levels of nonsuicidal self-harm behaviors. It showed that loneliness itself cannot predict nonsuicidal self-injury behaviours, but loneliness increases self-injury behaviour via increased emotion regulation difficulties.

The view that emotion regulation difficulties mediate the association between social support and nonsuicidal self-harm behaviors was supported in acceptable range. Accordingly, higher levels of social support from family and significant other predicted lower levels of difficulties in emotion regulation. Besides, difficulties in emotion regulation predicted higher levels of nonsuicidal self-harm behaviors. Difficulties to regulate emotions significantly mediated the relationship between nonsuicidal self-injury and social support from family and significant others. Thus, it seems that social support from peers doesn't have enough protective effects in the development of nonsuicidal self-harm behaviors.

The mediating role of the difficulties in emotion regulation in the relationship between family dysfunction in communication and nonsuicidal self-harm behaviors was partially supported. Accordingly, higher levels of family dysfunction in communication significantly predicted higher levels of difficulties in emotion regulation as well as directly predicting nonsuicidal self-injury heaviors. Although it was partially supported, it is obvious that having a communicative and supportive family environment is crucial for emotion regulation abilities and protection from nonsuicidal self-harm behaviors.

5.6. Clinical Implications

Nonsuicidal self-harm and suicide ideation are still unspoken phenomena, especially in our culture and stigmatization is so strong. Firstly, there is a need for psychoeducation about nonsuicidal self-harm behaviors and suicide ideation in schools to eliminate biases, guide youths not to reinforce self-harm behaviors to show how much they are tough and strong among their peer groups, teach how they can support and help their self-injurer friends step by step. Secondly, there is also a need of psychoeducation about emotion regulation abilities and Emotion Regulation Group Therapy for youths in schools because when youths learn how to regulate their intense negative emotions, their risk of engaging nonsuicidal self-harm behaviors and suicide ideation also decrease. Increasing awareness about emotions, accepting emotions, talking about emotions, setting goals after evaluating the emotions and challenging the catastrophizing and rumination through realistic point of view should be basic steps to strengthen the emotion regulation abilities of youths. Third wave therapies such as Acceptance Commitment Therapy and Functional Analytical Therapy emphasize the acceptance of emotions, letting go negative intense emotions without behaving impulsively, understanding the underlying functions of behaviors, working on client-therapist relation to learn how to build open, secure and healthy relations, and strengthening self-expression and emotional awareness. They can be effective for the treatment of nonsuicidal self-harm behaviors and suicide ideation. Family functioning and family support still play important roles for the development of youths especially when they try to plan their academic life and career at the age of 17-18. Thus, Family Therapy can lead to create supportive, loving and caring environment and healthy communication ways in the family to help youths with nonsuicidal self-harm

behaviors and/or suicide ideation. Nonsuicidal self-harm is a complex phenomenon and there is a need for multidisciplinary perspective. Collaboration between school counselor, family therapist, individual therapist and psychiatrist should be maintained. Creating supportive environment in both school and family will lead to promising changes among youths with nonsuicidal self-harm behaviors and/or suicide ideation, and eliminate loneliness and emptiness that many youths may experience.

5.7. Limitations and Future Directions

There are some methodological limitations in our study. Firstly, the sample size is not enough for such great numbers of analysis to run. The data were gathered from 414 students, but analyses were conducted with the data from 405 students. The participants were students in the last grade of high-school. It was a year which was a stressful time for university entrance exam but information about their expectations from the exam and their test anxiety were not collected. The sample was composed of technical and industrial vocational high-school students, from especially disadvantageous schools in İzmit, Kocaeli. So, the findings cannot be generalized to other populations. Inclusion of students from science high schools would be better to make comparisons between different types of schools. In addition, the academic scores of the students were not taken and included to our study. It would be informative to analyze the relationship between academic success and study variables.

The scales were filled by the students during lesson time. It was observed that they lost their attention because there were many scales, meaning approximately 20 pages. In addition, some students said: 'You asked many questions about suicide and self-harm. Do you think that we are mentally unhealthy?' and it was observed that some of them did not feel safe about completing the scales at school. On the contrary, some students talked each other about the last time they harmed themselves and advised each other to report their self-harm process. In addition, instead of having a lesson, filling the questionnaires seemed to be reinforcement to get rid of course hour. Thus, it would be better to get information about how much they felt safe and open to share information about themselves while they filled the scales at school.

The picture of suicide ideation and nonsuicidal self-harm in clinical population might be different from the normal population. The inclusion of clinical population would be informative and comprehensive to understand the trajectory of suicide ideation and nonsuicidal self-harm in late adolescence. In addition, other nonsuicidal self-harm behaviors such as burning the skin with a lighted cigarette, risk taking behaviors or addictions were not included into our study.

For the future studies, there is a need of more qualitative studies to understand how self-injurers manage not to harm themselves in the last one or more years; what kind of emotion regulation difficulties they experience before, during and after nonsuicidal self-harm behaviors; what kind of familial support is crucial in this developmental stage to eliminate their tendency to harm themselves; how they started to harm themselves in their early adolescence and what kind of factors result in continuing self-harming behaviors; and what kind of factors lead them to hide their suicide ideation and/or nonsuicidal self-harm behaviors. In addition, the differences between the adolescents who desired and planned to harm themselves without suicide intention but controlled themselves, and the adolescents who desired to harm themselves and acted on this desire and urge should be examined in future studies.

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APPENDIX I
Kişisel Bilgi Formu

Lütfen her soruyu dikkatlice okuyup size en uygun olan seçeneği işaretleyiniz.

1. Cinsiyetiniz:
□ Erkek □ Kadın

2. Yaşınız: …….

3. Sosyo-ekonomik seviyenizi nasıl tanımlarsınız?

□ Üst sınıf □ Üst-Orta Sınıf □ Orta Sınıf □ Düşük-Orta Sınıf □ Düşük Sınıf

4. Kimlerle birlikte yaşıyorsunuz?
□ Anne-baba, varsa kardeşlerinizle birlikte
□ Yakın akraba ile
□ Arkadaşlarınız ile
□ Yurtta
□ Yalnız
□ Diğer .....
5. Hayatınızın çoğunu geçirdiğiniz yer:
□ Köy/kasaba □ İlçe
□ Şehir □ Büyükşehir
6. Sizle beraber toplam kaç kardeşsiniz? ……
7. Siz ailenizin kaçıncı çocuğusunuz? …….
8. Annenizin eğitim durumu: (Bitirdiği en üst düzey eğitim seviyesini işaretleyiniz lütfen.)
□ Okur-yazar değil □ Okur-yazar
□ İlkokul Mezunu □ Ortaokul Mezunu
□ Lise Mezunu □ Yükseköğrenim ..... (Lütfen belirtiniz)
9. Babanızın eğitim durumu: (Bitirdiği en üst düzey eğitim seviyesini işaretleyiniz lütfen.)
□ Okur-yazar değil □ Okur-yazar
□ İlkokul Mezunu □ Ortaokul Mezunu
□ Lise Mezunu □ Yükseköğrenim ..... (Lütfen belirtiniz)

10. Aile:

	Yaşıyor mu?	
	Evet	Hayır
Annem		
Babam		

11. Anne-babanızın beraberlik durumu:
□ Birlikte yaşıyorlar □ Boşanmamış ancak ayrı □Boşanmış
□ Boşanıp tekrar evlenmiş □ İkisinden biri hayatta değil
12. Herhangi bir psikolojik sorununuz var mı? □ Evet □ Hayır
Eğer evet ise lütfen Belirtiniz: .....
13. Varsa, sorununuz için psikolojik yardım/ tedavi gördünüz mü?
□ Evet □ Hayır
14. Şu anda psikolojik yardım/ tedavi görüyor musunuz?

□ Evet □ Hayır

15. Psikiyatrik ilaç kullanıyor musunuz?

□ Evet □ Hayır

16. Herhangi bir sağlık probleminiz var mı?

□ Evet , (Lütfen belirtiniz: …….) □ Hayır

APPENDIX II
UCLA Loneliness Scale

Aşağıdaki ifadelerden her birinde tanımlanan durumu ne sıklıkta hissettiğinizi her biri için tek bir cevap olmak üzere belirtiniz. Lütfen her soruyu şu anki görüşlerinizi ve yaşam durumunuzu en iyi tanımlayacak şekilde cevaplayınız.

		Hiç Yaşamadım	**Nadiren Yaşarım**	**Bazen Yaşarım**	**Sık Sık Yaşarım**
1	Kendimi çevremdeki insanlarla uyum içinde hissediyorum.	**1**	**2**	**3**	**4**
2	Arkadaşım yok.	**1**	**2**	**3**	**4**
3	Başvurabileceğim hiç kimse yok.	**1**	**2**	**3**	**4**
4	Kendimi tek başınaymışım gibi hissetmiyorum.	**1**	**2**	**3**	**4**
5	Kendimi bir arkadaş grubunun bir parçası olarak hissediyorum.	**1**	**2**	**3**	**4**
6	Çevremdeki insanlarla bir ortak yönüm var.	**1**	**2**	**3**	**4**
7	Artık hiç kimseyle samimi değilim.	**1**	**2**	**3**	**4**
8	İlgilerim ve fikirlerim çevremdekilerce paylaşılıyor.	**1**	**2**	**3**	**4**
9	Dışa dönük bir insanım.	**1**	**2**	**3**	**4**
10	Kendime yakın hissettiğim insanlar var.	**1**	**2**	**3**	**4**
11	Kendimi grubun dışına itilmiş hissediyorum.	**1**	**2**	**3**	**4**
12	Sosyal ilişkilerde bulunurum.	**1**	**2**	**3**	**4**
13	Hiç kimse beni gerçekten iyi tanımıyor.	**1**	**2**	**3**	**4**
14	Kendimi diğer insanlardan soyutlanmış hissediyorum.	**1**	**2**	**3**	**4**
15	İstediğim zaman arkadaş bulabilirim.	**1**	**2**	**3**	**4**
16	Beni gerçekten anlayan insanlar var.	**1**	**2**	**3**	**4**
17	Bu derece içime kapanmış olmaktan dolayı mutsuzum.	**1**	**2**	**3**	**4**
18	Çevremde insanlar var ama benimle değiller.	**1**	**2**	**3**	**4**
19	Konuşabileceğim insanlar var.	**1**	**2**	**3**	**4**
20	Derdimi anlatabileceğim insanlar var.	**1**	**2**	**3**	**4**

APPENDIX III

The Difficulties in Emotion Regulation Scale

Aşağıdaki cümlelerin size ne sıklıkla uyduğunu altta belirtilen 5 dereceli ölçeğe göre değerlendiriniz. Her bir cümlenin karşısındaki 5 dereceli ölçekten, size uygunluk yüzdesini de dikkate alarak, yalnızca bir tek rakamı yuvarlak içine alarak işaretleyiniz.

Bazen (%11-%35) Çoğu zaman (%66-%90)

1----------2----------3----------4----------5

Hemen hemen hiç (%0-%10) Yaklaşık yarı yarıya zaman (%36-%65) Hemen hemen her (%91-%100)

1. Ne hissettiğim konusunda netimdir.	1	2	3	4	5
2. Ne hissettiğimi dikkate alırım.	1	2	3	4	5
3. Duygularım bana dayanılmaz ve kontrolsüz gelir.	1	2	3	4	5
4. Ne hissettiğim konusunda hiçbir fikrim yoktur.	1	2	3	4	5
5. Duygularıma bir anlam vermekte zorlanırım.	1	2	3	4	5
6. Ne hissettiğime dikkat ederim.	1	2	3	4	5
7. Ne hissettiğimi tam olarak bilirim.	1	2	3	4	5
8. Ne hissettiğimi önemserim.	1	2	3	4	5
9. Ne hissettiğim konusunda karmaşa yaşarım.	1	2	3	4	5
10. Kendimi kötü hissetmeyi kabullenebilirim.	1	2	3	4	5
11. Kendimi kötü hissettiğimde böyle hissettiğim için kendime kızarım.	1	2	3	4	5
12. Kendimi kötü hissettiğim için utanırım.	1	2	3	4	5
13. Kendimi kötü hissettiğimde işlerimi bitirmekte zorlanırım.	1	2	3	4	5
14. Kendimi kötü hissettiğimde kontrolden çıkarım.	1	2	3	4	5
15. Kendimi kötü hissettiğimde uzun süre böyle kalacağıma inanırım.	1	2	3	4	5
16. Kendimi kötü hissetmemin yoğun depresif duyguyla sonuçlanacağına inanırım.	1	2	3	4	5
17. Kendimi kötü hissettiğimde duygularımın yerinde ve önemli olduğuna inanırım.	1	2	3	4	5

18. Kendimi kötü hissederken başka şeylere odaklanmakta zorlanırım.	1	2	3	4	5
19. Kendimi kötü hissederken kontrolden çıktığım duygusu yaşarım.	1	2	3	4	5
20. Kendimi kötü hissediyor olsam da çalışmayı sürdürebilirim.	1	2	3	4	5
21. Kendimi kötü hissettiğimde bu duygumdan dolayı kendimden utanırım.	1	2	3	4	5
22. Kendimi kötü hissettiğimde eninde sonunda kendini daha iyi hissetmenin bir yolunu bulacağımı bilirim.	1	2	3	4	5
23. Kendimi kötü hissettiğimde zayıf biri olduğum duygusuna kapılırım.	1	2	3	4	5
24. Kendimi kötü hissettiğimde de davranışlarım kontrolümün altındadır.	1	2	3	4	5
25. Kendimi kötü hissettiğim için suçluluk duyarım.	1	2	3	4	5
26. Kendimi kötü hissettiğimde konsantre olmakta zorlanırım.	1	2	3	4	5
27. Kendimi kötü hissettiğimde davranışlarımı kontrol etmekte zorlanırım.	1	2	3	4	5
28. Kendimi kötü hissettiğimde daha iyi hissetmem için yapabileceğim hiç bir şey olmadığına inanırım.	1	2	3	4	5
29. Kendimi kötü hissettiğimde böyle hissettiğim için kendimden rahatsız olurum.	1	2	3	4	5
30. Kendimi kötü hissettiğimde, kendimle ilgili olarak çok fazla endişelenmeye başlarım.	1	2	3	4	5
31. Kendimi kötü hissettiğimde, kendimi bu duyguya bırakmaktan başka çıkar yol olmadığına inanırım.	1	2	3	4	5
32. Kendimi kötü hissettiğimde davranışlarım üzerindeki kontrolü kaybederim.	1	2	3	4	5
33. Kendimi kötü hissettiğimde başka bir şey düşünmekte zorlanırım.	1	2	3	4	5
34. Kendimi kötü hissettiğimde duygumun gerçekte ne olduğunu anlamak için zaman ayırırım.	1	2	3	4	5
35. Kendimi kötü hissettiğimde, kendimi daha iyi hissetmem zaman alır.	1	2	3	4	5
36. Kendimi kötü hissettiğimde duygularım dayanılmaz olur.	1	2	3	4	5

APPENDIX IV
Family Assessment Device

İlişikte aileler hakkında 60 cümle bulunmaktadır. Lütfen her cümleyi dikkatlice okuduktan sonra, sizin ailenize ne derecede uyduğuna karar veriniz. Önemli olan, sizin ailenizi nasıl gördüğünüzdür**. Her cümle için 4 seçenek söz konusudur (***Aynen Katılıyorum/ Büyük Ölçüde Katılıyorum/ Biraz Katılıyorum/ Hiç Katılmıyorum***)**

Her cümlenin yanında 4 seçenek için de ayrı yerler ayrılmıştır. Size uygun seçeneğe (X) işareti **koyunuz.** Her cümle için uzun, uzun düşünmeyiniz. **Mümkün olduğu kadar** çabuk ve samimi cevaplar **veriniz.** Kararsızlığa düşerseniz, ilk aklınıza gelen doğrultusunda hareket ediniz. **Lütfen her cümleyi cevapladığınızdan emin olunuz.**

CÜMLELER:	**Aynen Katılı-yorum**	**Büyük Ölçüde Katılı-yorum**	**Biraz Katılı-yorum**	**Hiç Katılmı-yorum**
1. Ailece ev dışında program yapmada güçlük çekeriz, çünkü aramızda fikir birliği sağlayamayız.	( )	( )	( )	( )
2. Günlük hayatımızdaki sorunların (problemlerin) hemen hepsini aile içinde hallederiz.	( )	( )	( )	( )
3. Evde biri üzgün ise, diğer aile üyeleri bunun nedenlerini bilir.	( )	( )	( )	( )
4. Bizim evde, kişiler verilen her görevi düzenli bir şekilde yerine getirmezler.	( )	( )	( )	( )
5. Evde birinin başı derde girdiğinde, diğerleri de bunu kendilerine fazlasıyla dert ederler.	( )	( )	( )	( )
6. Bir sıkıntı ve üzüntü ile karşılaştığımızda, birbirimize destek oluruz.	( )	( )	( )	( )
7. Ailemizde acil bir durum olsa, şaşırıp kalırız.	( )	( )	( )	( )
8. Bazen evde ihtiyacımız olan şeylerin bittiğinin farkına varmayız.	( )	( )	( )	( )
9. Birbirimize karşı olan sevgi, şefkat gibi duygularımızı açığa vurmaktan kaçınırız.	( )	( )	( )	( )
10. Gerektiğinde aile üyelerine görevlerini hatırlatır, kendilerine düşen işi yapmalarını sağlarız.	( )	( )	( )	( )
11. Evde dertlerimizi üzüntülerimizi birbirimize söylemeyiz.	( )	( )	( )	( )
12. Sorunlarımızın çözümünde genellikle ailece aldığımız kararları uygularız.	( )	( )	( )	( )
13. Bizim evdekiler, ancak onların hoşuna giden şeyler söylediğimizde bizi dinlerler.	( )	( )	( )	( )
14. Bizim evde bir kişinin söylediklerinden ne hissettiğini anlamak pek kolay değildir.	( )	( )	( )	( )
15. Ailemizde eşit bir görev dağılımı yoktur.	( )	( )	( )	( )
16. Ailemizin üyeleri, birbirlerine hoşgörülü davranırlar.	( )	( )	( )	( )

CÜMLELER:	Aynen Katılı-yorum	Büyük Ölçüde Katılı-yorum	Biraz Katılı-yorum	Hiç Katılmı-yorum
17. Evde herkes başına buyruktur.	( )	( )	( )	( )
18. Bizim evde herkes, söylemek istediklerini üstü kapalı değil de doğrudan birbirlerinin yüzüne söyler.	( )	( )	( )	( )
19. Ailede bazılarımız, duygularımızı belli etmeyiz.	( )	( )	( )	( )
20. Acil bir durumda ne yapacağımızı biliriz.	( )	( )	( )	( )
21. Ailecek, korkularımızı ve endişelerimizi birbirimizle tartışmaktan kaçınırız.	( )	( )	( )	( )
22. Sevgi, şefkat gibi olumlu duygularımızı birbirimize belli etmekte güçlük çekeriz.	( )	( )	( )	( )
23. Gelirimiz (ücret, maaş) ihtiyaçlarımızı karşılamaya yetmiyor.	( )	( )	( )	( )
24. Ailemiz, bir problemi çözdükten sonra, bu çözümün işe yarayıp yaramadığını tartışır.	( )	( )	( )	( )
25. Bizim ailede herkes kendini düşünür.	( )	( )	( )	( )
26. Duygularımızı birbirimize açıkça söyleyebiliriz.	( )	( )	( )	( )
27. Evimizde banyo ve tuvalet bir türlü temiz durmaz.	( )	( )	( )	( )
28. Aile içinde birbirimize sevgimizi göstermeyiz.	( )	( )	( )	( )
29. Evde herkes her istediğini birbirinin yüzüne söyleyebilir.	( )	( )	( )	( )
30. Ailemizde, her birimizin belirli görev ve sorumlulukları vardır.	( )	( )	( )	( )
31. Aile içinde genellikle birbirimizle pek iyi geçinemeyiz.	( )	( )	( )	( )
32. Ailemizde sert-kötü davranışlar ancak belli durumlarda gösterilir.	( )	( )	( )	( )
33. Ancak hepimizi ilgilendiren bir durum olduğu zaman birbirimizin işine karışırız.	( )	( )	( )	( )
34. Aile içinde birbirimizle ilgilenmeye pek zaman bulamıyoruz.	( )	( )	( )	( )
35. Evde genellikle söylediklerimizle, söylemek istediklerimiz birbirinden farklıdır.	( )	( )	( )	( )
36. Aile içinde birbirimize hoşgörülü davranırız	( )	( )	( )	( )
37. Evde birbirimize, ancak sonunda kişisel bir yarar sağlayacaksak ilgi gösteririz.	( )	( )	( )	( )
38. Ailemizde bir dert varsa, kendi içimizde hallederiz.	( )	( )	( )	( )

CÜMLELER:	**Aynen Katılı-yorum**	**Büyük Ölçüde Katılı-yorum**	**Biraz Katılı-yorum**	**Hiç Katılmı-yorum**
39. Ailemizde sevgi ve şefkat gibi güzel duygular ikinci plandadır.	( )	( )	( )	( )
40. Ev işlerinin kimler tarafından yapılacağını hep birlikte konuşarak kararlaştırırız.	( )	( )	( )	( )
41. Ailemizde herhangi bir şeye karar vermek her zaman sorun olur.	( )	( )	( )	( )
42. Bizim evdekiler sadece bir çıkarları olduğu zaman birbirlerine ilgi gösterir.	( )	( )	( )	( )
43. Evde birbirimize karşı açık sözlüyüzdür.	( )	( )	( )	( )
44. Ailemizde hiçbir kural yoktur.	( )	( )	( )	( )
45. Evde birinden bir şey yapması istendiğinde mutlaka takip edilmesi ve kendisine hatırlatılması gerekir.	( )	( )	( )	( )
46. Aile içinde, herhangi bir sorunun (problemin) nasıl çözüleceği hakkında kolayca karar verebiliriz.	( )	( )	( )	( )
47. Evde kurallara uyulmadığı zaman ne olacağını bilmeyiz.	( )	( )	( )	( )
48. Bizim evde aklınıza gelen her şey olabilir.	( )	( )	( )	( )
49. Sevgi, şefkat gibi olumlu duygularımızı birbirimize ifade edebiliriz.	( )	( )	( )	( )
50. Ailede her türlü problemin üstesinden gelebiliriz.	( )	( )	( )	( )
51. Evde birbirimizle pek iyi geçinemeyiz.	( )	( )	( )	( )
52. Sinirlenince birbirimize küseriz.	( )	( )	( )	( )
53. Ailede bize verilen görevler pek hoşumuza gitmez çünkü genellikle umduğumuz görevler verilmez.	( )	( )	( )	( )
54. Kötü bir niyetle olmasa da evde birbirimizin hayatına çok karışıyoruz.	( )	( )	( )	( )
55. Ailemizde kişiler herhangi bir tehlike karşısında (yangın, kaza gibi) ne yapacaklarını bilirler, çünkü böyle durumlarda ne yapılacağı aramızda konuşulmuş ve belirlenmiştir.	( )	( )	( )	( )
56. Aile içinde birbirimize güveniriz.	( )	( )	( )	( )
57. Ağlamak istediğimizde, birbirimizden çekinmeden rahatlıkla ağlayabiliriz.	( )	( )	( )	( )
58. İşimize (okulumuza) yetişmekte güçlük çekiyoruz.	( )	( )	( )	( )

59. Aile içinde birisi, hoşlanmadığımız bir şey yaptığında ona bunu açıkça söyleriz.	( )	( )	( )	( )
60. Problemimizi çözmek için ailecek çeşitli yollar bulmaya çalışırız.	( )	( )	( )	( )

APPENDIX V

The Multidimensional Scale of Perceived Social Support

Aşağıda 12 cümle ve her birinde de cevaplarınızı işaretlemeniz için 1 den 7 ye kadar rakamlar verilmiştir. Her cümlede söyleneni sizin için ne kadar çok doğru olduğunu veya olmadığını belirtmek için o cümle altındaki rakamlardan yalnız bir tanesini daire içine alarak işaretleyiniz. Bu şekilde 12 cümlenin her birinde bir işaret koyarak cevaplarınızı veriniz.

1. İhtiyacım olduğunda yanımda olan özel bir insan var.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

2. Sevinç ve kederimi paylaşabileceğim özel bir insan var.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

3. Ailem bana gerçekten yardımcı olmaya çalışır.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

4. İhtiyacım olan duygusal yardımı ve desteği ailemden alırım.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

5. Beni gerçekten rahatlatan bir insan var.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

6. Arkadaşlarım bana gerçekten yardımcı olmaya çalışırlar.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

7. İşler kötü gittiğinde arkadaşlarıma güvenebilirim.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

8. Sorunlarımı ailemle konuşabilirim.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

9. Sevinç ve kederlerimi paylaşabileceğim arkadaşlarım var.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

10. Yaşamımda duygularıma önem veren özel bir insanım.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

11. Kararlarımı vermede ailem bana yardımcı olmaya isteklidir.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

12. Sorunlarımı arkadaşlarımla konuşabilirim.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

APPENDIX VI

Inventory of Statements about Self-injury

BÖLÜM I: DAVRANIŞLAR

Aşağıdaki anket çeşitli kendini yaralama davranışlarını sorgulamaktadır. Lütfen yalnızca belirtilen davranışı **kasıtlı olarak (isteyerek, amaçlı)** ve **intihar amacı olmaksızın** gerçekleştirmiş iseniz işaretleyiniz.

1. Lütfen aşağıdaki maddeleri kasıtlı olarak yasamınız boyunca kaç kez yaptığınızı belirtiniz (0, 5, 10, 100 vb.):

Kesme	
Isırma	
Yakma	
Cilde bir harf/yazı/şekil kazıma	
Çimdikleme	
Saç kopartma (kökünden)	
Tırnaklama (deriyi kanatacak kadar)	
Kendini sert bir yere çarpma veya kendine vurma	
Yaranın iyileşmesine engel olma (ör: kabuklarını koparma)	
Cildi sert bir yüzeye sürtme	
Kendine iğne batırma	
Tehlikeli/zararlı madde içme/ yutma	
Diğer	

****

Önemli: Eğer yukarıda belirtilen davranışlardan bir ya da daha fazlasını gerçekleştirmiş iseniz anketin kalan kısmını doldurunuz. Eğer belirtilen davranışlardan hiç birisini gerçekleştirmemiş iseniz anketin kalan kısmını doldurmayınız ve bir sonraki ankete geçiniz.

****

2. Hangi yaşta?

1) İlk kez kendine zarar verdiğinde kaç yaşındaydın? .....

2) En son ne zaman kendine zarar verdiniz? (yaklaşık gün/ay/yıl) …….

3. Kendine zarar verme davranışı sırasında fiziksel acı hisseder misiniz?

1)EVET 2) BAZEN 3)HAYIR

4. Kendine zarar verme davranışı sırasında yalnız mı olursunuz?

1)EVET 2) BAZEN 3)HAYIR

5. Çoğunlukla kendine zarar verme dürtüsü oluştuktan ne kadar süre sonra eylemi gerçekleştirirsiniz?

1) 1 saatten az 2) 1-3 saat 3) 3-6 saat 4) 6-12 saat 5) 12-24 saat 6) 1günden fazla

6. Kendine zarar verme davranışınızı sona erdirmek ister misiniz / istediniz mi?

1) EVET 2) HAYIR

BÖLÜM II: İŞLEVLER

Bu anket intihar amaçlı olamayan kendine zarar verme davranışı deneyimini daha iyi anlamamızı sağlamaya yönelik oluşturulmuştur. Aşağıda sizin kendinize zarar verme deneyiminizle ilişkili olabilecek ya da olmayabilecek durumlar bir liste olarak verilmiştir. Lütfen sizin için en uygun olan durumları belirleyiniz.

• Belirtilen durum size **hiç uygun değilse** "0" işaretleyiniz,

• Belirtilen durum size **kısmen uygunsa** "1" işaretleyiniz,

• Belirtilen durum size **çok uygunsa** "2" işaretleyiniz.

"Kendime zarar verdiğimde, …	**0**	**1**	**2**
1….kendimi sakinleşmiş hissederim.			
2….kendim ve başkaları arasında sınır çizmiş olurum.			
3….kendimi cezalandırmış olurum.			
4…kendime özen göstermek için bir yol bulmuş olurum (yaramla ilgilenerek).			
5… uyuşukluk hissinden kurtulmak için acı oluşturmuş olurum.			
6….intihar girişimi dürtümden kaçınmış olurum.			
7….heyecan ve coşku yasatan bir şey yapmış olurum.			
8….akranlarımla aramda bir bağ kurulmuş olur.			
9….başkalarının hissettiğim duygusal acının boyutunu anlamalarını sağlamış olurum.			
10…acıya dayanıklılığımı görmüş olurum.			
11…kendimi berbat hissettiğime dair bir işaret bırakmış olurum.			
12…birisinden hıncımı çıkartmış olurum.			
13…kendi kendime yeterliliğimi kanıtlamış olurum.			
14…içimde biriken duygusal baskıdan kurtulmuş olurum.			
15…başkalarından ayrı olduğumu göstermiş olurum.			
16…değersiz veya akılsızlığımdan dolayı kendime duyduğum öfkeyi göstermiş olurum.			
17…duygusal stresime kıyasla bas etmesi daha kolay olan bir fiziksel yara yaratmış olurum.			
18…fiziksel acı bile olsa bir şeyler hissetmiş olurum (hiçbir şey hissetmemektense).			
19…intihar düşüncelerime gerçekten intihar girişiminde bulunmak yerine başka şekilde yanıt vermiş olurum.			
20…uç bir şey yaparak kendimi veya başkalarını eğlendirmiş olurum			
21…başkalarına uyum sağlamış olurum.			
22…başkalarından ilgi ya da yardım istemiş olurum.			

23…güçlü veya dayanıklı olduğumu göstermiş olurum.			
24…duygusal acımın gerçekliğini kendime göstermiş olurum.			
25…başkalarından intikam almış olurum.			
26…başkalarının yardımına bel bağlamadığımı göstermiş olurum.			
27…kaygı, hüsran, öfke ve diğer bunaltıcı hislerim hafiflemiş olur.			
28…kendim ve başkaları arasında bariyer inşa etmiş olurum.			
29…kendimden hoşnut olmamam ya da kendimden iğrenmeme bir yanıt vermiş olurum.			
30…kendimi yaramın iyileşmesine odaklarım, bu; benim için sevindirici ya da tatmin edici olabilir.			
31…kendimi gerçek hissetmediğimde hala hayatta olduğumdan emin olmuş olurum.			
32…intihar düşüncelerimi sonlandırmış olurum.			
33…sınırlarımı zorlamış olurum (paraşütle atlamak ya da uçta bir şey yapmak gibi).			
34…arkadaşlarım ve sevdiklerimle aramda bir dostluk ya da akrabalık bağı simgesi oluşturmuş olurum.			
35…sevdiğim birinin benden ayrılmasına ya da beni terk etmesine engel olmuş olurum.			
36…fiziksel acıya katlanabileceğimi kanıtlamış olurum.			
37…yaşadığım duygusal stresi anlamlandırmış olurum.			
38…bana yakın birini incitmeye çalışmış olurum.			
39… özerkliğimi / bağımsızlığımı ortaya koymuş olurum.			

(İsteğe bağlı) Aşağıdaki boşluğa, sizin için yukarıda sıralanmış olanlardan daha doğru durumlar var ise bir liste halinde yazınız:

(İsteğe bağlı) Aşağıdaki boşluğa, size uymasa bile yukarıda sıralanmış olanlara eklenmesi gerektiğini düşündüğünüz durumlar var ise bir liste halinde yazınız.

APPENDIX VII

Suicide Ideation Scale

Aşağıda intihara ait düşünceleri belirten bazı cümleler verilmiştir. Size uygun olanlar için
"Doğru", uygun olmayanlar için ise "Yanlış" sütununun altındaki kutuyu (X) işaretleyiniz.

	Doğru	Yanlış
1. Kontrol edemeyeceğim kadar öfkelenirim.		
2. Bazen başkalarını incitme isteği duyuyorum.		
3. İncinmem veya yaralanmam umurumda değil.		
4. Kendim için bir şeyleri daha iyi yapacağım konusunda umudumu kesebilirim.		
5. Geleceğim bana karanlık görünüyor.		
6. İlerisi için yalnızca hoş olmayan şeyler düşünüyorum.		
7. İstediğim hiçbir şeyi elde edemiyorum.		
8. Hiçbir şey istediğim gibi değil.		
9. Ölümü hak etmiş olduğumu düşünüyorum.		
10. İntihar girişiminde bulunacak olsam, öncesinde en az üç saat bunu düşünürdüm.		
11. Geçen yıl içinde başkalarına hayatıma son verebileceğimden bahsettim.		
12. Zaman zaman kendimi öldürme konusunda karşı konulmaz bir istek duyarım.		
13. Sık sık hayatıma son verme fikri aklıma geliyor.		
14. İşlerin kötü gitmesi konusunda kendimi suçluyorum.		
15. Kötü bir şeyler yapmışım gibi geliyor.		
16. Her zamankinden daha yavaş düşünüyorum.		
17. Her zamankinden daha yavaş konuşuyorum.		

APPENDIX VIII

Brief Symptom Inventory

Aşağıda, insanların bazen yaşadıkları belirtilerin ve yakınmaların bir listesi verilmiştir. Listedeki her maddeyi lütfen dikkatle okuyunuz. Daha sonra, o belirtinin **SİZDE BUGÜN DÂHİL, SON BİR HAFTADIR NE KADAR VAR OLDUĞUNU** yandaki bölmede uygun olan yere işaretleyiniz. Her belirti için sadece bir yeri işaretlemeye ve hiçbir maddeyi atlamamaya özen gösteriniz. Yanıtlarınızı kurşun kalemle işaretleyiniz. Eğer fikir değiştirirseniz ilk yanıtınızı siliniz.

Yanıtlarınızı aşağıdaki ölçeğe göre değerlendiriniz: Bu belirtiler son bir haftadır sizde ne kadar var?

0. Hiç yok

1. Biraz var

2. Orta derecede var

3. Epey var

4. Çok fazla var

	Hiç				**Çok Fazla**
1. İçinizdeki sinirlilik ve titreme hali	**0**	**1**	**2**	**3**	**4**
2. Baygınlık, baş dönmesi	**0**	**1**	**2**	**3**	**4**
3. Bir başka kişinin sizin düşüncelerinizi kontrol edeceği fikri	**0**	**1**	**2**	**3**	**4**
4. Başınıza gelen sıkıntılardan dolayı başkalarının suçlu olduğu duygusu	**0**	**1**	**2**	**3**	**4**
5. Olayları hatırlamada güçlük	**0**	**1**	**2**	**3**	**4**
6. Çok kolayca kızıp öfkelenme	**0**	**1**	**2**	**3**	**4**
7. Göğüs (kalp) bölgesinde ağrılar	**0**	**1**	**2**	**3**	**4**
8. Meydanlık (açık) yerlerden korkma duygusu	**0**	**1**	**2**	**3**	**4**
9. Yaşamınıza son verme düşünceleri	**0**	**1**	**2**	**3**	**4**
10. İnsanların çoğuna güvenilmeyeceği hissi	**0**	**1**	**2**	**3**	**4**
11. İştahta bozukluklar	**0**	**1**	**2**	**3**	**4**
12. Hiçbir nedeni olmayan ani korkular	**0**	**1**	**2**	**3**	**4**
13. Kontrol edemediğiniz duygu patlamaları	**0**	**1**	**2**	**3**	**4**
14. Başka insanlarla beraberken bile yalnızlık hissetmek	**0**	**1**	**2**	**3**	**4**

	Hiç				**Çok Fazla**
15. İşleri bitirme konusunda kendini engellenmiş hissetmek	**0**	**1**	**2**	**3**	**4**
16. Yalnızlık hissetmek	**0**	**1**	**2**	**3**	**4**
17. Hüzünlü, kederli hissetmek	**0**	**1**	**2**	**3**	**4**
18. Hiçbir şeye ilgi duymamak	**0**	**1**	**2**	**3**	**4**
19. Ağlamaklı hissetmek	**0**	**1**	**2**	**3**	**4**
20. Kolayca incinebilme, kırılmak	**0**	**1**	**2**	**3**	**4**
21. İnsanların sizi sevmediğine, kötü davrandığına inanmak	**0**	**1**	**2**	**3**	**4**
22. Kendini diğerlerinden daha aşağı görme	**0**	**1**	**2**	**3**	**4**
23. Mide bozukluğu, bulantı	**0**	**1**	**2**	**3**	**4**
24. Diğerlerinin sizi gözlediği ya da hakkınızda konuştuğu duygusu	**0**	**1**	**2**	**3**	**4**
25. Uykuya dalmada güçlük	**0**	**1**	**2**	**3**	**4**
26. Yaptığınız şeyler tekrar tekrar doğru mu diye kontrol etmek	**0**	**1**	**2**	**3**	**4**
27. Karar vermede güçlükler	**0**	**1**	**2**	**3**	**4**
28. Otobüs, tren, metro gibi umumi vasıtalarla seyahatlerden korkmak	**0**	**1**	**2**	**3**	**4**
29. Nefes darlığı, nefessiz kalmak	**0**	**1**	**2**	**3**	**4**
30. Sıcak-soğuk basmaları	**0**	**1**	**2**	**3**	**4**
31. Sizi korkuttuğu için bazı eşya, yer ya da etkinliklerden uzak kalmaya çalışmak	**0**	**1**	**2**	**3**	**4**
32. Kafanızın “bomboş” kalması	**0**	**1**	**2**	**3**	**4**
33. Bedeninizin bazı bölgelerinde uyuşmalar, karıncalanmalar	**0**	**1**	**2**	**3**	**4**
34. Günahlarınız için cezalandırılmanız gerektiği	**0**	**1**	**2**	**3**	**4**
35. Gelecekle ilgili umutsuzluk duyguları	**0**	**1**	**2**	**3**	**4**

	Hiç				**Çok Fazla**
36. Konsantrasyonda (dikkati bir şey üzerinde toplama) güçlük/zorlanmak	**0**	**1**	**2**	**3**	**4**
37. Bedeninizin bazı bölgelerinde zayıflık, güçsüzlük hissi	**0**	**1**	**2**	**3**	**4**
38. Kendini gergin ve tedirgin hissetmek	**0**	**1**	**2**	**3**	**4**
39. Ölme ve ölüm üzerine düşünceler	**0**	**1**	**2**	**3**	**4**
40. Birini dövme, ona zarar verme, yaralama isteği	**0**	**1**	**2**	**3**	**4**
41. Bir şeyleri kırma, dökme isteği	**0**	**1**	**2**	**3**	**4**
42. Diğerlerinin yanındayken yanlış bir şeyler yapmamaya çalışmak	**0**	**1**	**2**	**3**	**4**
43. Kalabalıklarda rahatsızlık duymak	**0**	**1**	**2**	**3**	**4**
44. Bir başka insana hiç yakınlık duymamak	**0**	**1**	**2**	**3**	**4**
45. Dehşet ve panik nöbetleri	**0**	**1**	**2**	**3**	**4**
46. Sık sık tartışmaya girmek	**0**	**1**	**2**	**3**	**4**
47. Yalnız bırakıldığında/kalındığında sinirli hissetmek	**0**	**1**	**2**	**3**	**4**
48. Başarılarınız için diğerlerinden yeterince takdir görmemek	**0**	**1**	**2**	**3**	**4**
49. Yerinde duramayacak kadar kendini tedirgin hissetmek	**0**	**1**	**2**	**3**	**4**
50. Kendini değersiz görmek	**0**	**1**	**2**	**3**	**4**
51. Eğer izin verirseniz insanların sizi sömüreceği duygusu	**0**	**1**	**2**	**3**	**4**
52. Suçluluk duyguları	**0**	**1**	**2**	**3**	**4**
53. Aklınızda bir bozukluk olduğu fikri	**0**	**1**	**2**	**3**	**4**

APPENDIX IX

Cognitive Emotion Regulation Questionnaire

Olaylarla nasıl başa çıkarsınız?

Herkesin başından istenmeyen veya tatsız birçok olay geçmiştir veya geçmektedir ve herkes bu duruma kendi yöntemleriyle karşılık vermektedir. **İSTENMEYEN VEYA TATSIZ DURUMLARLA KARŞILAŞTIĞINIZDA** genellikle ne şekilde düşündüğünüzü, aşağıda yer alan sorular aracılığıyla belirtmeniz istenmektedir.

1 (Neredeyse) Hiçbir zaman **2 Bazen** **3 Düzenli olarak** **4 Sık sık** **5 (Neredeyse) Her zaman**	**Hiçbir zaman**	**Bazen**	**Düzenli olarak**	**Sık sık**	**Her zaman**
1. Gerçekleşen olaydan dolayı kendimi suçlarım.	**1**	**2**	**3**	**4**	**5**
2. Bu olay yaşandı, gerçekleşen durumu bu şekilde kabullenmem gerektiğini düşünürüm.	**1**	**2**	**3**	**4**	**5**
3. Yaşadığım olayın bende uyandırdığı duyguları düşünürüm.	**1**	**2**	**3**	**4**	**5**
4. Yaşadığım tatsız olaydan daha iyi bir şeyler düşünürüm.	**1**	**2**	**3**	**4**	**5**
5. Yapabileceğim en iyi hamleyi düşünürüm.	**1**	**2**	**3**	**4**	**5**
6. Yaşanan tatsız olaydan bir şeyler öğrenebileceğimi düşünürüm.	**1**	**2**	**3**	**4**	**5**
7. Yaşananlar çok daha kötü bir şekilde de gerçekleşebilirdi diye düşünürüm.	**1**	**2**	**3**	**4**	**5**
8. Başımdan geçen olayın diğerlerinin başına gelenlerden daha kötü olduğunu düşünürüm.	**1**	**2**	**3**	**4**	**5**
9. Gerçekleşen olay karşısında başkalarını suçlarım.	**1**	**2**	**3**	**4**	**5**
10. Gerçekleşen olayın sorumlusu olarak kendimi görürüm.	**1**	**2**	**3**	**4**	**5**
11. Yaşanan kötü olayı kabul etmem gerektiğini düşünürüm.	**1**	**2**	**3**	**4**	**5**
12. Yaşanan olay karşısında ne düşündüğüm ve ne hissettiğimle meşgul olurum.	**1**	**2**	**3**	**4**	**5**
13. Bu olayla ilgisi olmayan güzel şeyler düşünürüm.	**1**	**2**	**3**	**4**	**5**
14. Bu durumla en iyi nasıl başa çıkabileceğimi düşünürüm.	**1**	**2**	**3**	**4**	**5**
15. Yaşananların bir sonucu olarak daha güçlü bir kişi haline dönüştüğümü düşünürüm.	**1**	**2**	**3**	**4**	**5**

1 (Neredeyse) Hiçbir zaman **2 Bazen** **3 Düzenli olarak** **4 Sık sık** **5 (Neredeyse) Her zaman**	**Hiçbir zaman**	**Bazen**	**Düzenli olarak**	**Sık sık**	**Her zaman**
16. Diğer insanların çok daha kötü deneyimler yaşayabileceklerini düşünürüm.					
17. Yaşadığım olayın ne kadar kötü olduğunu sürekli düşünürüm.	**1**	**2**	**3**	**4**	**5**
18. Gerçekleşen olaydan başkalarının sorumlu olduğunu düşünürüm.	**1**	**2**	**3**	**4**	**5**
19. Gerçekleşen olayda yaptığım hataları düşünürüm.	**1**	**2**	**3**	**4**	**5**
20. Yaşanan bu olayla ilgili değiştirebileceğim bir şey olmadığını düşünürüm.	**1**	**2**	**3**	**4**	**5**
21. Yaşanan olayın, üzerimde neden bu şekilde bir duygu yarattığını anlamak isterim.	**1**	**2**	**3**	**4**	**5**
22. Yaşanan bu kötü olayı düşünmek yerine güzel şeyler düşünürüm.	**1**	**2**	**3**	**4**	**5**
23. Durumu nasıl değiştirebileceğimi düşünürüm.	**1**	**2**	**3**	**4**	**5**
24. Yaşanan kötü olayın aynı zamanda olumlu yönlerinin de bulunduğunu düşünürüm.	**1**	**2**	**3**	**4**	**5**
25. Diğer şeylerle karşılaştırdığımda, bu olayın çok da kötü olmadığını düşünürüm.	**1**	**2**	**3**	**4**	**5**
26. Yaşadığım olayın, bir insanın başına gelebilecek en kötü olay olduğunu düşünürüm.	**1**	**2**	**3**	**4**	**5**
27. Gerçekleşen olayda başkalarının yaptığı hataları düşünürüm.	**1**	**2**	**3**	**4**	**5**
28. Yaşananların kaynağı olarak kendimi görürüm.	**1**	**2**	**3**	**4**	**5**
29. Bununla yaşamayı öğrenmek zorundayım diye düşünürüm.	**1**	**2**	**3**	**4**	**5**
30. Başımdan geçen kötü olayın, bende harekete geçirdiği duygular üzerinde düşünürüm.	**1**	**2**	**3**	**4**	**5**
31. Beni mutlu eden başka olayları düşünürüm.	**1**	**2**	**3**	**4**	**5**
32. Yapabileceğim hamlelerle ilgili bir plan düşünürüm.	**1**	**2**	**3**	**4**	**5**
33. Durumun pozitif yönlerini ararım.	**1**	**2**	**3**	**4**	**5**
34. Kendi kendime hayatta daha kötü şeyler olduğunu söylerim.	**1**	**2**	**3**	**4**	**5**
35. Durumun ne kadar korkunç olduğunu sürekli düşünürüm.	**1**	**2**	**3**	**4**	**5**
36. Bu soruna temelde başkalarının neden olduğunu düşünürüm.	**1**	**2**	**3**	**4**	**5**

CURRICULUM VITAE

EDUCATION

2003-2007 Bosphorus University, Faculty of Arts & Sciences, Department of Psychology

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