

EXAMINING DIFFERENT ASPECTS OF MENTALIZATION CAPACITY  
AMONG ADOLESCENTS

CEYDA DEDEOĞLU

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EXAMINING DIFFERENT ASPECTS OF MENTALIZATION CAPACITY  
AMONG ADOLESCENTS

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Ceyda Dedeoğlu

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## DECLARATION OF ORIGINALITY

I, Ceyda Dedeoğlu, certify that

- I am the sole author of this thesis and that I have fully acknowledged and documented in my thesis all sources of ideas and words, including digital resources, which have been produced or published by another person or institution;
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## ABSTRACT

### Examining Different Aspects of Mentalization Capacity Among Adolescents

Mentalization is considered a core human capacity, necessary for personal awareness and reciprocal interaction (Bleiberg, 2013). The features of mentalizing in the important period of adolescence are not sufficiently studied. The current study examines mentalization in adolescents, investigating whether there are differences in the mentalizing ability of two diagnostic groups, externalizers vs internalizers, compared with each other, as well as those with no symptoms of psychopathology. With this aim, two main hypotheses were tested. The first hypothesis claims that adolescents with no symptoms of psychopathology will have better mentalization scores. The second hypothesis claims that there will be differences between the mentalization scores of internalizers and externalizers, internalizers being better mentalizers. In addition, the Turkish adaptation of the How I Feel Questionnaire and the Turkish version of the Youth Reflective Functioning Scale were administered. To test the hypotheses, a community sample of 700 high school students from Istanbul were reached and they completed several measurement tools. Both hypotheses were supported, indicating that mentalizing scores are worse when there are symptoms of psychopathology. The profiles of internalizers and externalizers were significantly different from each other in their mentalization scores. The community sample provides detailed information about the relation of mentalization and symptoms of psychopathology among adolescents, indicating that externalizers need support to develop mentalizing skills, whereas too much mentalizing can be associated with internalizing symptoms.

## ÖZET

### Ergenlerde Zihinselleştirme Kapasitesinin Farklı Yönlerinin İncelenmesi

Zihinselleştirme, kişisel farkındalık ve karşılıklı etkileşim için gerekli temel bir insani özellik olarak kabul edilir (Bleiberg, 2013). Zihinselleştirme kavramı, önemli bir gelişimsel dönem olan ergenlikte henüz yeterince incelenmemiştir. Mevcut çalışmada zihinselleştirme becerisinin ergenlik döneminde nasıl seyrettiği incelenmekte, dışa yönelim problemleri olanlar ile içe yönelim problemleri olan ergenlerin zihinselleştirme becerileri birbirleriyle ve problemi olmayanlarla karşılaştırılmaktadır. Bu amaçla iki ana hipotez test edilmiştir. İlk hipotez, psikopatoloji belirtisi olmayan ergenlerin daha iyi zihinselleştirme puanlarına sahip olacağını iddia eder. İkinci hipotez, içe yönelim problemi olanlarla dışa yönelim problemleri olanların zihinselleştirme puanları arasında farklılıklar olacağını, içe yönelim problemi olanların daha iyi zihinselleştirme becerisine sahip olacağını iddia eder. Bu hipotezlere ek olarak çalışmada Nasıl Hissediyorum Ölçeği'nin Türkçe uyarlaması yapılmış ve Gençler için Yansıtıcı İşlevsellik Ölçeği Türkçe kullanılmıştır. Hipotezleri test etmek için İstanbul'dan 700 lise öğrencisinden oluşan bir toplum örneğine ulaşılmış ve çeşitli ölçüm araçları kullanılmıştır. Her iki hipotez de psikopatoloji belirtileri olduğunda zihinselleştirme puanlarının kötüleştiğini gösteren sonuçlarla desteklenmiştir. İçe yönelim ve dışa yönelim problemlerinin profili, zihinselleştirme puanları açısından birbirinden önemli ölçüde farklıdır. Ergen grupta zihinselleştirme ve psikopatoloji belirtileri arasındaki ilişki hakkında ayrıntılı bilgi veren toplum örneği, dışa yönelim problemleri olanların zihinselleştirme becerilerinin geliştirilmesine ihtiyaç duyduğunu, fazla zihinselleştirmenin de içe yönelim semptomlarıyla ilişkilenebildiğini göstermektedir.

## CURRICULUM VITAE

NAME: Ceyda Dedeoğlu

### DEGREES AWARDED

PhD in Clinical Psychology, 2022, Boğaziçi University

MA in Clinical Psychology, 2003, Boğaziçi University

BA in Psychology, 1999, Boğaziçi University

### AREAS OF SPECIAL INTEREST

Psychotherapy with children, adolescents, and families. Mentalization based treatments with children, adolescents, and families. Neuropsychological testing for children, child abuse and neglect, child protection systems.

### PROFESSIONAL EXPERIENCE

Psychotherapist, manager, and owner, Eflatun Psychology, 2020 - present

Managing partner and psychotherapist, YDY Consulting, 2014-2020

Psychotherapist and supervisor, Güzel Günler Clinic, 2012-2014

Psychotherapist, Doku Consulting, 2012-2014

Child Protection Officer, UNICEF, 2008-2012

Neuropsychological testing, Institute of Juvenile Research at The University of Illinois at Chicago, Department of Psychiatry, 2006-2007

Psychotherapist and neuropsychological testing, Center for Psychological Research and Services (BÜPAM) at Boğaziçi University, 2003-2006

Research coordinator, psychotherapist and neuropsychological testing, Güzel Günler Clinic, 2003-2006

Research Assistant, Israel-Istanbul joint project of Marmara Earthquake, 1999-2003

### CERTIFICATIONS AND FELLOWSHIP

Mentalization Based Treatment for Adolescents Supervisor, Anna Freud Center for Children and Families, 2017

Mentalization Based Treatment for Children, Anna Freud Center for Children and Families, 2017

Autism Diagnostic Observation Schedule ADOS-2 practitioner, Fondation Pôle Autisme Genève, 2016

Mentalization Based Treatment for Adolescents, Anna Freud Center for Children and Families, 2015

Mentalization Based Treatment for Families, Anna Freud Center for Children and Families, 2015

Fulbright Scholarship, 2005

## PUBLICATIONS

### Journal Articles

Gökçe, S., Yazgan, Y., Ayaz, A. B., Kayan, E., Yusufoglu, C., Carkaxhiu Bulut, G., Aslan Genç, H., Dedeoğlu, C., Demirhan, S., Sancak, A., & Saridoğan, G. E. (2017). Association between age of beginning primary school and attention deficit hyperactivity disorder. *Journal of Developmental & Behavioral Pediatrics*, 38(1), 12-19.

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### Conference Proceedings

Taşkın, B., Biçer, D., & Dedeoğlu, C (2021). Family as a Surrogate Executive System: Attention Deficit Hyperactivity Disorder and its Interactions with Family Functions. In *30<sup>th</sup> Congress on Child and Adolescent Psychiatry*, Istanbul, Turkey.

Dedeoğlu, C. Theory of Mind, Assessment of Communication, Therapy of Empathy (2017). In *27<sup>th</sup> Turkish Child and Adolescent Psychiatry Congress*, Izmir, Turkey.

- Dedeoğlu, C. Transition to Adulthood or Transformation of Difficulties (2017). In *27<sup>th</sup> Turkish Child and Adolescent Psychiatry Congress*, Izmir, Turkey.
- Aközer, M., & Dedeoğlu, C. (2013). Ethics of social work: Respect for the privacy right of children in institutional care. In *3<sup>rd</sup> ENSACT European Conference*, Istanbul, Turkey.
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- Dedeoğlu, C. (2008). Community and teacher-based mental health approaches to mass disasters. In *18th World Congress of the International Association for Child and Adolescent Psychiatry and Allied Professions (IACAPAP)*, Istanbul, Turkey.
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- Dedeoğlu, C. (2002). Multidiscipline studies among street children and youth. In XII. National Psychology Congress, Ankara, Turkey.
- Dedeoğlu, C. (2001). Community Intervention for Trauma: Programs for children, youth and elderly. In *National Congress of Psychiatry*, Istanbul, Turkey.
- Dedeoğlu, C. (2000). World Bank-Street Children Association joint project: A pilot study for street children. In *International Congress for Street Children*, Cairo, Egypt.

#### Other Publications

- Müderrisoğlu, S., Dedeoğlu, C., Akço, S. & Akbulut, B. (2014). Research on Domestic Violence against Children aged 0-8 years in Turkey. Research Report, Bernard van Leer Foundation.
- Dedeoğlu, C. (2013). From the individual analysis to mutual reconstruction. Suret, Aralık.
- Psychological Assessment of Children in Child Protection Centers in Manual for Hospital Based Child Protection Centers: Holistic Approach for Children Abused and Neglected. UNICEF, 2011.
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## ABBREVIATIONS

ANOVA	Analysis of variance
BES	Basic Empathy Scale
HIF	How I Feel Questionnaire
MANOVA	Multivariate analysis of variance
MoNE	Ministry of National Education
RFQ	Reflective Functioning Questionnaire
SES	Socio-economic status
YSR	Youth Self Report



## CHAPTER 1

### INTRODUCTION

The main objective of the study is to investigate the mentalization levels of the adolescents in a community sample and examine differences among internalizing and externalizing adolescents in terms of mentalization. Developing tools for the measurement of mentalization in Turkish for the adolescent age group is the secondary objective of the study. Highschool students from İstanbul were examined for their internalizing and externalizing behavioral symptoms, and their relationship with mentalizing capacity was examined. As the only known study in a Turkish community sample and among a limited number of studies in the world which focus on adolescent mentalization in a community sample, the results contribute to the understanding of mentalizing in an important developmental period.

This chapter will summarize the concepts examined in the study, starting with the term mentalization and its meaning. The mentalization concept will be elaborated in sub-sections where comparison with related concepts and its development is explained. These sections will be followed with an explanation about the distinction of internalizing and externalizing behaviors. The relationship between internalizing and externalizing profiles and mentalization will be elaborated separately, referring to the former research in this area. The chapter will be closed by the hypotheses of this research and the possible contribution of the study to the field.

#### 1.1 What is mentalization?

Mentalization is a new concept which emerged from psychotherapy work within recent decades (Hagelquist, 2017, p. 18). Although its roots are based on the Theory of Mind work, the new conceptualization as “mentalization” was developed by Peter

Fonagy and his colleagues (Allen & Fonagy, 2006; Hagelquist, 2017). As a general definition, Fonagy and Allison (2012) explain mentalization as “a form of imaginative mental activity, namely, perceiving and interpreting human behaviour in terms of intentional mental states (e.g. needs, desires, feelings, beliefs, goals, purposes, and reasons)” (p. 11). Allen, Fonagy and Batemen (2008) define the concept of mentalization as understanding/holding/keeping/conceptualizing one’s own or the other’s mind, to understand the meaning of behavior.

As a new word in dictionaries and a newly developing concept, it is being defined in different ways. To clear up confusion about the concept, Allen et al. (2008), offered a list of short definitions of the concept, as stated in Table 1 below.

Table 1. Definitions of Mentalizing

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<ul style="list-style-type: none"> <li>• Holding mind in mind</li> <li>• Attending to mental states in self and others</li> <li>• Understanding misunderstandings</li> <li>• Seeing yourself from the outside and others from the inside</li> <li>• Giving a mental quality to or cultivating mentally</li> </ul>
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Allen et al. (2008)

Several critical nuances in the use of the term are underlined by the researchers of mentalization. One of them is the use of the word “mentalizing” instead of “mentalization, to reflect the “activeness” of the mind<sup>1</sup> (Allen et al., 2008). Another important nuance is the inclusion of the emotional world within the concept. Although in some of the definitions the “mentalization” concept sounds mostly like a cognitive ability, it captures emotional intensity (Midgley et al., 2017). Mentalization is considered as a unique human ability where you can get information about yourself

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<sup>1</sup> The words mentalization and mentalizing will be used interchangeably within the text, in line with the literature.

like an outsider and about others like an insider, so that you can understand and interpret actions more appropriately (Midgley et al., 2017). As Allen et al. (2008) indicated, “not all mental activity is mentalizing; rather, mentalizing is concerned with mental states” (p. 4).

Mentalizing is considered as an acquired capacity enabling children to interpret the world (or behaviors) in terms of mental states (Suchman et al., 2012). The so called “mind reading” ability is acquired in the early years. With this developmental achievement, children become able to respond to behaviors with an understanding of the beliefs, intentions, feelings underlying that behavior (Fonagy & Target, 1997).

## 1.2 Mentalization related concepts

Mentalization is a concept within the social-emotional world capturing a wide range of human capacities which are also defined under different terminologies. Mentalization is considered both as a concept of social cognition as well as self-awareness. Under social cognition concepts like theory of mind, mind-reading, mind-blindness, empathy and under self-awareness terms like meta-cognition, insight, mindfulness has similar definitions with mentalization (Ballespí et al., 2018a). Some of these terms have intersection points with mentalization; the commonalities are high and only subtle differences separate the terms. Several concepts like reflective functioning, psychological mindedness, social or emotional understanding, emotional intelligence, perspective taking and affect consciousness are also considered to be related and overlapping concepts, some of which are used interchangeably with mentalization (Vrouva et al., 2012). The brief table from Allen et al. (2008) defines the critical differences between the mentalization concept and the other related terminology.

Table 2. Differentiating “Mentalizing” from Overlapping Terms

Term	Distinctions
Mentalizing	Attending to mental states in self and others, and interpreting behavior accordingly
Mind-blindness	Antithesis of mentalizing; employed originally to characterize autism
Mindreading	Applies to others and focuses on cognition
Theory of mind	Focuses on cognitive development and provides a conceptual framework for mentalizing
Metacognition	Focuses primarily on cognition in the self
Reflective functioning	Operationalizes the general level of mentalizing
Mindfulness	Focuses on the present and is not limited to mental states
Empathy	Focuses on others and emphasizes emotional states
Emotional intelligence	Pertains to the mentalizing of emotion in self and others
Psychological mindedness	Characterizes the disposition to mentalize, broadly defined
Insight	Mental content that is the product of the mentalizing process
Allen et al. (2008), p. 41	

Among the long list of conceptually interconnected terms, the more relevant ones for the current research -namely the Theory of Mind, empathy and reflective functioning- will be defined separately in this section. The initial one is the Theory of Mind since it is used in a tremendous amount of research and constitutes the baseline for much of the mentalization work. The roots of the mentalization concept are based on Baron-Cohen’s (2005) work on Theory of Mind (Fonagy et al., 2002). Several aspects of the mentalization concept differentiates it from the Theory of Mind. The first distinction researchers underline is the primary focus on cognitive development in the ToM concept. With this focus, ToM is found to be too narrow to capture the concept of mentalization, since mentalization focuses on the emotional side as well.

Mentalizing is considered as capturing a more general concept, predominantly focusing on the emotional side (Allen et al., 2008). Another distinction Allen et al. (2008) define again refers to a narrowness of the ToM concept, this time about the primary focus on the other. The ToM concept is about interpreting the other's mind; however, mentalization also captures interpretation about the self. The third distinction they made between the concepts is about the focus on mentalizing "activity", which employs the ToM concept to daily life and contributes to its development. Allen and Fonagy (2006) underline that the lack of ToM, also conceptualized as mind-blindness is considered as a stable neurobiological condition – like autism. On the other hand, lack of mentalization can vary in degree, partial failures can be seen even in people with strong mentalizing skills, based on their conditions (Allen & Fonagy, 2006). In general, ToM is a cognitive developmental stage whereas mentalization is considered to be an evolving relational capacity.

The other relevant concept for the current study is "empathy". Allen and Fonagy (2006) suggest that, if empathy captures empathy for one's own self, then the two concepts are identical. The definition of empathy by Hoffman (2004) underlines this distinction: "Empathy is an effective response more appropriate to someone else's situation than to one's own". On the other hand, empathy has a broader meaning as "it includes an appropriate response to what is mentalized" (Allen et al., 2008, p.55). With the huge interaction and interdependence of these two constructs, Allen et al. (2008) suggest the use of them together; "to mentalize empathically with respect to self and others" (p.55).

The last concept that will be elaborated for this research is reflective functioning. This is the term Fonagy and his colleagues use to operationalize the concept of mentalization (Duval et al., 2018; Ha, 2012; Sharp et al., 2009). The

Reflective Functioning Scale is a tool for the measurement of mentalization ability, based on the Adult Attachment Interview. The instrument aims to measure the quality of mentalizing, within the spectrum from negative RF to exceptional RF (Allen et al., 2008). In further research, The Reflective Functioning Questionnaire was developed for brevity and ease of administration (Fonagy et al., 2016). The terms of mentalizing/mentalization and reflective functioning are used interchangeably in the literature (Fonagy & Target, 1997), and within the current research.

### 1.3 Development and underdevelopment of mentalization

The concept of mentalization develops on the basis of attachment theory (Allen, 2013), stemming from the human infant's tendency to socialize (Cozolino, 2006). The relationship between the caregiver and the child<sup>2</sup> plays a crucial role in the development of the representational world. With the contemporary findings in developmental psychology, especially in infant research, the synchrony and developing relationship between the baby-caregiver couples, the growth of interaction, and the development of the relationship for further years are better identified (Beebe, 2005). When the child develops to a point where he acquires more controlled and symbolic understanding about the self and the other, considering and verbalizing that the other's mind can be different from his own becomes possible, and mentalizing is fully achieved (Bleiberg, 2013).

Three different modes of experience were defined by Target and Fonagy (1996) as occurring before the achievement of full mentalization capacity. These are

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<sup>2</sup>From this point on "he" will be used to refer to the infant or the child and "she" will be used to refer to the mother or the caregiver. This is for the sake of simplicity in the language, not a reflection of gender bias.

“psychic equivalence mode”, “pretend mode” and “teleological mode”. The pre-mentalizing modes are briefly explained in Table 3 below. Fonagy and colleagues’ theory of mentalization claims that, even if full mentalization capacity is reached, when there are problems that collapse the mentalizing capability, the individual may regress to one of these pre-mentalizing modes (Allen et al., 2008).

Table 3. Modes of Mentalization Experience

Mode	Description
Psychic equivalence	World=mind; mental representations are not distinguished from the external reality that they represent, as in dreams, flashbacks, and paranoid delusions.
Pretend	Mental states are separated from reality but maintain a sense of unreality in as much as they are not linked to or anchored in reality.
Teleological	Mental states such as needs and emotions are expressed in action; only actions and their tangible effects -not words- count.
Mentalized	Actions are understood in conjunction with mental states (as contrasted to the teleological mode), and mental states have neither an exaggerated sense of reality nor unreality but rather are appreciated as representing multiple perspectives on reality (as contrasted with the psychic equivalence and pretend modes).

Allen et al. (2008), p. 91

Reaching the mentalizing mode is around age four, when the child develops cognitively in order to make causal inferences. The child’s mind is able to make abstractions in this representational phase. This is also the phase, where there is an understanding of other mental and emotional states, separate from his own, therefore the feeling of self as an agent is developed (Fonagy et al., 2002).

In a mentalization based approach, not being able to make the full transition to this representational mode is considered as a problem, or the cause of

psychopathology. Regression to the pre-mentalizing modes due to situational factors is also considered as the underlying problem in many disorders. Problems in the development of mentalizing are considered under three main categories: Failure of mentalizing, distorted mentalizing (hyper or under mentalizing) and misuse of mentalizing (pseudo-mentalizing) (Allen et al., 2008). Mentalization is not a skill that either exists or is absent. Several factors determine the variations in mentalizing capacity. For a particular situation, the mentalization performance of the person can be affected both from some developmental/constitutional factors and some situational factors. For children and adolescents, the developmental level or the underlying pathology as well as the current stress can alter the mentalization capacity (Sharp et al., 2007). The absence of mentalizing capacity, is considered under the category of “failure of mentalization” and is associated with the autism spectrum disorders (although there are variations within the spectrum) (Sharp & Venta, 2012).

Distorted mentalization is seen in different childhood psychopathologies either associated with low levels of mentalizing (under mentalizing) or too much mentalizing (hyper mentalizing). Misuse of mentalization is also a distorted version of mentalization, in which the skill seems to exist but is used not genuinely with good intentions. This type of mentalizing is also associated with psychopathology (Sharp & Venta, 2012). The level mentalization difficulties both in internalizing and in externalizing pathologies are the focus of several clinical studies in recent years (Katznelson, 2014).

#### 1.4 Internalizing and externalizing expressions of dysfunction in adolescent years

Adolescence is a critical period of rapid changes in biological, social, and relational spheres (Chow et al., 2017). The period of transition from childhood to adulthood is



considered as the formational stage for identity development. Due to the structural changes in the brain, the period is fragile and prone to developmental difficulties. Early signs of adult psychopathology are seen in adolescent years (Chow et al. 2017). Therefore, proper examination of mental health problems in adolescence is important.

Behavioral, emotional, and social problems of childhood and adolescence are grouped under the two empirically established and widely accepted classifications called “internalizing” and “externalizing” disturbances (Achenbach et al., 2016; Cicchetti & Natsuaki 2014; Leadbeater et al., 1999). These categories emanated from the work of Achenbach and colleagues in 1966 and established the roots of extensive research in defining childhood and adolescent dysfunctioning (Achenbach et al., 2016; Achenbach & Edelbrock, 1987; McConaughy, Stanger et al., 1992, as cited in Garnefski et al., 2005).

The internalizing problems category refers to the problems directed inwards; the direct harm is not to the people around one, but to the self (Achenbach & McConaughy, 1997). Inward directed distress of an internalizer can be recognized by outsiders (like parents, teacher, etc.) as sad, shy, or irritable appearance, expressing itself with several complaints like headaches. “Disordered mood” is the major area of difficulty in internalizing disorders (Sharp et al., 2008). Mood disorders, anxiety disorders and withdrawal from life’s basics can be considered as common expressions of internalization. Generalized anxiety disorder, major depressive disorder, dysthymia, and eating disorders are the examples considered under the internalizing problems category (Cosgrove et al., 2011; Sharp et al., 2008)

On the other hand, externalizing problems are the ones directed outwards; disruption is easily noticed by people around the person. People around externalizers often describe them as defiant, overactive, or aggressive since the behaviors usually

cause conflict with others. The major feature of the difficulty in externalizing problems is “dysregulated behavior” (Sharp et al., 2008). Disordered behaviors like aggression, delinquency and hyperactivity are among those considered in the externalizing behaviors category. Conduct disorder, oppositional defiant disorder, attention deficit/hyperactivity disorder, antisocial personality disorder and substance use disorder are classified under the category of externalizing disorders (Cosgrove et al., 2011).

Emotional turmoil in the adolescent years is considered normal, therefore, some level of emotional distress or misconduct should not be pathologized. However, when these difficulties start interfering with the young person’s functioning and the impairment is prolonged, the situation should be considered serious (Oltmanns & Emery, 1995, as cited in Garnefski et al., 2005). Prevalence studies usually focus on specific problem areas; therefore, it is not possible to talk about general statistics on internalizing/externalizing problems. Some adolescents have predominantly internalizing problems and for some the primary problem is externalizing. However, this distinction is not that clear in all cases. It has been shown that problems from both categories can occur in adolescents, and the frequency for this combination is not low. (Angold & Costello, 1995; Kreski et al., 2022; Cicchetti & Natsuaki, 2014; Nottelmann & Jensen, 1995). It has been shown that while the prevalence of externalizing symptoms was higher than internalizing symptoms in the studies before 2010, there is an opposite trend in the findings of the recent studies. The increase in the internalizing symptomatology among adolescent populations was shown in several countries (Kreski et al., 2022).

Researchers worked on identifying some common causal risk factors for both internalizing and externalizing symptoms (Kim et al., 2003). Gender difference is one

of the major factors revealed in the majority of the studies (Allen et al., 1994). These studies indicate that the behavioral manifestation of psychological distress is mostly seen as internalizing problems in girls and externalizing problems in boys. (Offer & Schonert-Reichl, 1992; Garnefski et al., 2005; Martel, 2013). Different risk factors were found to be associated with internalization or externalization problems, in which gender differences were also found to be prominent (Leadbeater et al., 1995; Leadbeater et al., 1999)

The emotion regulation strategies used by dysfunctional adolescents are considered to be important mechanisms to understand the distinction between the internalization and externalization categories as well as for developing appropriate intervention strategies. There is a need to differentiate and specify which emotion regulation strategy is being used by internalizers vs externalizers. The results of existing studies reveal that internalizers and externalizers use separate cognitive strategies and they each have unique features. Therefore, theoretical models or intervention strategies should differ for internalization and externalization problems (Garnefski et al., 2005).

### 1.5 Externalizing problems and mentalization

Externalizing behaviours in the developmental years are considered as risk factors for later juvenile delinquency, violence, and adult crime (Liu, 2004; Mestre et al., 2022) as well as internalizing psychopathology in the adult years (Kim-Cohen et al., 2003; Fairchild et al., 2019; Mestre et al. 2022). One of the most important decisive features of externalizing symptoms is the problems they create in interpersonal relationships, leading to disturbances of social functioning (Liu, 2004; Sharp & Venta, 2012). Since mentalization provides understanding of self and others' mental states, lack of it is

assumed to cause problems of social functioning. Therefore, mentalization deficits were investigated as underlying causes of social functioning disturbances of externalizing psychopathology.

Externalizing children are shown to have poor interpersonal relationships both with their parents and their peers (Greenberg et al., 1991). Under-controlled, impulsive, and aggressive behaviors are associated with externalizing disorders (Mestre et al., 2022). To understand these aggressiveness and relationship problems, Dodge et al. (2002) investigated children with conduct problems in terms of social-information processing. They concluded that children with conduct disorder have deficits in correctly understanding, interpreting, and responding to social information. Especially, when the social information has an ambiguous component, children with conduct disorder immediately attribute “hostile intentions” to the behavior. While interpreting the results of the study, Sharp and Venta (2012) proposes that the expectation of hostility in each situation (without proper analysis of evidence or understanding) ends up with aggressive responses, which show a failure of proper mentalization. A similar finding comes from a study where adolescents who show psychopathic tendencies were investigated. Blair and Coles’s (2001) study demonstrated that their responsiveness to facial emotions is low when the emotion is fear and sadness, compared to aggression. Signs of this trend is seen in the study of Sharp (2008), where the children with externalizing symptomatology show deficits in emotion reading ability. In sum, these research findings indicate a form of mentalizing difficulty in prominent examples of externalizing psychopathology.

A similar form of mentalizing difficulty, where cognitively proper but emotionally inadequate understanding of the other is seen in another form of externalizing pathology, bullying. In their study, Sutton et al. (2000) demonstrated

that children who show bullying behavior have advanced mind reading ability. This ability upon first glance can be considered as a developed mentalizing skill. However, they lack the main component of mentalizing, which is curiosity and respect for the other's mind. In contrast, the bullies use their capacity for cognitively grasping another's mind, as a tool to manipulate it; rather than understand emotionally as well and improve the interpersonal relationship (Sharp & Venta, 2012). Another form of this manipulation is investigated by Crick and Grotpeter (1996) as a form of female aggression in childhood years. The researchers show that girls use their relational abilities for disclosure and then manipulate the other by threatening what is disclosed with going public. In both instances, a developed capacity to understand the mindset of the other is misused as a form of controlling the other's mind and/or behavior. Developed mind reading ability without the main components of genuine curiosity to understand the other is called pseudo-mentalizing and is not considered as a real form of mentalizing (Allen et al., 2008).

In sum, in the conditions associated with externalizing symptoms, mentalization problems are seen either in the form of distortion, where over-intention is attributed to the other, or there is a misuse of mentalization, in which the ability to understand the other does not end up in enhanced relationships. In both scenarios, the externalizing person has a form of mentalization deficit.

Many research findings indicate that externalizing symptoms increase around the adolescent years, reach a peak, and then decrease during adulthood (Burt, 2012). It is claimed that socialization processes determine this fluctuation, where necessary controlling mechanisms are gained while mastering interpersonal relationships (Maroson et al., 2019). Strengthened interpersonal functioning is the ultimate goal in a

true mentalization process (Sharp & Venta, 2012). Therefore, proper mentalization should be associated with lower levels of externalizing pathology.

### 1.6 Internalizing problems and mentalization

Like an internalizing child in a classroom, internalizing problems are easily ignored compared to externalizing problems. Internalizing problems constitute an important portion of the mental health problems of adolescent years, since they increase over this fragile period (Antolin-Suarez et al., 2020). Elevated symptoms decrease during adult years for some, while remaining constant for others (van Loo et al., 2021).

Internalizing difficulties can manifest as anxiety disorders, depressive disorders and suicide ideation, somatization disorders and other self-harming psychopathology. The underlying factors and mechanisms of internalizing problems especially for children and adolescents needs to be elaborated.

The relationship between internalizing disorders and mentalization is investigated in some research, although limited in number. The major association between these two constructs are studied in anxiety disorders. Socially anxious children were found to have mentalization difficulties (Frith & Happe, 1994). Social situations require understanding and interpreting several mental states and responding, accordingly; however socially anxious children were not proficient at this ability (Sharp & Venta, 2012).

Depression, as one of the major internalizing disorders stands as one of the least studied areas. Among multiple potential contributors of depressive dysfunction, difficulties in the area of social cognition are also considered (Bora et al., 2006). Bora and Berk (2016) claim that depression can be related to deficits in complex modes of ToM, in understanding and predicting others' mental states. There is also research

associating mentalizing ability with negative attributions of depressed people (Sharp & Venta, 2012). For adults, the difficulties in mentalization were shown to be associated with major depressive disorder (Fischer-Kern et al., 2013). Also, for children, the negative correlation between depressive symptoms and reflective functioning was revealed (Ensink et al., 2016). All these findings need further support, therefore more research is needed.

Kranzler et al. (2015) showed that, the inability of children and adolescents to identify and label their own internal states was found to be a predictor of symptoms of depression and anxiety. Similarly, in their conceptualization, Bizzi et al. (2018) claim that children with internalizing symptoms do not have any difficulty in understanding others' mental states; however, they have difficulty in reflecting on their own mental states. The work on anxious children also supports a similar view that, these children can only focus, even over-focus on the other's mind and lack inner state understanding (Banerjee, 2008).

Banerjee (2008) raises an important question in her elaborated evaluation of anxious children. As she mentioned, accumulated knowledge about anxious children claims that these children have negative cognitions about the threats or social encounters around them. Banerjee questions whether this is due to negative and biased evaluations or whether there is a deficit in mentalizing and proper social understanding. Drawing on the research on anxious children which shows that children with high social anxiety have worse quality in their social relations/friendships, she claims that deficits underlying interpersonal relations could be the root cause of anxiety, rather than anxiety being the cause for less developed skills.

There is not sufficient research integrating these empirical findings on internalizing problems. There is a real need for understanding the mentalization ability

of internalizing people, especially of children and adolescents, since focusing on the deficit at these ages can be preventative for further psychopathology.

### 1.7 Importance of mentalizing for adolescent years

Adolescent years represent an important time for the development of social skills as well as the ability to evaluate one's social life. Thus, mentalization ability is a crucial factor in how adolescents deal with social relations.

As a developing concept of psychodynamic theory, research, and practice, mentalization has been studied immensely within the last decade. However, this work mostly focused on the adult population, therefore knowledge about child and adolescent populations and mentalizing is relatively weak (Cropp et al., 2019). Accumulating research on adolescents especially with a mentalization approach is beginning to address this area as well. Acknowledging the mental health risks of the adolescent years, this developmental period is also considered as a period of growth and resilience. The structural changes in brain development are not open only to problems, but to strengthening with the help of the plasticity of the brain (Luyten et al., 2021). Mentalization is seen as a factor which can foster the handling of developmental challenges of adolescent years (Fonagy et al., 2002).

### 1.8 Goal of the study

The current study investigated the identifying features of mentalizing ability in an adolescent age group. The research question focused on the clinical/symptomatic profile of adolescents in terms of internalization and externalization in relation to their mentalizing capacity.



It will not be an exaggeration to claim that nearly all the clinical work related to a child's/adolescent's behavior problems can be summarized under the internalization vs externalization dimensions. This is not for the sake of overvaluing Achenbach's work, but to restate a general belief, which mostly captures a clinician's mind when introduced to a new child. The differences between the internalizing and externalizing dimensions and factors predicting these dimensions have been the area of research for many scientists, for different types of psychopathologies.

On the other hand, Allen et al. (2008), claim that mentalizing is the “working factor” in therapeutic interventions. Mentalization based therapy/treatment models are developing rapidly in the last decade and their use in child/adolescent psychotherapy is widening. With this acceleration of a mentalization based approach in therapeutic settings, there needs to be a clear understanding of the relation of this construct with the basic distinctions in childhood problems. The differences in the mentalization ability of externalizing vs internalizing children can enhance the treatment approaches to these distinct populations.

Based on the above rationale, the current study focused on investigating whether there are differences in the mentalizing ability of externalizing vs internalizing adolescents, compared with each other, as well as normal controls. Thus, the following hypotheses are provided:

Hypothesis 1: Adolescents who have no psychopathology will have a better mentalizing level than adolescents with internalizing and/or externalizing psychopathology.

Hypothesis 2: The mentalizing ability of internalizers will be different from that of externalizers. Mentalizing scores of internalizers will be higher than that of externalizers.

The planned procedure for testing these hypotheses created the opportunity to achieve the secondary objective of providing instruments for the measurement of mentalization in Turkish for the adolescent age group.

The objective and methodology of the research study contains features which can be regarded as unique contributions to the literature. The major contribution of the clinical domain will be the identification of the two major clinical groups, internalizing and externalizing, in terms of their differences in mentalizing. As a result of the scarcity of the studies in this domain, the profile of mentalization especially in internalizing problems is not known thoroughly. This study, examining the group of adolescents with internalizing symptoms and comparing them with peers showing externalizing symptoms can be a substantial contribution to the literature in this area. This examination can be crucial in development of the treatment approaches, providing necessary tools to fine tune the therapy protocols according to the needs of the different populations.

In addition to this main achievement, the project will be providing measurement tools for mentalization ability in Turkish speaking adolescents. A mentalization based approach is regarded as a post-modern theoretical framework in clinical psychology and it is considered to be “under construction”. Having a measurement tool in Turkish can open the way for further research to contribute to the newly developing area of work.

Overall, the results of the study have the potential to contribute to the development of strategies in improving overall mental health of adolescents, using mentalization as a tool.

## CHAPTER 2

### METHOD

#### 2.1 Participants

The participants were adolescents enrolled in high schools. The age range in high schools is between 14-19, depending on the status of the school regarding foreign language instruction. The last year -12<sup>th</sup> grade- is a remarkably busy year of preparation for the national university entrance exam, therefore 12<sup>th</sup> grade students were not included in the study. Only the 9<sup>th</sup> to 11<sup>th</sup> grades were targeted, including the preparatory class where available.

##### 2.1.1 Selection of schools

The study was conducted in İstanbul/Turkey; different schools within the province were targeted. In the Turkish education system, after the 8<sup>th</sup> grade there is a national exam according to which students are assigned to different high schools. The academic and socio-economic level of the students may differ according to the type of the high school. For example, technical high schools are known to receive students from low academic and socio-economic backgrounds whereas the Anatolian High School profile is academically strong, with a relatively high socio-economic status since those are the ones who can afford the necessary preparation for the examination.

In the current study, the schools were selected so as to represent the variety of schools, socio economic status and ranking in academic level. Permission for the study was taken from the Istanbul National Education Provincial Directorate. Üsküdar and Beşiktaş provinces were targeted as the main areas of research, representing both the Anatolian and European sides of the city, also with a wide range of socio-economic variation among the population living in those districts. Different types of

schools were selected from the list of the high schools in these two provinces and similar schools were approached in both districts to pursue the research study. Among the ten schools approached, seven accepted participation. The schools included in the research and their status can be seen in Table 4.

Table 4. Type of Schools Included in the Research Study

Name of the School	Status	Type	District	Ranking <sup>1</sup>
School 4	State	Vocational and Technical Anatolian High School for Girls	Beşiktaş	425
School 1	State	Vocational and Technical Anatolian High School	Üsküdar	461
School 5	State	Anatolian High School	Beşiktaş	3
School 2	State	Anatolian High School	Üsküdar	67
School 3	State	Anatolian High School	Beşiktaş	185
School 6	State	Anatolian High School for Girls	Üsküdar	148
School 7	Private	Private High School	Üsküdar <sup>2</sup>	

Note: <sup>1</sup> Indicates the rankings on the entrance exam among the 965 high schools in İstanbul

<sup>2</sup> The original establishment and main structure of the school is in Üsküdar district, but the high school building is in another district. The district for the private region does not represent the population of that neighborhood since people go to that school from different parts of the city.

### 2.1.2 Selection of Students

After receiving permission from the school administrations, 9th to 11th graders were approached for participation in the research study. Consent forms were sent to their parents and those who brought the forms back were included in the study. In some cases, students who forgot to bring the forms but wanted to participate in the study were included only if they later brought the forms to the counseling service of the school.

The population reached and the data used have a discrepancy due to the “incomplete” questionnaires and “mismatch” of consent forms. With conservative inclusion criterion, only the “fully complete” data were used, details of which are given in Table 5.

Table 5. Consent Forms and Completion of Research Requirements

	Consent Form Exists	Consent Form Mismatch	TOTAL
All forms completed	634	284	918
There are missing items	66	82	148
TOTAL	700	366	1066

The high number of missing data can be explained under three main reasons. The first group of missing cases is due to the difficulty of matching consent forms of parents with the student forms, caused by the restrictions of the MoNE. The second gap was due to the difficulty of matching online and paper-pencil forms of students, without the student number information (restricted by the MoNE). And the third group of data was discarded due to the high number of unanswered questions making the scales incalculable. Thus, the data included was proper in all senses and the rest were discarded even if there is a minor doubt in either of the mentioned dimensions.

Thus, the overall participants were taken as 700 students with valid consent forms and scales. Out of these 700 students, 634 of them (91%) fully completed the scales.

### 2.1.3 Participant profile

The mean age of the 700 participants was 15.95 (SD=1.00) with a range of 14 to 18. The distribution of gender within each grade is given in Appendix A. Preparatory

classes were included where available. The age distribution according to grades can be seen in Appendix B.

## 2.2 Measures

### 2.2.1 Mentalization measurement / Turkish adaptation of the How I Feel

#### Questionnaire

The main instrument to assess mentalization was developed based on the structure of the How I Feel Questionnaire (Sandell et al., 2012), a tool used for the assessment of mentalization in several clinical studies (e.g., Rossouw & Fonagy, 2012). The questionnaire is composed of 15 vignettes, each of which describes a situation common for adolescent life. The tool was originally developed to measure the impact of a training program in Sweden (Kimber et al., 2008) aiming at socio-emotional development. As is the case for mentalization theory, the conceptual development of the How I Feel scale is also based on a combination of several theories, namely emotional intelligence theory, mentalization theory, and cognitive social learning theory (Sandell et al., 2012).

The questionnaire involves vignettes of social situations where the reader is exposed to a conflict situation. The original questionnaire has two sets of multiple-choice questions related to each vignette. After reading the vignette, the reader is asked two consecutive questions: “What do you feel and why”, referred to as the ‘feel item’ and “What do you do?”, referred to as the ‘do item’. The vignettes differ in terms of the protagonist, where for some vignettes the reader responds as if s/he is in that situation and in others the reader tries to imagine on behalf of the other person in the situation. (Sandell et al., 2012). The original version of the questionnaire can be seen in Appendix C.

The Sandell et al. (2012) study indicates high reliability for the questionnaire, with a Cronbach's alpha of 0.85 for the whole measure. When analyzed separately feel and do items also had satisfactory reliability coefficients of 0.74 and 0.75, respectively (Sandell et al., 2012). For the validity of the instrument, the How I Feel scale was compared with substance use and bullying measures for discriminant validity and empathy and cooperation measures for convergent validity; concluding that the HIF is a valid measure of social-emotional development. (Sandell et al., 2012).

In the current study, while preparing The Turkish Version of the instrument, the basic structure of the vignettes in the original questionnaire was used, with necessary changes according to the cultural context. In the current study, the reader was asked to give spontaneous reactions to the questions, followed by responses to the multiple-choice questions.

This tool was selected as the measure of mentalization because the vignettes involve conflictual situations where an emotional response is triggered. In some vignettes, the adolescents are expected to think about themselves in the situation (Example 1) and in some others, they are asked to mentalize about the main character's mental state (Example 2). This procedure is closer to real-life situations compared with self-assessment questionnaires asking for the frequency of a certain behavior.

Example 1:

***Vignette: You are watching TV. Your father tells you to go to bed although it's not that late.***

<b>What do you feel and why?</b>	
<b>(Open-ended): .....</b>	
<b>What do you feel and why? (Choose one below)</b>	<b>Tick Here</b>

I don't feel anything because it's my father who decides	
I'm angry because it's unfair	
I'm surprised because I can usually stay up longer	
<b>What do you do?</b>	
<b>(Open-ended): .....</b>	
<b>What do you do? (Choose one below)</b>	<b>Tick Here</b>
Go to bed	
Ask to stay up for a while	
Become tearful	

Example 2:

***Vignette: Mathew has been throwing rubbers at Bill throughout the lesson. In the end Bill gets angry and throws one back.***

***Their teacher looks at Bill at just that moment. She gets angry and says: 'What have I told you about throwing these things; stop it immediately'.***

<b>What does Bill feel and why?</b>	
<b>(Open-ended): .....</b>	
<b>What does Bill feel and why? (Choose one below)</b>	<b>Tick Here</b>
Nothing in particular; what he did wasn't so serious	
He feels stupid because the teacher caught him out	
He's disappointed with his teacher, who blames him without knowing the whole truth	
<b>What does Bill do?</b>	
<b>(Open-ended): .....</b>	
<b>What does Bill do? (Choose one below)</b>	<b>Tick Here</b>



Says that both he and Mathew have been throwing the rubbers	
Tells the teacher that Mathew started it	
Nothing	

The original version and Turkish version of the How I Feel Scales can be seen in Appendix C and Appendix D, respectively.

### 2.2.2 Reflective Functioning Scale -Youth

Fonagy and his associates use the term reflective function “to refer to a quantified index of attachment-related mentalization” in their research (Fonagy, 2006, p. 53). In other words, reflective function is the term used for the operationalization of mentalizing ability. The researchers developed a reflective function self-assessment tool for screening purposes (Fonagy et al., 2016). In the development of the scale, factor analysis revealed a two-factor structure, certainty, and uncertainty with internal reliability scores of 0.77 and 0.65, respectively (Fonagy et al. 2016). The overall psychometric properties of the questionnaire were found to be sufficient, and the factor structure and the discriminative power of the tool is being studied in several studies. The website of the tool gives information and provides an open access to research for the use of the tool <http://www.ucl.ac.uk/psychoanalysis/research/rfq>. Work on a more detailed, multidimensional version of the tool is continuing.

On the website of the scale, the Turkish version of the questions are available. The validation of the Turkish instrument was done by Köksal (2017). This study used the 54 Item version of the scale in Turkish, with university students. The reliability coefficient of the Turkish implementation revealed Cronbach alpha scores of .91 and .82 for the two subdomains of the scale (Köksal, 2017).

The Youth version of the RFQ scale was originally developed by Sharp et al. (2009), based on the original version developed by Fonagy and Ghanai (as cited in Ha, 2012). The use of the questionnaire was validated in some initial research (Ha et al., 2013). More recently, Duval et al. (2018) further investigated the psychometric structure of the questionnaire with the aim of assessing different domains of mentalizing. They explored the factor structure with a new way of scoring. Their work revealed a three-factor structure; namely, an uncertainty/confusion factor, an interest/curiosity factor, and an excessive certainty factor. The internal consistency coefficients were found as 0.89, 0.75 and 0.80, for the three factors. The first factor *uncertainty/confusion detects* confusion regarding the mental states of self or others. Higher scores are associated with higher confusion. Second factor, *interest/curiosity about mental processes* emphasizes the respondents' interest and motivation to understand the mental state of the self and others. Higher scores indicate higher interest in mental states. Third factor, excessive certainty, measures the level of confidence in the respondent in their knowledge about the mental states. Higher scores indicate problematic level of certainty about the mental states. The RFQ-Youth was indicated as a reliable tool for detecting mentalizing difficulties (Duval et al., 2018).

The current study used the RFQ-Y as a tool for measuring mentalization, both to serve the hypothesis and as a validity measure for The How I Feel Questionnaire. The RFQ-Y itself did not have a standardized Turkish language version and this study involves the initial use of the questionnaire in a Turkish sample. The current research used the 25-item version of the RFQ-Y, as advised by Duval et al. (2018), with the new scoring system. The relevant items which were translated into Turkish and validated in Köksal's (2017) study, were extracted for RFQ-Y-25 youth version in

Turkish. The psychometric properties of the Turkish version of RFQ-Y-25 are indicated in the section 2.4.2, below. The questionnaire can be seen in Appendix E.

### 2.2.3 Youth Self Report (YSR)

Youth Self Report (YSR) is a version of widely used measure the Child Behavior Checklist (CBCL) which was developed by Achenbach in 1987 (Achenbach, 1991). YSR is the self-administered form of CBCL targeting the adolescent ages of 11 to 18. It aims to assess the emotional and behavioral problems of adolescents in a standardized way. As in the original measure of CBCL, YSR captures internalizing (i.e., anxiety, depression) and externalizing (i.e., aggressive, noncompliant) behaviors and a total score of overall functioning. Beside the cumulative scores, there are 8 subscales under which different symptoms can be measured. All the questions in YSR are parallel to CBCL, only the sentences are adapted in a format available for self-rating.

The structure of the scale is composed of two main sections. One section assesses social competence and adaptive functioning. In this section, there are questions about school, activities, and social life. The second section is for behavior problems. This section is composed of 118 items which can be scored from 0 to 2. If the symptom described in the item is not observed, the respondent should score 0 (not true). If the behavior is sometimes observed, score of 1 is given. Score 2 is for the symptoms frequently observed/lived. These items are cumulated in 8 different subscales, namely: Anxious/Depressed, Withdrawn/Depressed, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule-Breaking Behavior, and Aggressive Behavior. These subscales are the result of factor analyses from empirical studies and are not substitutes for a clinical diagnosis (Bordin et al., 2013)

The broad scale of Internalizing Behavior Problems is composed of the subscales of

Anxious/Depressed, Withdrawn/Depressed and Somatic Complaints. The subscales of Rule-Breaking Behavior and Aggressive Behavior are the components of the Externalizing Behavior Problem score. There are three subscales which are not included in the internalizing or externalizing scores; Social Problems, Thought Problems, Attention Problems. The Total Behavior Problem score contains all the subscales. The raw scores gathered from the scale are transferred into T scores where the deviance from norm is assessed.

The Turkish adaptation of the Achenbach scales was done by Erol and Şimşek (1997). The test-retest reliability of the scale is given as .81 and .82 for total adaptive and total behavior scores, respectively. The internal consistency of the scale is gathered from a sample of 2206 students, with a Cronbach Alpha of .80 for Internalizing, .81 for Externalizing and .89 for Total Behavior Scores.

In the current study, the behavior problems section of the Turkish version of the Youth Self Report scale was administered in the targeted high schools. The questionnaire can be seen in Appendix F.

#### 2.2.4 Basic Empathy Scale (BES)

In the current study, The Basic Empathy Scale was used as a tool for testing the construct validity of the mentalization measurement. The Basic Empathy Scale is considered among the measures in which some aspects of mentalizing are assessed (Vrouva et al., 2012). Since the Turkish version has sufficient psychometric properties, it stands as an appropriate tool for ensuring the validity of mentalization measurement.

The Basic Empathy Scale was developed by Jolliffe and Farrington (2006), with the purpose of overcoming the shortcomings of already existing measures of

empathy. They wanted to develop a measure based on Cohen and Strayer's (1996) definition of empathy: "understanding and sharing in another's emotional state or context" (p.523). Affect congruence and understanding of the other's emotions are both captured in the scale, which can be called as affective and cognitive empathy, respectively. This comprehensive feature of the scale is one of the reasons to be selected for use in the current study.

A second reason for selection is related to the population for which the original scale was developed; namely adolescent groups. The other empathy measurement tools are all developed with the convenient populations of university students which are developmentally different from adolescents. Therefore, this tool is more suitable for the current research.

The Turkish adaptation of the Basic Empathy Scale was conducted by Topçu et al. (2010). The scale is composed of 20 items, 11 of which detect emotional empathy and the remaining 9 items focus on cognitive empathy. It uses a Likert Scale of 5, from "1= strongly disagree" to "5= Strongly agree". Scores range between 9 to 45 for cognitive empathy and 11 to 55 for emotional empathy. The researchers revealed internal consistency scores of .76 for emotional and .80 for cognitive empathy. The divergent validity for the scale was tested by two different scales which are supposed to be negatively correlated with empathy scores. The results indicated satisfactory Cronbach alpha coefficients for both scales, ranging between .76 and .80. The scale can be seen in Appendix G.

#### 2.2.5 Demographic questionnaire

Participants were asked to complete a demographic questionnaire in order to gather basic information about age, socio-economic-status and family demographics. The

questionnaire was kept short and simple to allow the time to be spent on the major tools.

The students' perception about family economic status was asked, since mentalization ability is taught to be not functioning well when the basic needs of the individuals are not met (Mentalization Based Treatment for Families (MBT-F) Training Manual, 2015). Adolescent's self-ratings for their overall well-being at home, school and social life was asked on a Likert scale. This simple rating was used as a parent and teacher rating in previous studies and was shown effective in associating the perceived competence with problem areas (Güler et al., 2014; Wolmer et al., 2005).

The demographic scale was part of the measures which were filled out in the classroom in the group administration. The demographic scale can be seen in Appendix H.

#### 2.2.6 Raven's Progressive Matrices Test (RPMT)

The Raven Progressive Matrices Test was used to cancel out major intellectual difficulties. Raven's Progressive Matrices is a widely used language free test of general cognitive ability. It has high correlations with intellectual ability test scores (Arthur & Day, 1994). The test is composed of different matrices presented in gradually increasing difficulty. Each test is composed of 5 sets, which include 12 different matrices. The matrices are incomplete patterns, and the examinee is asked to find the missing part for the pattern from the alternatives provided. The originally developed test is called the Standard Progressive Matrices. Two different versions were developed based on the need to identify the most and least developed populations.

The Raven's Progressive Matrices test has been standardized as part of the Bilnot Bataryası (Karakaş & Doğutepe Dinçer, 2011) for the Turkish population.

In the current study, an abbreviated version of the test and group administration in high school classes was preferred. Since the overall research includes several other questions, and the time of application should be short so as not to disturb school activities, the long form of the Raven Matrices was not appropriate for the research design. Instead, the abbreviated form, which was developed by Arthur and Day (1994), was preferred. Researchers tested the abbreviated forms and showed that it is possible to use this short version, preserving the overall structure of progressive difficulty as well as the main psychometric properties of the original long test.

In the current research design, use of the Raven Matrices will serve to eliminate the possibility of general intellectual disability hindering mentalization. Therefore, a short form as a scanning tool was deemed sufficient for the research purposes. The test can be seen in Appendix I.

### 2.3 Procedures

The research procedure includes two main steps. The first step consists of the development of the Turkish version of How I Feel Questionnaire. The second step includes data collection from schools to test the psychometric properties of the instruments as well as the necessary information for hypothesis testing. The steps followed are summarized in Table 6 below and detailed descriptions are in the following sub-sections:

Table 6. Steps Followed During the Research

1. Tool Development	2. Data Collection
Translation of the questionnaire	Permissions
Expert Committee Opinion	BU Ethical Committee
Second Version of the Questionnaire	MoNE İstanbul Directorate
Back translation	Revision on the Questionnaire for MoNE
Third version of the questionnaire	Each School
Pilot with adolescents	Data Collection
Fourth version of the questionnaire	Each school
Second pilot with adolescents	Paper & Online forms
Focus Group	Data Work
Online administration	Merge of paper & online data
Factor analysis	Data clearance
Expert opinion	Coding of open-ended data
Fifth version of the questionnaire	Feedback to schools
Experts meeting for the scoring	Feedback letters to students
Final version	Feedback presentations to schools
	Seminars for schools

### 2.3.1 Development of the Turkish version of the mentalization scale

The Turkish version of the mentalization scale for adolescents was developed based on the How I Feel Questionnaire (HIF; Sandell et al., 2012). The main steps followed during the development of the scale are as follows:

#### 2.3.1.1 Translation of the instrument

The original scale includes 15 vignettes and related questions appropriate for the adolescent age group. In the initial step, the vignettes and questions were translated into Turkish. The focus of the initial translation was to reflect the meaning of the vignettes with the correct translation and appropriate use of language in Turkish. Cultural adaptations were not considered at this stage.



#### 2.3.1.2 Expert group

The recent literature argues about the effectiveness of traditional methods of translation (translation, back translation) in cross-cultural adaptation of scales. Limitations including the individual perspective of the translators, appropriate use of terminology and efficiency in back translations are discussed. Use of expert groups, composed of bilingual professionals with expertise in the related field is a way to overcome the translation limitations. Dual procedures, both the back translation and the expert group opinion reveal better results for cross-cultural adaptations of scales (Epstein et al., 2015).

Based on this information, with the aim of finding the most appropriate language to assess the intended subject, an expert committee was established, composed of 5 mental health professionals, all working with adolescents. The committee included two psychologists with a psychodynamic background, two psychologists with a cognitive behavioral background and a child psychiatrist. All members of the committee had received special training on mentalization based treatment with adolescents.

The translation of the questionnaire was given to the expert committee and feedback was received on language, appropriateness for the culture and for the adolescent population. All the feedback received from the experts was combined and the questionnaire was revised accordingly.

#### 2.3.1.3 Back translation

Parallel to the expert committee work, back translation was done by a native Turkish speaker and an associate professor of literature at SUNY Fredonia who also works as a translator. Consistency of back translation and feedback of the translator were

discussed again with the experts committee. As a result of this feedback, the new version of the questionnaire was prepared for use in the pilot study.

#### 2.3.1.4 Pilot with adolescents

After completing the initial phase of translation, the new version of the Turkish scale was given to a pilot group of 5 adolescents in the age range of 14-18. The appropriateness of the language, understandability of the items and validity of the answers for the purpose of the questionnaire was asked to the pilot group. Adolescents were invited for contribution with a letter; the original Turkish version and English version are in Appendix J.

According to the feedback received from the adolescents, three more vignettes were added to the questionnaire to capture the most contemporary issues in an adolescent's life. In addition, some revisions were done for language and phrasing. The feedback and revisions were discussed with the experts committee.

#### 2.3.1.5 Second pilot with adolescents

A second line of pilot implementation was conducted after the revisions based on the first pilot study. The second pilot had two different steps. The first step was an in-depth investigation with a small number of adolescents and the second step was an online implementation with a larger group.

In the first step, adolescents were invited for a focus group meeting, to discuss the questionnaire. The initial part of the meeting was arranged for the completion of all questionnaires in the research design. The participants were asked to work in the same room, to imitate the effects of implementation in a classroom environment. They started to work at the same time and informed the researcher when

they finished one questionnaire and started the next one. The total time of implementation and the average time for all the participants was calculated. as 65 minutes for the whole process. Completion times were also calculated for each of the questionnaires. Implementation of the HIF questionnaire was online, as was planned to be done in the classrooms. The average time for completing the online questionnaires (including all) was 25 minutes.

After completing the questionnaires, the participants were encouraged to express their opinions about the whole process and specifically about the questions of the HIF Questionnaire. The focus group discussion included the use of terminology, appropriateness of the vignettes for the targeted age group and the feelings about fulfilling the questionnaire while sitting together.

The same version of the online questions was administered to three more adolescents, separately. This time only the demographic questions and the HIF questionnaire were used. All the comments from both implementations were noted and used for the next revision as well as implementation strategy of the questionnaire. One of the vignettes was deleted according to the feedback.

The second step of the second pilot aimed to reach a larger group of adolescents for development of the HIF Questionnaire. The online version of the questionnaire was sent to several locations, with convenience sampling. There were 38 adolescents in total (18 girls, 20 boys) with an age range of 13-19. The participants were from different provinces of Turkey, with a variety of socio-economic status. Results of these implementations were used to finalize the revisions of the HIF questionnaire.

#### 2.3.1.6 Factor analysis and item selection for HIF Questionnaire

The results of all the pilot implementations were examined. Results of the 1<sup>st</sup> pilot implementation were not included in the analysis due to the differences in the questionnaire. The combination of the 2<sup>nd</sup> pilot implementations, both the focus group and the online administrations, were used for reliability and factor analysis. The participants of the pilot implementations and the distribution of 45 adolescents for the second phase is summarized in Table 7.

Table 7. Number of Participants for Pilot Implementations

	Gender (n)		TOTAL	
	Girls	Boys		
Pilot 1	2	7	9	
Pilot 2a	6	1	7	Total
Pilot 2b	18	20	38	45
TOTAL	26	28	54	

Reliability analysis indicated an acceptable reliability coefficient, as shown in Table 8; however, the values in the item analysis indicated a need for factor analysis.

Table 8. Reliability Statistics for Pilot Implementation

		N	%
Cases	Valid	45	100
	Excluded	0	0
	Total	45	100
Cronbach's Alpha		N of Items	
0,758		34	

A principal component analysis with varimax rotation was conducted for all the vignettes of the HIF questionnaire feeling questions. Better working questions

were extracted and cross-checked with the feedback received through pilot implementation and with the experts committee. Some of the vignettes were eliminated and a final version of the questionnaire was established. In addition to the psychometric properties of the items, the criteria below were also considered while including the vignette in the questionnaire:

- Gender balance in the vignettes
- Me vs other question balance (the story is about the reader, or the reader is being asked to think or feel instead of another person)
- Cultural appropriateness

The comparison between the original scale and final version of the Turkish scale in terms of the orientation of the vignettes can be seen in Table 9 below.

Table 9. Comparison of Original Scale with Turkish Version

# of questions	Original	TR
Me	9	4
Other	6	8
Total	15	12

The factor analysis results for the latest version of the selected vignettes are stated below in Table 10 and 11:

Table 10. Pilot Data Factor Analysis-Kaiser Meyer Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.440
Bartlett's Test of Sphericity	Approx. Chi-Square	79.629
	df	55
	Sig.	.017

Table 11. Pilot Data Factor Analysis-Component Matrix

	Component					
	1	2	3	4	5	6
H14	,632	,442		-,361		
H12	-,620	,318	,404			
H17	,619	,395			-,364	
H2	,532	-,497		,446		
H7		,612	,321	,479		
H16	,322		-,747			
H6	,419		,507	,458		
H18			-,526	,647		
H13		,444			,675	
H8	,314	,330			,553	-,457
H11						,851
Extraction Method: Principal Component Analysis.						

#### 2.3.1.7 Scoring procedure

In the Turkish adaptation of the How I Feel Questionnaire, two different types of responses were collected, unlike the original scale. The adolescents were asked to write their initial response openly after reading the vignette. The online implementation allowed for writing the open responses before seeing the multiple-choice options. This part of the responses will be referred to as “qualitative data” and the answers for the multiple-choice questions will be referred to as “quantitative data”. In this section, the scoring procedure both for qualitative and quantitative data will be explained.

The qualitative part of the data was composed of the short answers given for the two questions per each vignette: “What do you feel and why?” and “What do you do?”. These open answers were coded by two clinicians, who are well equipped in mentalization theory as well as working with adolescents. Considering the 12 vignettes used in the study, each of the 700 participant’s answers were coded for 24 different questions. In the open answers, the existence of a positive emotion word, negative

emotion word, or no emotion word was coded by the evaluators. Inter-rater reliability among the expert's coding were checked for and the Kappa coefficient was found satisfactory ( $Kappa = .78$   $p < .000$ ).

In the quantitative part of the answers, a rating methodology was generated, based on the procedure of the original questionnaire. In the original version of the How I Feel Questionnaire, a score was developed for each of the multiple-choice options, based on the Thurstone scaling procedure. The Thurstone technique is a scaling procedure for measuring attitudes, especially used for health outcomes (Krabbe, 2008). This procedure is based on the opinion of experts and their evaluation of the items are used in developing the scale. For the original How I Feel scale, experts from the Swedish Psychological Association were used to rate the options of possible answers (Sandell et al, 2013). In the Thurstone procedure, the options are rated by the experts on a 10-point scale and medians and interquartile ranges (IQR) are calculated for each item. Afterwards, the items are sorted according to the value they received. In the original scale of HIF, researchers asked the experts to rate each option according to the level of social-emotional maturity it indicated. Afterwards, researchers selected three options from the distribution which reflected the low, medium, and high range of expert ratings (Sandell et al., 2013).

In the Turkish version of the questionnaire, a similar methodology was used. An expert group was established to rate the options of the Turkish version. The group was composed of 13 experts in mental health (clinical psychologists and psychiatrists), who are working with adolescents and are knowledgeable about mentalization theory. They were asked to rate the options in terms of the level of mentalization on a 10-point scale. The median responses were calculated and the scaling points for the answers were generated.

Two different versions for the scaling were developed. In the first version, the original Swedish scale was used, and Turkish expert group ratings were added only for the additional vignettes. In the second version, all the scaling was based on the ratings of Turkish experts. In the preliminary analysis of the data, the two versions did not show significant differences, thereafter the Turkish version of scaling was set as the main procedure of the Turkish version of the questionnaire.

### 2.3.2 Data collection

After finalizing the development of the Turkish version of the How I Feel Questionnaire, data collection procedure was started for the whole research. This section will examine each step of data development and reveal the properties of the developed scales based on the data.

#### 2.3.2.1 Procedure of permissions

The research design and target population necessitated certain permissions to be taken from official institutions. The procedures followed and experiences of the official permission processes are explained in this section. There were three steps in the official approval process.

The ethical approval of the research design was received from the Institutional Review Board for Research with Human Subjects at Boğaziçi University (For the whole version of consent form approved by the board, see Appendix K).

Any implementation in the schools necessitates permission from Ministry of Education (MoNE). Since the current study aimed to collect data from different parts of the city permission was asked from the Istanbul Provincial Directorate of the Ministry of National Education. For the application, all the details of the procedure



and the materials were submitted to the research approval committee of MoNE provincial directorate.

The approval procedure included some requests of change in study instruments. There were two main requests affecting the design of the study. The first one was related to some of the questions in the study tools. The necessary changes were done to receive the approval. The second line of request was related to personal information about the students. Collecting school ID numbers was not approved, therefore that information was deleted from the questionnaires, which caused some problems in matching the online and paper-pencil data. The details of the MoNE approval process and the changes made in the questionnaire are explained in detail in Appendix L.

With official permission from MoNE Provincial Directorate including signatures from the directorate and the Governor of Istanbul, specific schools in the selected areas were visited, with an initial contact made with the school principals. Every school pursued the process differently. Some schools rejected participating because of time constraints. In the schools who accepted participation, meetings were conducted for the organization with the appointed staff.

#### 2.3.2.2 Data collection

The first step of data collection involved receiving consent from the parents. The collection of consent forms was done either by the counseling service or in the deputy principle's room. The responsible person from the school was given a box to collect the signed letters, and the students were informed to bring the letters to that box before the day of data collection. In each of the schools, with the permission of the management, the researcher went into the classrooms, explained about the study, and

invited the students to participate. The students were told about the importance of the consent forms and the necessity to bring them signed if they wanted to participate. After the deadline for bringing the consent forms, assistant researchers collected the forms from the schools and prepared the list of students who were eligible to participate in the study.

On the day of data collection, in each of the school sites, there were students who claimed that they brought the consent or forgot but will be bringing immediately. They were also included (with the concern of mistakenly being out of the prepared lists of received consents). The demographic questionnaire also started with the question “do you have a consent from your parents?”. Those participants, whose consent forms were not found, were excluded from the study as described at the “selection of students” section.

The second phase of the data collection was the day actual data was collected. Parallel sessions were conducted in several classrooms as per permission from the school management. In some schools, implementation was done in the classrooms, in each classroom a person from the research team was present to answer questions or ease the process. At some schools, teachers of that class were also present but at some schools they left the classroom to the researcher. In some of the schools, where a big conference room was available, students who brought their consent forms were invited to the conference room and implementation was done all together.

In all the implementations, either in the classrooms or conference rooms, the researcher started with a short explanation of what is expected and why it is important to answer individually. A group of young psychologists and psychology interns accompanied the researcher as the research team and were present either in the

classrooms or at different parts of the conference room to monitor and help for the implementation, especially to prevent group work.

All the implementation was done in two phases. First, paper forms were distributed. The paper forms included the short demographic questionnaire, Raven Matrices and Youth Self Report. The students who completed the paper form were directed to a website where they could find the online forms. The website was designed separately for each of the schools. In other words, students from one school were only able to enter to the link that was designed for their school. The link was only open during the data collection process.

The online phase of the study was implemented with different tools in different schools. In schools, where using mobile phones were permitted, students used their own devices. The researcher provided internet for the students. In some cases, some students did not have a mobile device where they could access the internet; in those cases, researchers provided devices for students. In some of the schools, children were not allowed to bring any mobile device and/or economically were not able to possess one. In those instances, students were invited to the computer lab of the school and all the implementation (both the paper and the online) were completed there.

The completed forms were grouped as grades and were taken from the schools directly. Neither the school management nor the teachers could look at the individual responses of the students.

At the end of the data collection process, there were two different types of data for each participant, on paper and online. The first step of data work included the merging procedure of the data. Since MoNE did not allow registering the name of the participants, the only identifying information was the school number. However, in

some of the cases, the hand-written school number was not readable, which caused problems in data merging.

The data merging process included several variables to be on the safe side. The two data sets were compared according to the school number, grade, classroom, gender, and date of birth. Although a thoughtful and detailed process was pursued to merge the data, some data was disregarded to be on the safe side.

The second step of data work was clearance, which included random checking of the data entrance process. In the clearance step, the number of valid answers for each questionnaire was also calculated. When the number of valid answers was not enough to calculate the score, that data was disregarded. This was the case for the paper forms, since the online forms necessitated answering each item to continue the rest of the implementation. Therefore, there were no missing elements in the online forms if the process was completed. YSR form has a limitation on the missing elements for the computations of the scale; students who exceeded this limit were disregarded since their form was invalid.

Another step of the data work was the coding of the open-ended questions of the HIF scale. This process was explained in the “scoring procedure” section, above.

#### 2.3.2.3 Feedback about the research findings

In the initial presentation about the data collection, all the schools and students were informed that they would receive feedback after the implementation of the study. The researcher promised this step to increase the willingness for participation as well as a thanks for the time participants dedicated.

School managements were informed that individual scores or other personal information would not be shared with them. However, a group score or general

distribution of the school would be presented at the end of the study. In addition, a seminar for one of the stakeholders of the school was offered for each school that participated. For the students, feedback letters were prepared, summarizing their scores. The letters included general information about the used measurements and the student's score and its relative position according to his/her age group. An example of the feedback letter can be seen in Appendix M.

The delivery of feedback letters and seminars were postponed due to the school closures during the Covid-19 pandemic. Since the closure period continued longer than expected, alternative solutions were offered for the schools. Only the schools and students who requested were provided feedback letters through email. A limited number of students received their feedback letters, and one school requested a seminar for the teachers in the online period of the schools.

## 2.4 Psychometric properties of new scales

### 2.4.1 Psychometric properties of The How I Feel Scale

Psychometric properties of the Turkish version of the How I Feel scale was investigated on the current data after completion of the aforementioned procedures. The reliability analysis revealed a Cronbach alpha coefficient of .73, which is considered as adequate. Separate analysis of “doing” and “feeling” items did not reveal adequate results, therefore the scale should be used only with the total score.

The relationship between the HIF scale and the other instruments of the research study were explored in a principal-component factor analysis with oblique rotation (direct oblimin). Empathy scale, Raven matrices, YSR scores and RFQ scale were subjected to the analysis in the initial trial. The analysis revealed a low level of

variance explained for Raven total score; therefore, this score was removed from the analysis. (Raven score is not related to mentalization, conceptually).

Inspection of the correlation matrix revealed the presence of many coefficients of .30 and above. The Kaiser-Meyer-Olkin value was .71 and Bartlett's Test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix. Principal components analysis revealed the presence of two components with eigenvalues exceeding 1, explaining 62.9% of the variance in total (see Table 12). The scree-plot also revealed a distribution supporting two factor solution.

Table 12. Results of the Principal Component Analysis Pattern Matrix

	Component	
	1	2
YSR Externalization	.838	
RFQ Confusion	.785	
YSR Internalization	.775	
HIF TOTAL-TR	-.606	.490
Empathy Total		.836
RFQ Interest Curiosity		.824
RFQ Excessive Certainty		.597

Extraction Method: Principal Component Analysis.  
Rotation Method: Oblimin with Kaiser Normalization.

Factor I explained 34.7% of the total variance, with the highest loading on the YSR externalization item. RFQ Confusion and YSR Internalization also received high positive loadings. The HIF also had a substantial loading but in negative direction. The second component accounted for 28.1% of the variance with the highest loading on the empathy scale. HIF also had a substantial loading on this factor, this time in a positive

direction. All the measures in the second factor can be called as part of a social emotional dimension. The loading for the first factor points to behavioral/mental measures. There was a weak correlation between the two factors ( $r=.06$ ).

The bivariate correlations between the HIF scale and the other instruments were also explored for validity of the scale. The Empathy scale was used as the most relevant construct for mentalization. Also, the relation with the second mentalization measure, the RFQ scale was also observed.

The two related concepts, mentalization (as measured by HIF) and empathy (as measured by Basic Empathy Scale) revealed significant correlations as shown in Table 13. The correlation coefficient is higher in the affective empathy score compared to the cognitive empathy score. The total score of the empathy scale is also found significantly correlated with the HIF scale.

Table 13. Correlations HIF & Empathy Scales

HIF- TR- TOTAL	Pearson Correlation Sig. (2-tailed)	Empathy- Total	Empathy- Cognitive	Empathy- Affective
		.340**	.260**	.343**
		.000	.000	.000
	N	639	639	639

\*\* $p < .01$ ,

The correlations between the two mentalization scales were also significant, as shown in Table 14. The two significant relations were between the HIF scale and RFQ-confusion and RFQ-Interest/Curiosity sub-scores. The Excessive Certainty dimensions of the RFQ scale did not reveal a significant correlation. For the confusion sub-score, the relation is negative, as expected.

Table 14. Correlations HIF &amp; RFQ

		RFQ	RFQ	RFQ
		Uncertain ty/Confus ion	Interest/ Curiosity	Excessive Certainty
HIF- TR- TOTAL	Pearson Correlation	-.242**	.221**	.023
	Sig. (2-tailed)	.000	.000	.567
	N	639	639	639

\*\*p&lt;.01

#### 2.4.2 Psychometric Properties of The Reflective Functioning Questionnaire for Youth

As indicated earlier in this research the Turkish translations of the Reflective Functioning scale was used from the Köksal (2017) study, by extracting the necessary items for the Youth version as validated by Duval et al. in 2018. The scoring method was also used as Duval et al. (2018) corrected in their study.

The reliability analysis of the Turkish version of the Reflective Functioning Questionnaire for Youth with the current data revealed similar results as indicated in the original study by Duval et al. (2018). The Cronbach alpha coefficients for all the factors are adequate, two of them suggesting particularly good internal consistency. The comparison of reliability coefficients can be seen in Table 15.

Reliability analysis of the factor “interest curiosity” revealed a Cronbach alpha which is barely adequate. The examination of the inter-item correlation matrix and corrected item total correlations indicated a problem with question 25, which does not correlate adequately with the rest of the items in this factor. This question is a revised item, and the wording could have been confusing. When the reliability analysis was re-calculated with exclusion of this item, all the statistical tables were corrected, and Cronbach alpha increased to .77 level.



Table 15. Reliability Analysis Results in Comparison with the Original Questionnaire

	Original	Turkish
Uncertainty/confusion	0.89	0.84
Interest/curiosity	0.75	0.70 / 0.77*
Excessive certainty	0.80	0.83

\*Cronbach alpha value without item 25

The steps for the validity of the questionnaire are similar to the ones followed for the HIF questionnaire. As indicated in Table 12 above, the factor analysis revealed a two-factor structure where the interest/curiosity and excessive certainty dimensions of the RFQ cumulated in the same factor with HIF, indicating the assessment of similar constructs. The correlations with HIF also revealed significant results for two of the sub-dimensions, as shown in Table 14.

The relations between the Basic Empathy Scale and the RFQ sub-dimensions were also examined. The total score of BES is significantly correlated with all the sub-scores of the RFQ-Y. The correlation coefficients revealed a strong relationship between the interest/curiosity score of the RFQ-Y and all empathy dimensions. The relationship with RFQ-confusion and Empathy-cognitive is not significant and the relation is in the negative direction as can be expected. Also, the relationship between the Empathy-affective score and RFQ-excessive certainty score is not significant. The correlation coefficients signal a strong relationship between Empathy-cognitive and RFQ-Excessive certainty scores.

Table 16. Correlation of RFQ & BES

		Empathy TOTAL	Empathy Cognitive	Empathy Affective
RFQ Uncertainty/Confusion:	Pearson Correlation	.105**	-.052	.160**
	Sig. (2-tailed)	.008	.190	.000
	N	641	641	641
RFQ Interest/Curiosity:	Pearson Correlation	.542**	.490**	.375**
	Sig. (2-tailed)	.000	.000	.000
	N	641	641	641
RFQ Excessive Certainty:	Pearson Correlation	.331**	.510**	.057
	Sig. (2-tailed)	.000	.000	.149
	N	641	641	641

\*\*p<.01, \*\*\*p<.001

## CHAPTER 3

### RESULTS

The results of the study are presented in three sections. In the first section, each measure used in the study is examined, and descriptive statistics for each instrument are given. In addition, gender differences for each instrument were checked and presented in this section. The details, regarding the school differences can be found in the relevant Appendix.

The second section of the chapter reveals answers regarding the hypotheses. First, correlations between the tools of the research are presented. Secondly, the differences between internalizers and externalizers in terms of mentalization scores are examined. Finally, the factors affecting mentalization scores, as well as the factors influencing the internalizing and externalizing scores were examined by regression analysis. The last section of the results chapter describes the qualitative data.

All the statistical analyses were carried out with the SPSS 20 program. The critical alpha value for significance was set as 0.05, however, more strict values were calculated where necessary. The preliminary assumptions were checked for each of the analyses, the critical ones were explained in detail.

#### 3.1 Descriptive information about the measures used

This section presents the descriptive statistics for each measure separately.

### 3.1.1 Demographic questionnaire

Students were asked several questions in the demographic questionnaire to define different aspects of the population. The distribution of SES for the whole data can be seen in Figure 1. As the figure demonstrates, the distribution is negatively skewed, meaning that most of the students live in families where they can easily meet their basic needs. The distribution of the SES level for each school can be seen in Appendix N.

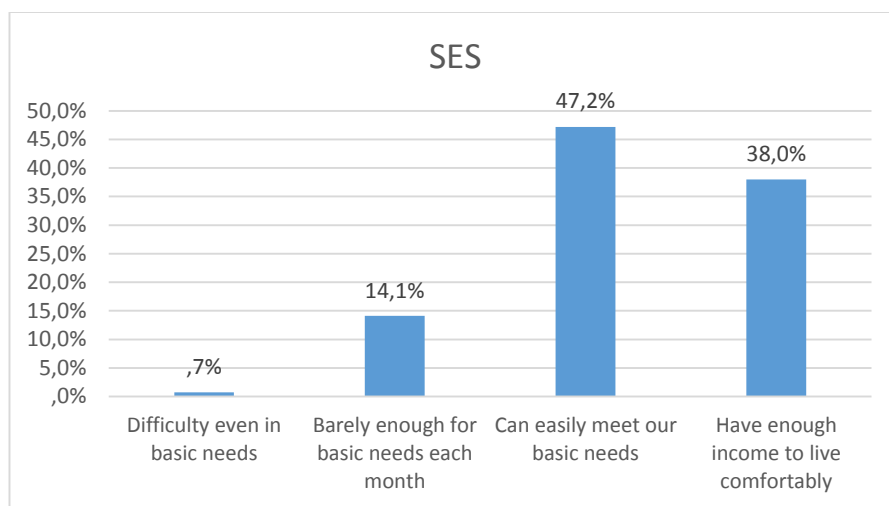


Figure 1. Distribution of the SES level

Another question of the demographic scale was the student self-ratings for three main areas of functioning, namely their evaluation of their performance on social, academic, and behavioral domains. The percentages of their ratings are given in Figure 2. Less than 10% of the students rated their performance as “bad” or “very bad” in any of the areas. Also, few students rated their academic performance as “very good”, at 14.3%.

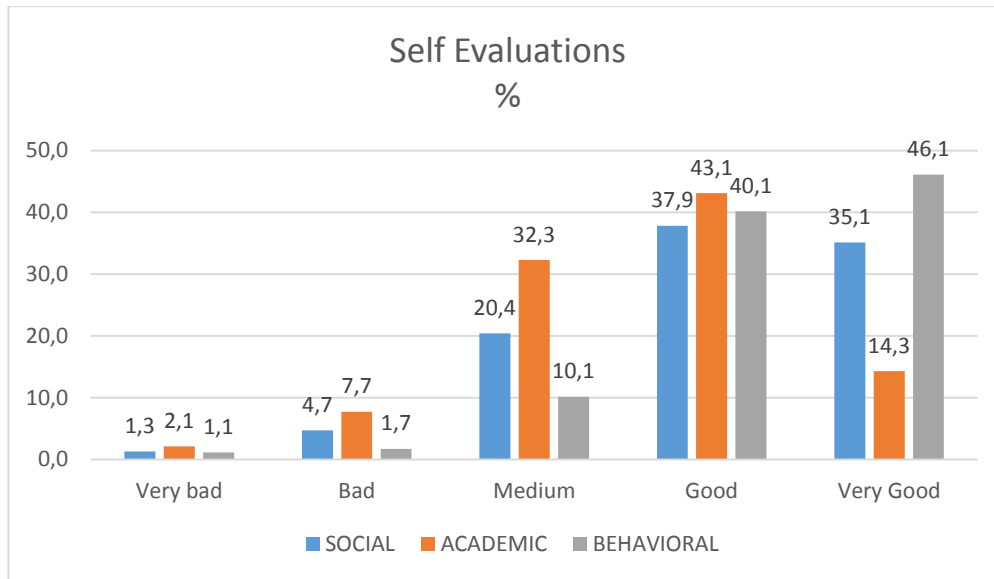


Figure 2. Self-evaluations in percentages

### 3.1.2 Raven Progressive Matrices

The short form of the Raven Progressive Matrices was used to eliminate the possibility of any intellectual difficulty, possibly hindering mentalization ability. The distribution of the scores is given in Table 17.

Table 17. Raven Total Score Descriptive Statistics

	<i>N</i>	Min.	Max.	<i>M</i>	<i>SD</i>
Raven Total	699	0	9	5.88	1.87

The exploration of gender differences within the Raven total score by one-way between-groups analysis of variance did not reveal significant results, meaning that both girls and boys showed similar abilities of reasoning. The distribution of Raven Scores for each school can be seen in Appendix O.

### 3.1.3 Basic Empathy Scale (BES)

The Basic Empathy Scale was one of the main measures used to test the validity of the mentalization scales. The mean and standard deviations for the total, cognitive and affective scores of the scale is given in Table 18.

Table 18. BES Mean Scores and Standard Deviations

	<i>N</i>	Min.	Max.	<i>M</i>	<i>SD</i>
Empathy Total	641	39.00	96.00	72.92	10.25
Empathy Cognitive	641	13.00	45.00	35.69	5.44
Empathy Affective	641	11.00	54.00	38.46	7.20

The exploration of gender differences revealed significant results for all three scores of the scale. The descriptive statistics for girls and boys are seen in Table 19 and the one-way ANOVA results are shown in Table 20. As can be seen from the tables, girls have higher empathy scores for all the measures. The distribution of BES Scores for each school can be seen in Appendix P.

Table 19. BES Mean Scores According to Gender

		<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Empathy Total	Girls	489	74.85	9.89	0.45
	Boys	152	66.72	8.85	0.72
Empathy Cognitive	Girls	489	36.32	5.25	0.24
	Boys	152	33.67	5.55	0.45
Empathy Affective	Girls	489	39.72	6.91	0.31
	Boys	152	34.39	6.61	0.54

Table 20. BES Results for One-Way ANOVA with Gender

		Sum of Squares	df	Mean Square	<i>F</i>	Sig.	Eta Squared
Empathy Total	Between Groups	7659.594	1	7659.594	82.135	.000	
	Within Groups	59591.024	639	93.257			0.11
	Total	67250.618	640				
Empathy Cognitive	Between Groups	813.054	1	813.054	28.676	.000	
	Within Groups	18117.786	639	28.353			0.04
	Total	18930.839	640				
Empathy Affective	Between Groups	3301.326	1	3301.326	70.601	.000	
	Within Groups	29879.829	639	46.760			0.10
	Total	33181.154	640				

#### 3.1.4 How I Feel Scale (HIF)

The How I Feel Scale is one of the major scales of mentalization in this research. The mean and standard deviations of the scores for the measure are given in Table 21 both for the whole population and for girls and boys separately.

Table 21. HIF Scale Descriptive Measures

	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
Girls	488	180.82	20.04	0.91
Boys	151	170.45	23.07	1.88
Total	639	178.37	21.24	0.84

The one-way ANOVA indicated a difference between girls and boys for the total score of HIF. The Levene test of homogeneity of variances revealed significant results,  $F(1,637) = 5,59, p < 0.05$ , meaning a violation of the assumption. The Welch's statistics is used for the difference measure. It revealed a significant

difference between the two groups.  $F(1, 224.45) = 24.72, p < 0.000$ . The distribution of HIF Scores for each school can be seen in Appendix Q.

### 3.1.5 Reflective Functioning Questionnaire (RFQ)

The Reflective Functioning Questionnaire is the second mentalization measure in this research. Descriptive statistics about the main factors of the scale are given in Table 22, separately for girls and boys and in total.

Table 22. Mean RFQ Scores

		<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
RFQ Uncertainty/Confusion	Girls	489	3.21	0.97	0.04
	Boys	152	2.95	0.91	0.07
	Total	641	3.15	0.96	0.04
RFQ Interest/Curiosity	Girls	489	4.18	0.81	0.04
	Boys	152	3.87	0.85	0.07
	Total	641	4.11	0.83	0.03
RFQ Excessive Certainty	Girls	489	3.94	0.98	0.04
	Boys	152	3.82	1.00	0.08
	Total	YT641	3.91	0.98	0.04

One-way ANOVA revealed significant differences for girls and boys for Uncertainty/Confusion<sup>3</sup> and Interest/Curiosity scores. The values for the statistical analysis results are shown in Table 23. The calculated effect sizes are small. The Excessive Certainty score did not reveal a significant difference.

<sup>3</sup> The three subscales of the RFQ scales are defined in the Method Chapter, section 2.2.2. To avoid confusion, details are mentioned in Results Chapter. In sum, lower scores in uncertainty/confusion, higher scores in interest/curiosity and lower scores in excessive certainty are indicators of better mentalizing capacity.



Table 23. One-Way ANOVA Results for RFQ and Gender

		Sum of Squares	df	Mean Square	<i>F</i>	Sig.	Eta squared
RFQ Uncertainty/Confusion	Between Groups	8.04	1	8.04	8.79	0.00	
	Within Groups	584.41	639	0.91			0.01
	Total	592.45	640				
RFQ Interest/Curiosity	Between Groups	11.23	1	11.23	16.72	0.00	
	Within Groups	429.21	639	0.67			0.03
	Total	440.44	640				

### 3.1.6 Youth Self Report (YSR)

The Youth Self Report is the main measure for identifying internalizing and externalizing characteristics. The three main cumulative scores of the questionnaire are total score, internalization score and externalization score. The mean and standard deviation values for the three cumulative scores are given in Table 24, separately for both sexes. One-way ANOVA was conducted for gender difference in the cumulative scores. For internalization, the homogeneity of variance assumption was violated, but Welch's *F* showed significant difference, ( $F(1, 347.62)=76.79$ ,  $p<0.001$ ), with a medium effect size of 0.08, indicating higher scores for girls. For externalization, no significant difference was found between girls and boys. For total score, there is a significant difference indicating higher problem scores for girls ( $F(1,693) = 20.40$ ,  $p<0.001$ ) with a small effect size of 0.03.

Table 24. YSR Descriptive Statistics According to Sex

		<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
YSR	Girls	529	19.28	9.66	.42
Internalizing	Boys	166	12.94	7.58	.59
	Total	695	17.76	9.59	.36
YSR	Girls	529	11.54	6.59	.29
Externalizing	Boys	166	11.89	7.02	.54
	Total	695	11.63	6.69	.25
YSR	Girls	529	49.56	21.87	.95
Total	Boys	166	40.95	19.91	1.55
	Total	695	47.50	21.72	.82

YSR has several other scores which explore problem areas. There are eight sub-scores under the problem behavior dimension of the questionnaire. The mean and standard deviation of the sub-scores for these areas are given in Table 25. Since these subtests are not the focus of the current research, no further analysis was conducted.

A visual demonstration of the mean problem behavior scores for the eight sub-areas can be seen in Figure 3. As can be seen from the graph, in all the sub-scores -except rule breaking behavior- girls' behavior problem scores are higher than boys. Although the girl population in this data outnumbered boys, this finding needs consideration.

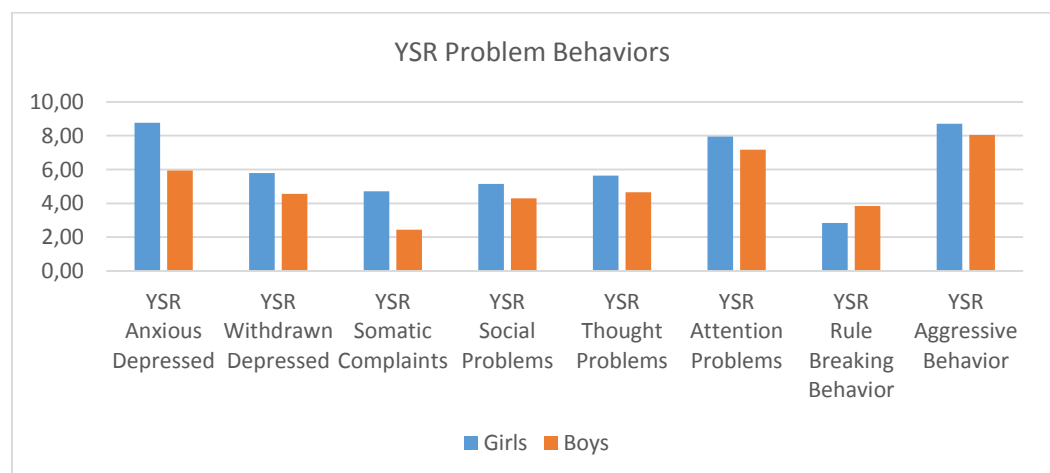


Figure 3. YSR problem behavior mean scores according to the sexes

Table 25. YSR Problem Behavior Sub-Score Demographics

		<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
YSR	Girls	529	8.76	4.93	.21
Anxious	Boys	166	5.94	4.08	.32
Depressed	Total	695	8.09	4.89	.19
YSR	Girls	529	5.79	3.18	.14
Withdrawn	Boys	166	4.56	3.00	.23
Depressed	Total	695	5.50	3.18	.12
YSR	Girls	529	4.72	3.62	.16
Somatic	Boys	166	2.44	2.34	.18
Complaints	Total	695	4.18	3.49	.13
YSR Social	Girls	529	5.14	3.27	.14
Problems	Boys	166	4.30	3.00	.23
	Total	695	4.94	3.23	.12
YSR	Girls	529	5.64	3.98	.17
Thought	Boys	166	4.65	3.58	.28
Problems	Total	695	5.41	3.91	.15
YSR	Girls	529	7.95	3.28	.14
Attention	Boys	166	7.17	3.15	.24
Problems	Total	695	7.77	3.26	.12
YSR Rule	Girls	529	2.84	2.78	.12
Breaking	Boys	166	3.85	2.95	.23
Behavior	Total	695	3.08	2.85	.11
YSR	Girls	529	8.71	4.48	.20
Aggressive	Boys	166	8.04	4.61	.36
Behavior	Total	695	8.55	4.51	.17

The YSR questionnaire reveals other sub-scores which are not cumulated under the problem behavior section but gives important information about symptom areas. Also, there is a “positive qualities” sub-score. The rest of the dimensions that can be gathered from YSR measurement are summarized in Table 26 and Figure 4.

Table 26. YSR Other Sub-Scores

		<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
YSR Other Problems	Girls	529	5.46	2.69	.12
	Boys	166	4.66	2.51	.20
	Total	695	5.27	2.67	.10
YSR Affective Problems	Girls	529	8.28	4.78	.21
	Boys	166	5.61	3.91	.30
	Total	695	7.64	4.72	.18
YSR Anxiety Problem	Girls	529	3.90	2.18	.10
	Boys	166	2.60	1.96	.15
	Total	695	3.59	2.20	.08
YSR Somatic Problems	Girls	529	3.43	2.91	.13
	Boys	166	1.69	1.87	.15
	Total	695	3.02	2.79	.11
YSR ADHD Problems	Girls	529	5.57	2.58	.11
	Boys	166	4.85	2.77	.22
	Total	695	5.40	2.64	.10
YSR Oppositional Defiant Problems	Girls	529	3.98	1.95	.09
	Boys	166	3.53	1.89	.15
	Total	695	3.87	1.95	.07
YSR Conduct Problems	Girls	529	2.29	2.83	.12
	Boys	166	3.26	3.27	.25
	Total	695	2.52	2.97	.11
YSR Obsessive Compulsive Problems	Girls	529	5.79	3.31	.14
	Boys	166	4.51	3.18	.25
	Total	695	5.48	3.32	.13
YSR PTS Problems	Girls	529	10.71	4.93	.21
	Boys	166	8.29	4.31	.33
	Total	695	10.13	4.89	.19
YSR Positive Qualities	Girls	529	19.98	3.17	.14
	Boys	166	19.93	3.30	.26
	Total	695	19.97	3.20	.12

This section elaborated the distribution of the measures used in the study.

Considering the sample size and distribution, the current statistics give a valid information about the adolescent sample on the examined constructs. The sample covers a wide range of socio-economic-status; however, the majority is cumulated on medium to high SES. The main scores show gender differences to the advantage of girls, when the measurement is about empathy and mentalization. When the

investigated construct is psychopathology, this time the girls are disadvantaged, as in total and internalization scores of YSR. YSR externalization score and Raven score did not reveal any gender differences.

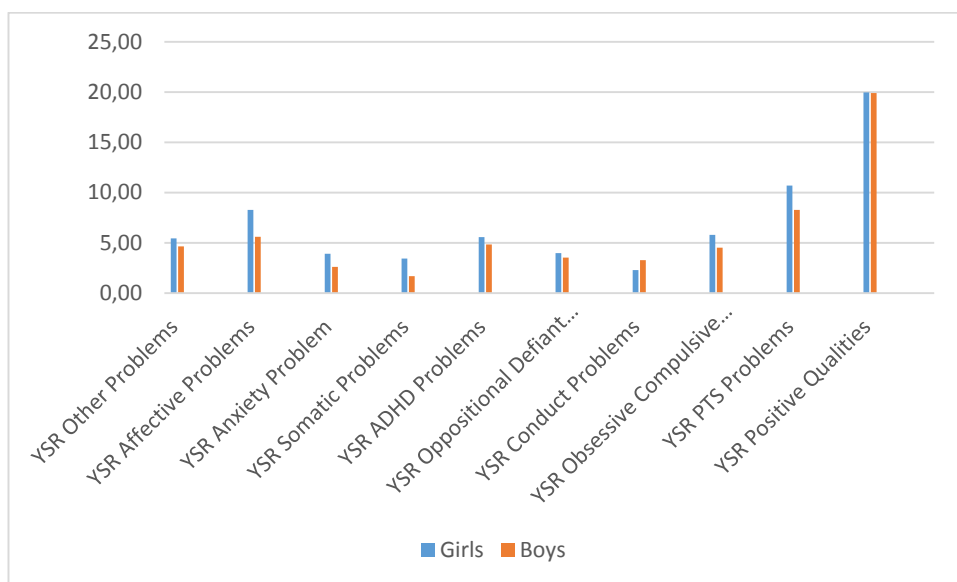


Figure 4. YSR other sub-domains

### 3.2 What quantitative data reveals about the research question?

This section focuses on the main hypothesis of the research in terms of the relations between the mentalization related scores (Reflective Functioning Questionnaire-RFQ, How I Feel Scale-HIF, the Basic Empathy Scale-BES) and the internalizing and externalizing scores on the YSR.

#### 3.2.1 Interaction between the measures (correlations)

The relationship between the measures used for the research was explored before the comparisons. Table 27 shows the Pearson Correlation coefficients between the measures.

Table 27. Descriptive Values and Correlations between Variables

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
Raven (1)	5.88	1.87	-								
RFQ Uncertainty Confusion (2)	3.14	.96	-.042	-							
RFQ Interest/ Curiosity (3)	4.10	.82	.254 **	.248 **	-						
RFQ Excessive/C ertainty (4)	3.90	.98	.053	.116 **	.404 **	-					
Empathy Cognitive (5)	35.69	5.43	.116 **	-.052	.490 **	.510* *	-				
Empathy Affective (6)	38.45	7.20	.078 *	.160 **	.375 **	.057	.348 **	-			
YSR Internalizin g (7)	17.76	9.59	.004	.596 **	.235 **	.140 **	.009	.132* *	-		
YSR Externalizin g (8)	11.63	6.69	-.065	.532 **	.079 *	.174 **	-.089 *	-.139 **	.517 **	-	
HIF TR Total Score (9)	178.3 6	21.2 4	.139 **	-.242 **	.221 **	.023	.260 **	.343 **	-.237 **	-.405 **	-

\* $p < .01$ ; \*\* $p < .001$ 

The relationships between the two mentalization scales and the empathy scale was investigated under the validity section in Method chapter since the empathy scale was used as a validity measure for mentalization. Here the added measures are Raven Progressive Matrices and YSR scores. The Raven total score showed moderate significant correlations with mentalization and empathy measures. There is no significant correlation between the YSR scores and the Raven score. On the other hand, YSR scores revealed significant correlations with mentalization scores, ranging from low to moderate levels. Also, there are significant relations between the empathy scores and YSR scores.

In general, it can be summarized that the measures used within the study are correlated with each other at a moderate level. Behavioral problem scores measured by the YSR were correlated with the measures of mentalization and empathy, but not correlated with reasoning ability measured by Raven.

### 3.2.2 Differences among Youth Self Report groups

The main hypothesis of the research claims that the mentalization abilities of internalizers and externalizers would be different from each other. The group was divided into four according to the YSR scores as the ones with no pathology, the ones with internalizing psychopathology, the ones with externalizing psychopathology and the ones who have both internalizing and externalizing symptoms together. It is expected that these four groups would be different than each other in terms of their mentalization levels. Internalizers and externalizers were calculated as the group where the internalizing or externalizing score exceeded the 75th percentile of the current population. In other words, the higher 25th percentiles were considered in the internalizer or externalizer category. “None” group refers to those who did not score high in any of the behavior problem areas of internalizing or externalizing and “both” group refers to the participants whose scores are at the highest 25 % for both internalizing and externalizing scores.

To investigate the main hypothesis, a multivariate analysis with the Raven score as a covariate was planned. In the initial analysis, it was seen that the Raven score is not strongly related to the dependent variables and failed the assumptions for being used as a covariate. Therefore, to examine the group differences a one-way between-groups multivariate analysis of variance (MANOVA) was performed. Six dependent variables were used: RFQ uncertainty/confusion, RFQ interest/curiosity,

RFQ excessive certainty, Empathy cognitive, Empathy affective and HIF TR total score. The correlation matrix of these dependent variables, including the means and standard deviations can be seen in Table 27 above. The independent variable was the grouping of YSR scores as internalizers, externalizers, both and none. The group distribution can be seen in Table 28.

Table 28. Distribution of YSR Sub-groups

YSR Groups		
	N	%
None	410	58.6
Internalizer	93	13.3
Externalizer	101	14.4
Both	91	13.0
Total	695	99.3

Preliminary analyses to check several assumptions of multivariate analysis tested the following assumptions: Sample size, multivariate normality, linearity, multicollinearity, and homogeneity of variance-covariance matrices. The sample size is sufficient with far more than an adequate number of cases in each cell, which ensures the normality assumption. To test the multivariate normality, Mahalanobis distance was calculated and only six cases were found exceeding the critical value. When the number of cases exceeding the critical value are limited in respect to the sample size and the difference from the critical value is not high, it is recommended to keep these cases in the analyses (Pallant, 2007). Since the number of cases exceeding the critical value were very low, it is decided to keep them in the analysis. No violations were detected in the linearity and multicollinearity assumptions. The homogeneity of variance-covariance matrices as measured by Box's test revealed



significant results, indicating the violation of the assumption. However, the Box's test is known as overly sensitive to large samples (McCall & Appelbaum, 1973) and this result was predicted. To overcome this issue, Pillia's Trace value was used, since it is recommended as a more robust test for this violation, in several sources (i.e., Ateş et al, 2019). The Levene's test of Equality of Error Variance checks for the assumption that variances of each variable are equal across all groups. This assumption was met for all dependent variables, except HIF Total. When the assumption is violated, a strict alpha level is recommended for that variable (Pallant, 2007). To overcome this problem, a Bonferroni adjusted alpha level of 0.008 was set.

There was a statistically significant difference between the groups on the combined dependent variables,  $F(18,1881) = 16.05$ ,  $p < 0.000$ ; Pillia's Trace = .40, partial eta squared = 0.13. The results for the dependent variables were considered separately, using a Bonferroni adjusted alpha level of .08. The details for the separate dependent variables can be seen in Table 29.

Table 29. MANOVA Results for each Dependent Variable

Dependent Variable	Type III Sum of Squares	df	Mean Square	<i>F</i>	Sig.	Partial Eta Squared
RFQ	179.780	3	59.927	93.544	.000	.308
Uncertainty/Confusion						
RFQ Interest/Curiosity	17.991	3	5.997	9.017	.000	.041
RFQ_	13.046	3	4.349	4.535	.004	.021
Excessive Certainty						
Empathy Cognitive	324.481	3	108.160	3.702	.012	.017
Empathy Affective	991.031	3	330.344	6.560	.000	.030
TR_HIFTOTAL	30690.114	3	10230.038	25.212	.000	.107

Table 29 shows that the YSR groups show statistically significant differences for the dependent variables. Only “Empathy Cognitive” does not reach a statistical significance, with the strict alpha level.

The details of the group differences were investigated through individual one-way ANOVAs. The descriptive values for each group are given in Table 30.

Table 30. Mean Values of each YSR Group for the Dependent Variables

		<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
RFQ Uncertainty/Confusion	None	374	2.728	.808	.042
	Internalizer	84	3.603	.750	.082
	Externalizer	92	3.454	.766	.080
	Both	86	4.176	.853	.092
	Total	636	3.144	.963	.038
RFQ Interest/ Curiosity	None	374	4.032	.827	.043
	Internalizer	84	4.384	.757	.083
	Externalizer	92	3.914	.849	.088
	Both	86	4.377	.772	.083
	Total	636	4.108	.830	.033
RFQ Excessive Certainty	None	374	3.796	.969	.050
	Internalizer	84	4.044	1.084	.118
	Externalizer	92	4.011	.927	.097
	Both	86	4.167	.962	.104
	Total	636	3.910	.986	.039
Empathy Affective	None	374	38.642	6.601	.341
	Internalizer	84	40.667	7.286	.795
	Externalizer	92	36.011	7.528	.785
	Both	86	38.105	8.488	.915
	Total	636	38.456	7.201	.286
TR HIF TOTAL	None	373	183.737	17.448	.903
	Internalizer	84	176.658	21.554	2.352

Externalizer	92	168.255	26.598	2.773
Both	85	167.368	21.672	2.351
Total	634	178.358	21.268	.845

---

The differences between the four YSR groups and detailed mean scores of the mentalization measures are presented in the tables in Appendix R. In general, supporting the 1<sup>st</sup> Hypothesis, mentalization scores are higher for the “none” group, which has no pathology, and lower for the “both” group which has both internalizing and externalizing pathology. Different sub-scores of the used measures indicated subtle differences. The RFQ scale is composed of three factors. The first one, the uncertainty/confusion score indicates higher levels of confusion about mental states, which means difficulty in proper mentalizing. Results indicated that the “none” group has statistically lower scores than the “both” group in terms of uncertainty/confusion, indicating better mentalizing ability. The mean uncertainty/confusion score increases for externalizer, internalizer and “both” groups in the given order. In short, the ones who have pathology are more confused about mental states.

The second factor of the RFQ is interest/curiosity, high scores of which are associated with better mentalizing ability. For this score, the major distinction is in the externalizer group. Externalizers show statistically lower scores both than the internalizers and the “both” groups. Interest/curiosity scores for the other groups are as follows in order of higher scores: The “none”/no pathology group, the “both” group and finally the internalizers group with the highest interest/curiosity scores.

The third factor of the RFQ is excessive certainty, in which higher scores are associated with lower mentalizing ability. For excessive certainty, the “both” group

was found to be significantly higher than the “none” group. When the participants show both internalizing and externalizing pathology, their excessive certainty scores are significantly higher than the ones who show no pathology.

For the HIF scale, the difference between the HIF mean scores indicates that mentalizing capacity is less in those who have combined internalizing and externalizing psychopathology. This score is followed in order by the mean scores of externalizers and internalizers, which are all lower than the mean scores of the group who have no YSR psychopathology.

### 3.2.3 Comparison of internalizers and externalizers

In this section, a closer examination of internalizers and externalizers is presented since the 2<sup>nd</sup> hypothesis claims that internalizers would be better than externalizers in their level of mentalization.

The internalization score is one of the sub-total scores of the YSR, including the Anxious/Depressed, Withdrawn/Depressed and Somatic Complaints. In the current sample, the internalizer group was identified as the upper 25%ile of the internalizing score. In the YSR, the externalization score is gathered as a combination of sub-sections rule-breaking behavior and aggressive behavior. In the current design, the externalizer group is defined as the upper 25%ile of the externalization score.

In total, 93 participants out the whole sample were categorized as internalizers and 94.6 % of this group consist of girls. In the sample, there are 101 participants who were classified as externalizers (participants who qualify both for internalizer and externalizer group are not included). The gender distribution within

the externalizers is 57.4% girls and 42.6% boys. The answers to the socio-economic level question within the groups are presented in Table 31.

Table 31. SES Level of Internalizers and Externalizers

	SES %			
	1	2	3	4
Internalizers		20.40	41.90	35.50
Externalizers		11.90	46.50	41.60

Difficulty even in basic needs=1, Barely enough for basic needs each month=2,  
We can easily meet our basic needs=3, We have enough income to live comfortably=4

Percentages of self-ratings about social, academic, and behavioral domains are demonstrated in Figure 5, separately for internalizers and externalizers.



Figure 5. Self-ratings of internalizer and externalizer groups

The means and standard deviations for the main measurement tools of the research are summarized for internalizers and externalizers separately in Table 32.

Table 32. Descriptive Statistics for Main Measurement Tools for Internalizers and

Measures		<i>N</i>	Min.	Max.	<i>M</i>	<i>SD</i>	Variance
Raven	Int	93	0	9.00	5.90	1.89	3.59
Total	Ext	101	0	9.00	5.85	1.94	3.77
RFQ	Int	84	1.91	5.73	3.60	.75	.56
Uncertainty / Confusion	Ext	92	1.55	5.45	3.45	.77	.59
RFQ	Int	84	2.13	6.00	4.38	.76	.57
Interest/ Curiosity	Ext	92	1.00	5.75	3.91	.85	.72
RFQ	Int	84	1.50	6.00	4.04	1.08	1.18
Excessive Certainty	Ext	92	1.17	6.00	4.01	.93	.86
Empathy	Int	84	24.00	45.00	36.45	5.60	31.36
Cognitive	Ext	92	13.00	45.00	34.12	6.07	36.81
Empathy	Int	84	18.00	53.00	40.67	7.29	53.09
Affective	Ext	92	15.00	48.00	36.01	7.53	56.67
HIF Total	Int	84	100.75	211.50	176.66	21.55	464.58
	Ext	92	82.50	206.00	168.26	26.60	707.45

A multivariate analysis of variance was conducted for the comparison of the mentalization abilities of internalizers and externalizers. The main assumptions for MANOVA were checked for in different levels. The reduced sample limited to the group of internalizers and externalizers still was sufficient for the sample size assumption in each group. Mahalanobis distance calculation showed that only three cases exceeded the critical limit, which were disregarded due to the insignificance within the whole data. No serious violations were detected in the linearity and multicollinearity assumptions. Box's test revealed significant results, as is the case in large samples; therefore, Pillia's Trace value was used.

There was a statistically significant difference between the groups on the combined dependent variables,  $F(6,169)=3.93$ ,  $p<0.001$ ; Pillia's Trace=0.12; partial eta squared = 0.12. When the results for the dependent variables were considered separately, RFQ-Interest/ Curiosity and Empathy-Affective were found to be

statistically significant, using a Bonferroni adjusted alpha level of 0.01. The  $F$  values for the dependent variables are shown in Table 33.

Table 33. MANOVA Results for Internalizers vs Externalizers

	Type III Sum of Squares	df	Mean Square	$F$	Sig.	Partial Eta Squared
RFQ Uncertainty/ Confusion	,978	1	,978	1,701	.194	.010
RFQ Interest/ Curiosity	9,680	1	9,680	14.882	.000	.079
RFQ Excessive Certainty	,047	1	,047	,047	.829	.000
Empathy Cognitive	238.955	1	238,955	6,985	.009	.039
Empathy Affective	951.793	1	951,793	17,317	.000	.091
HIF TR Total	3099.925	1	3099,925	5,240	.023	.029

For further investigation on the differences between the two groups, direct logistic regression was performed to assess the impact of a number of factors on the likelihood that respondents would be classified as internalizers or externalizers. The model contained thirteen independent variables both from the demographic questionnaire and from the research measures. The full model containing all predictors was statistically significant,  $X^2(13, N=175) = 79.42, p < 0.001$ , indicating that the model was able to detect the participants as belonging into appropriate groups. The model, as a whole explained between 36.5% (Cox and Snell R Square) and 48.7% (Nagelkerke R squared) of the variance between the two statuses, and correctly classified 80% of the cases.

Table 34 shows the independent variables that made a unique statistically significant contribution to the model. The variables which contributed to the results do not involve any of the mentalization or empathy measures. The strongest predictor



of being categorized as internalizer was being a girl, recording an odds ratio of 6.81. This indicated that girls are nearly seven times more likely to be internalizers, controlling for all factors in the model. The other two significant contributors were behavioral and social self-ratings. If the behavioral self-ratings are positive, participants are nearly three times more likely to be categorized as internalizers. The opposite is true for the other significant result. If the students rated themselves as good at social domain, they were 0.36 times less likely to be internalizers.

Table 34. Results for Logistic Regression

	<i>B</i>	<i>S.E.</i>	<i>Wald</i>	<i>df</i>	<i>Sig.</i>	<i>Exp(B)</i>	95% C.I. for <i>EXP(B)</i>	
							<i>Lower</i>	<i>Upper</i>
Sex	1.919	.626	9.391	1	.002	6.811	1.997	23.234
Age	-.163	.195	.704	1	.401	.849	.580	1.244
SES	-.188	.303	.387	1	.534	.828	.457	1.499
Social	-1.013	.246	16.910	1	.000	.363	.224	.589
Academic	.166	.250	.441	1	.507	1.180	.723	1.926
Behavioral	1.077	.299	13.004	1	.000	2.936	1.635	5.273
Raven	.123	.115	1.144	1	.285	1.131	.903	1.417
Total								
RFQ_	.226	.283	.637	1	.425	1.253	.720	2.181
Uncertainty								
Confusion								
RFQ_	.455	.307	2.193	1	.139	1.576	.863	2.878
Interest								
Curiosity								
RFQ_	-.095	.247	.149	1	.699	.909	.560	1.475
Excessive								
Certainty								
Empathy	.025	.049	.253	1	.615	1.025	.931	1.128
Cognitive								
Empathy	.014	.036	.145	1	.703	1.014	.945	1.087
Affective								
HIF TR	.001	.010	.012	1	.912	1.001	.982	1.020
TOTAL								
Constant	-4.256	3.910	1.185	1	.276	.014		

### 3.2.4 Factors affecting mentalization

The factors affecting mentalization ability as assessed by the HIF scale was investigated through a hierarchical regression model. The model was used to assess the ability of the measures used in the research to predict the levels of mentalization, after controlling for the influence of demographic variables. Demographic variables used within the model were: Gender, age, SES level and Raven total score. The Raven score was used in the initial model, since the purpose of its use in the research design was to eliminate the confusion of intellectual disability with lack of mentalization. The second line of variables, the impact of which were assessed on the HIF score were as follows: Social, academic, behavioral self-evaluations, cognitive and affective empathy scores, internalizing and externalizing scores of YSR and three sub-scores of RFQ (uncertainty/confusion, interest/curiosity, excessive certainty).

Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. Initially, demographic variables of the first block were entered into the model; in this case the overall model explained 6.2% of the variance. After inclusion of the second block of variables, the whole model explained 33.2%. The second block of variables by itself explains an additional 27% of the variance in HIF, even when the effects of demographic variables are statistically controlled for. According to the results of the regression analysis, the total variance of 33.2% explained by the model as a whole is statistically significant,  $F(14,619) = 21.97, p < .001$ . The significant predictors of the model are presented in Table 35.

The unique contribution of several variables is seen as significant in the below table, although the Beta values are not that high. It is seen that when the

internalizing and externalizing scores increase, there is a significant contribution to the mentalization score in a negative direction. Also, high scores on affective empathy contribute to the mentalization score positively, as expected. The results of the RFQ sub-scales are also in the expected direction. High levels of interest/curiosity contribute positively to the HIF scores, whereas when the uncertainty/confusion dimension is high, the contribution to the HIF score is in a negative direction. The excessive certainty sub-score did not contribute to the model significantly.

Among the self-evaluation scores, the “social” evaluation significantly contributes to a higher HIF score. In addition, the significant effect of gender remains although it is controlled for in the first block.

The difference between the internalizing students and externalizing students is one of the main interest areas of this research. Two separate hierarchical regression models were conducted, for investigating the unique contribution to the internalizing and externalizing scores.

The initial model looked for the factors affecting the internalizing score. The necessary conditions were checked for ensuring no violation of assumptions of normality, linearity, multicollinearity, and homoscedasticity. Like the regression model of HIF, demographic variables (gender, age, SES, Raven total) were grouped as the first block in the hierarchical model. The rest of the measures, this time including the HIF score were entered as the second block of variables.

Table 35. Coefficients of the Hierarchical Regression Model of HIF Total

	$\Delta R^2$	df	F-change	<i>B</i>	<i>SE</i>	$\beta$
1	0.062	4	10.322			
Sex				-10.179	1.946	-.204
Age				-.503	.822	-.024
Raven Total				1.433	.446	.126
SES				.857	1.184	.029
2	0.332	10	25.043			
Sex				-	1.849	-.142
			7.067***			
Age				-.392	.711	-.018
Raven Total				.729	.397	.064
SES				-.463	1.020	-.015
Empathy				.185	.174	.047
Cognitive						
Empathy				.648***	.117	.220
Affective						
YSR				-.282**	.108	-.128
Internalizing						
YSR				-.740***	.147	-.233
Externalizing						
RFQ				-2.501*	1.006	-.113
Uncertainty/						
Confusion						
RFQ				4.191***	1.108	.164
Interest/						
Curiosity						
RFQ				-.716	.917	-.033
Excessive						
Certainty						
Social				1.894*	.858	.083
Academic				-1.148	.847	-.049
Behavioral				1.262	.999	.048

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ 

In this model regarding the internalizing score, demographic variables explained 9.2% of the variance. After the entry of the major measures to the model, the total variance explained by the model as a whole was 54.8%,  $F(14,619) = 53.67$ ,  $p < .001$ . The unique contribution of the measures to the internalizing score after

statistical control of the demographic variables was measured as 45.7%. The significant contribution of each variable is marked in the Table 36 below, separately.

The regression model for internalization shows that gender is still an important factor. Among the self-evaluations, both social and behavioral self-evaluation significantly contributed to the model whereas the dimensions of the Empathy Scale were not significant. As maybe expected, the major contribution is from the externalizing score, since it is also measuring the behavioral problems and there are significant number of people whose scores are high both in the externalizing and internalizing dimensions.

Table 36. Coefficients of the Hierarchical Regression Model of Internalization

	$\Delta R^2$	DF	F-change	B	SE	$\beta$
1	0.092	4	15.852			
Sex				-6.244	.864	-.277
Age				.657	.365	.069
SES				-1.197	.526	-.088
Raven Total				.043	.198	.008
2	0.548	10	62.586			
Sex				-5.135***	.663	-.228
Age				.002	.264	.000
SES				-.243	.379	-.018
Raven Total				.001	.148	.000
Social				-2.722***	.300	-.264
Academic				-.052	.315	-.005
Behavioral				.967**	.369	.082
RFQ Uncertainty/ Confusion				3.051***	.355	.306
RFQ Interest/ Curiosity				1.159**	.414	.100
RFQ Excessive Certainty				.483	.340	.050
Empathy Cognitive				-.063	.065	-.036
Empathy Affective				.055	.044	.042
HIF Total				-.039**	.015	-.086
YSR Externalizing				.450***	.053	.314

\*p<.05, \*\*p<.01, \*\*\*p<.00

When we look at the contribution of measures related to mentalization, we see the same sub-scales coming to the fore, uncertainty/confusion and interest/curiosity. However, special attention is needed, since the direction of the contribution is positive, meaning high levels in these sub-scales contribute to high levels of internalizing problems. On the contrary, the HIF scale of mentalization also has a contribution -although the Beta score is very low- in the negative direction; meaning high levels of mentalization as measured by HIF is associated with a decrease in the internalizing score.

The hierarchical regression model for externalization also followed the same procedure. Ensuring no violation for the necessary assumptions, the same demographic variables were entered to the model as the first step. In the second step, all the measures were entered, including the internalizing score. The initial block of demographic variables contributed to the model only at a 1% level. After inclusion of the second group, the model explained 51.7% of the variance. The unique contribution of the second block of measures were assessed as 50%. The model was found to be statistically significant,  $F(14,619)=47.29, p<.001$ . The individual contributions of each major can be seen in Table 37 below.

Table 37. Coefficients of the Hierarchical Regression Model of Externalization

	$\Delta R^2$	df	F-change	<i>B</i>	<i>SE</i>	$\beta$
1	0.017	4	2.658			
Sex				.305	.628	.019
Age				.636	.265	.095
SES				-.531	.382	-.056
Raven Total				-.194	.144	-.054
2	0.517	10	64.07			
Sex				.643	.501	.041
Age				.144	.190	.022
SES				-.099	.273	-.010
Raven Total				-.016	.107	-.004
Social				1.086***	.227	.151
Academic				-.614**	.226	-.083
Behavioral				-1.876***	.257	-.227
RFQ				1.829***	.261	.263
Uncertainty/ Confusion						
RFQ				-.034	.300	-.004
Interest/ Curiosity						
RFQ				1.004***	.242	.148
Excessive Certainty						
Empathy				-.049	.047	-.040
Cognitive						
Empathy				-.109**	.032	-.117
Affective						
HIF Total				-.053***	.011	-.169
YSR				.234***	.027	.336
Internalizin g						

\*p<.05, \*\*p<.01, \*\*\*p<.001

The results of the regression model for externalization differs both from the regression models with HIF and internalization. First of all, gender does not contribute to the model as a major factor. All the self-evaluation scores, social, academic, and behavioral have significant contributions to the externalization score. The internalization score is a significant contributor for the externalization score, as expected.

For the measures of mentalization, the affective empathy score is found to be significant in negative direction, meaning that an increase in affective empathy is associated with a decrease in the externalization score. Two sub-scores of RFQ have significant contribution to the externalization score; high excessive certainty and high uncertainty/confusion (meaning less mentalizing ability) is associated with higher externalizing scores. The HIF total score is also a significant negative contributor, meaning that a higher score is associated with lower externalization, although with a low Beta score.

### 3.2 What qualitative data reveals about research question?

As stated in the method section additional data on responses to the HIF scale were collected as initial reactions of the students before they gave multiple-choice answers. The purpose of the qualitative part was to understand the trend in young people before they select among one of the predetermined choices.

The qualitative part does not have a detailed text for analysis about the issue, therefore a proper analysis with qualitative methods is not possible, nor was that the objective. However, the brief responses of young people to the questions give some idea about the thinking style of this age group while developing the Turkish version of the questionnaire. The answers for each question were coded by two independent coders as to whether it included an emotion word or not. Both coders were psychologists with special training on mentalization. A total score of emotion labeling was calculated for coding of both the “feel” items and “do” items of the questionnaire. The interrater reliability among the two different coders was good,  $Kappa=.78, p<.000$ .



Differences between the YSR groups for the existence of emotion labeling was investigated using the total scores of emotion coding. In order to understand the group differences a one-way ANOVA was conducted, where the independent variable is set as YSR groups. The groups are differentiated as: None= No pathology, Internalizer= Internalizing score is high, Externalizer= Externalizing score is high, Both= Both of the internalizing and externalizing scores are above the critical level.

The one-way ANOVA indicated a difference between the YSR groups on emotion labeling only for the “feel” items. As can be expected, the use of emotion words for “doing” items were low and there were no group differences. For the “feel” items, the Levene test of homogeneity of variances revealed significant results,  $F(3,628)=2.76, p< 0.05$ , meaning a violation of the assumption. The Welch’s statistics is used for the difference measure. It revealed a significant difference between the groups.  $F(1,185.39)=2.67, p<0.05$ , with a low effect size of .02. Means and standard deviations for the groups can be seen in Table 38.

Table 38. YSR Groups and Emotion Labeling Means and Standard Deviations

		<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
FEEL Emotion Wording	None	371	9.59	1.78	.09
	Internalizer	84	9.80	1.70	.19
	Externalizer	91	9.00	2.15	.23
	Both	86	9.48	1.93	.21
	Total	632	9.52	1.86	.07
DO Emotion Wording	None	373	.55	1.11	.06
	Internalizer	83	.40	.78	.09
	Externalizer	92	.60	1.02	.11
	Both	85	.81	1.46	.16
	Total	633	.57	1.12	.04

Post-hoc analysis indicated where the difference exists among the groups. The differences stem from the externalizer group. Externalizers are significantly different both from none and internalizer groups in terms of emotion wording. In other words, externalizers' initial reaction to the "what do you feel?" questions after reading the mentalization triggering vignette included fewer emotion expressions than the others.

## CHAPTER 4

### DISCUSSION

This research aimed to investigate the identifying features of mentalization within an adolescent age group. The specific and major focus of the investigation was the relationship of mentalization with two major psychopathology domains seen in adolescent years, namely internalization and externalization. Two different measurement tools for mentalization and a mentalization related construct -empathy- were assessed within the sample and their relationship with internalizing and externalizing psychopathologies was explored. The distribution of mentalization skills according to several demographic factors were secondary products of the research. Moreover, as a response to the scarcity of measurement tools for mentalization in the Turkish language, the adaptation of the “How I Feel Questionnaire” into Turkish was completed within the scope of this study. In addition, the Turkish version of the Reflective Functioning Questionnaire was used for an adolescent population for the first time -as of knowledge- therefore, the psychometric properties of this tool were also studied.

In this chapter, the results revealed from the study will be discussed under two main sections. The first section will focus on the relevance of mentalization related measures for different psychopathological responses, as well as the relationship between mentalization and internalizing and externalizing psychopathology. The second section will discuss the distribution of demographic factors in the current data in comparison to other studies, including the interpretation of the measures developed in this research, as clinical tools for further studies. These

sections will be followed by a statement of the limitations of the research, followed by a discussion of the clinical and research implications for the future are discussed.

#### 4.1 Mentalization related measures and psychopathology

The current research explored the mentalization level of adolescents in a community sample and investigated its relationship with psychopathology. The major instruments directly measuring mentalization were RFQ and HIF for the current study. The main effect of both measures was found significant in terms of their impact on the internalization and externalization levels in the sample. In other words, adolescents showing no internalizing or externalizing psychopathology were better in their mentalizing scores. In addition, adolescents who show both internalizing and externalizing psychopathology were worse than the other groups (no pathology group, only internalizer group or only externalizer group). These results undoubtedly indicate that the mentalization levels of adolescents without an internalizing or externalizing psychopathology are better than the ones showing one or both symptoms at higher levels.

Most research investigates the role of mentalization in a specific psychopathology or the construct that relates to that psychopathology. For example, there are studies investigating the mentalization level for autism spectrum disorders as well as the relationship of Theory of Mind (ToM) and mentalization (Baron-Cohen et al., 1985; Chung et al., 2013; Hart et al., 2017; Sharp et al., 2011; Sugranyes et al., 2011). Not limited to autism; borderline personality disorder, suicide, addiction, attention deficit hyperactivity, eating disorders, trauma related disorders, depression, social anxiety spectrum disorders have attracted researchers who investigate the role of mentalization levels in these specific disorders. Most of

the research associates higher symptom levels of a given psychopathology with lower levels of mentalization, corroborating the results of this study (Ballespi et al., 2018b).

The study by Ballespi et al. (2018b) is important, in that it did not show a relationship between an increase in mentalization levels and decrease in psychopathology level. Psychopathology may exist for some who have high levels of mentalization. On the other hand, their data revealed that those with strong mentalization skills were better at general competence and adaptive functioning. Although there is a need for further support for this argument, Ballespi et al. (2018b)'s study underlines an important role of mentalization in nonclinical samples, as to whether it is a sign of better psychological functioning, adjustment and well-being.

#### 4.1.1 Studies on internalizers and externalizers

The main objective of this research was to explore the differences between internalizer and externalizer adolescents in terms of their mentalizing capacity. It was hypothesized that internalizers would be better mentalizers than externalizers. If the hypothesis is valid for this adolescent age group, interventions for psychopathology and prevention for future psychopathology should be designed differently for the two different groups. The results of the current study support the hypothesis, showing a significant difference in the mentalization levels of internalizers and externalizers.

Although relatively few in numbers – as mentioned in Halfon et al. (2020), there are some studies investigating the difference in mentalizing for internalizing and externalizing symptoms. Bizzi et al. (2018) investigated the relationship between attachment and mentalization with internalizing and externalizing psychopathology

in middle childhood and early adolescence. They used two specific diagnoses, Somatic Symptom Disorder (SSD) and Disruptive Behavior Disorder (DBD) as the common representatives of internalizing and externalizing disorders, respectively. Their results supported the general hypothesis that children with these disorders have lower mentalization scores compared to the control group without psychopathology. In the second part of their research Bizzi et al. (2018), investigated the mentalization differences of SSD and DBD diagnosed children. They concluded that mentalization level -measured by reflective functioning- of DBD children, which is an externalizing disorder is lower than SSD diagnosed group, which is considered as an internalizing disorder. Thus, the results of Bizzi et al. (2018) study support the findings of the current study both in the general sense that mentalization level is lower when there is either internalizing or externalizing psychopathology and that internalizers' mentalizing capacity are higher than that of externalizers.

The Halfon et al. (2020) study also focused on the differences of internalizers and externalizers in terms of their mentalization capability. Their research focused on mental state talk and the use of emotion words in children. Their findings supported the assumption that mentalization differs in children with internalizing and externalizing problems such that, children with externalizing problems have difficulties of mentalization; on the other hand, children with internalizing problems have better mentalization skills but for others, not for themselves.

Norup and Bo (2019) were interested in the underlying factors for the relationship of borderline personality disorder (BPD) with internalizing and externalizing disorders in children and adolescents who were referred to a child psychiatry clinic. Their analysis revealed a mediator role for mentalization capacity in the relation of BPD with internalization and externalization. Therefore, in clinical

treatment or preventative studies, enhancement of mentalization skills can serve as a controlling factor both for borderline psychopathology and for symptom reduction in internalizing and externalizing disorders.

Ensink et al.'s (2016) comprehensive research is an example of the importance of preventative role of mentalizing capacity. They investigated the relation of mentalization with internalizing and externalizing symptoms for children with a history of child abuse. They also assessed the mentalization level of their mothers and linked these assessments with the regulation capacity of the children. Depression was the focus of their study, as an internalizing psychopathology. They also looked for externalizing symptoms in general, measured by the Achenbach scale, as is the case in the current study. Their results indicated that abused children have lower reflective functioning/mentalization, higher depression, and higher externalizing symptoms. Moreover, low levels of mothers' reflective functioning were found to be correlated with higher levels of externalizing symptoms. In their model, Ensink et al. (2016) found a partial mediator role of reflective functioning for child sexual abuse both for depression and externalizing behaviors. Both the independent predictor role of maternal mentalization on externalizing behavior and the mediator role of mentalizing capacity on the negative impact of child abuse on depressive or externalizing states provides support for the importance of studies like the current research, emphasizing the preventative aspects.

#### 4.1.1.1 Mentalizing and externalizing

The results of this research on mentalization and externalizing are concordant with a large body of research on the relation of mentalization with conduct problems in children. With aggressive, antisocial, and defiant behaviors, conduct disorder is a

characteristic example of externalizing psychopathology. A specific impairment in mentalizing or ToM is detected in children with conduct problems (Ha et al., 2011; and Sharp, 2008, respectively). In addition, difficulties of mother's mentalizing about the child was found to be related to the children's conduct problems (Ha et al, 2011).

Taubner et al. (2013) investigated the protective role of mentalization in the manifestation of aggressive behaviors in adolescents with psychopathic traits, which is considered as an externalizing pathology. Their results revealed a clear relationship between deficits of mentalization and existence of psychopathic traits and aggression. Further, they showed that when the mentalization level is low, people with psychopathic tendencies act more aggressively. On the contrary, mentalization capacity served as an inhibitory factor in expression of aggression in adolescents with psychopathic traits.

Similarly, the relationship between early traumatic experiences, aggression and mentalization in adolescent years was also investigated by Taubner and Curth (2013). They argued that the relation between early abuse and aggressive behavior was mediated by the level of reflective functioning. In 2016, Taubner et al. replicated these findings with a larger sample. Clinically referred adolescents were compared with normal controls in terms of potential for violence. The study detected a clear association between early maltreatment and potential for violent behavior with reflective functioning capacity as a partial mediator for this strong relationship. Therefore, RF or mentalizing capacity was detected as a protective factor for diminishing the impact of early maltreatment on aggressive behavior.

In a French community sample of adolescents and young adults, Badoud et al. (2015) searched for the relationship between mentalization and non-suicidal self-injury. Their results showed that low levels of mentalization were associated with



non-suicidal self-injury in adults, however their data did not reveal the same result for the adolescent population. As an externalizing symptom, self-injury in adolescents needs to be investigated better in terms of its relation to mentalization.

Externalizing psychopathology is also associated with crime in its severe forms. Studies conducted with prisoners showed that mentalization is severely impaired in criminal offenders, and they don't have the capability to mentalize on their crimes (Levinson & Fonagy, 2004; Möller et al., 2014).

Morosan et al. (2020) searched for the trajectory of externalizing behaviors in adolescents and young adults over time. They measured the population in four different time points to assess the level of externalizing behaviors, which are thought to decrease over time. Their study presents two major findings about the importance of mentalization for externalization problems. Firstly, an increase in externalizing difficulties was related to impairments in mentalization levels. Secondly, their follow-up study showed that those who have better mentalizing initially showed a sharper decrease in externalizing behaviors assessed in later years. Results of the current research is in line with these findings, showing that externalizers have decreased mentalizing scores compared to other groups.

In short, it can be concluded that different types of externalizing disorders are found to be related with difficulties of mentalizing, in line with the current study.

#### 4.1.1.2 Mentalizing and internalizing

The results of the current study with regard to mentalization and internalizing actually fill an important gap in research since compared to externalization, there is a scarcity of research investigating the relationship between mentalization and internalization in children and adolescents. The relevant ones are discussed below in

comparison with the current findings. In contrast to externalization where the symptoms are overtly visible and most of the time disruptive for other people, internalization does not usually give signs outside but causes suffering internally, the research findings have a different fluctuation. Internalizing disorders, mostly studied under the diagnoses of depression, anxiety and withdrawal are predominantly caused by inner distress (Achenbach & McConaughy, 1997).

Social anxiety can be considered as the typical psychopathological representative of internalizing symptoms. Banerjee and Henderson (2001) established the link between social anxiety and social cognition. They compared socially anxious and non-anxious children from two countries (UK and USA), assessing their social cognitive skills. They found that socially anxious children have a specific difficulty in connecting their emotions, beliefs, and intentions regarding their experiences in social situations. They can do social tasks with cognitive reasoning but have difficulty in those requiring mentalization. They concluded that the avoidance of social interaction has an impact on the development of social cognition.

Ballesi et al. (2018a) elaborated the above conclusion further to the assumption that socially anxious children may avoid social interaction and their capacity for mentalization will be affected. In their study Ballesi et al. (2018a) hypothesized that behavioral inhibition in early childhood would be related to the mentalization level in later years, since deficits in social interaction would have an impact on the development of the skills for understanding another's mind. They compared the mentalization level of adolescents in terms of the low, moderate, and high levels of behavioral inhibition in their childhood. Controlling for social anxiety

and depression levels, they found that when the behavioral inhibition level in childhood was high, the mentalization level at adolescence is low.

Theory of mind studies also showed an interaction between social anxiety and the development of TOM. Suway et al. (2011) followed a group of children from 24 months, and they found that highly inhibited children developed lower ToM understanding when they reached 36 months. There are also studies which claim that social anxiety puts children in a good observer position, which opens the way for enhancing the capacity for understanding other people in a more sophisticated way. Mink et al. (2014) compared the ToM abilities of toddlers in terms of their temperament at 18 months. They found that the ones with shy temperament showed better ToM abilities at the age of 3.

Buhlmann et al. (2015) investigated the internalizing disorders in which the patients' major fear is negative evaluation by others. Social Anxiety Disorder (SAD) and Body Dysmorphic Disorder (BDD) were compared to normal controls within a social cognition task. There was also a disorder control group, obsessive-compulsive disorder (OCD) in a task assessing the ability of accurate inferences about another's mental states. The comparison between patient and control groups indicated that the socially anxious patient group, SAD and BDD was significantly more impaired than the control group but there was no difference between the OCD group and the controls. Also, there was a significant difference between the SAD and OCD groups, to the advantage of the latter. Interestingly, all groups could understand the emotions of others; there was no statistical difference in recognition of emotions, but the interpretation of thoughts and intentions created the gap between the socially anxious group and controls. These results may shed light on the importance of measuring

different aspects of mentalization to understand young people's functional difficulties in real social life.

In short, there are studies supporting the impact of social anxiety on social cognition/mentalization in both positive and negative ways. There is no consensus on whether social anxiety impairs or strengthens the youngster's ability to understand other people (Ballespi et al, 2018a). The possible explanation for this distinction may lie in the level of inhibition or anxiety, as well the measures that we use for social cognition. It is clear that more studies directly measuring mentalization in its relation to social anxiety are needed; and the current study also contributes to this area, since the results indicate that high levels of internalization are associated with high levels of mentalization in general. Specification of the internalization score into its components, including social anxiety may shed light on the discussions in the literature on the causal relationship of social anxiety and social cognition.

One other domain of psychopathology associated with internalizing problems is somatization. Somatization is usually linked with difficulties in emotional awareness. Subic-Wrana et al. (2010) and Stonnington et al. (2013) demonstrated in their research that, in addition to the difficulties of emotional awareness, people with somatoform disorders have impairments in ToM. Ballespi et al. (2019) analyzed the role of emotional awareness on the somatization level of a large group of adolescents. Their findings showed that when there is no emotional comprehension, difficulties with somatization rise. And they underlined the fact that, if the person has a high level of attention without emotional comprehension, the somatic suffering exacerbates.

Depression is one other major domain under internalizing disorders. Major Depressive Disorder is a neglected area in mentalization research. There is a limited

amount of research focusing on mentalization or relevant processes and depression. Bora and Berk (2016) conducted a metanalytic study on the relationship of ToM with Major Depressive Disorder (MDD). As a result of the 18 studies they included in their research, they concluded that ToM is significantly impaired in MDD patients when compared with normal controls. Their results indicate that severity of MDD is also related with impairment of ToM.

Another review for depressive symptomology and mentalization was conducted by Fischer-Kern and Tmej (2019). They used 15 studies to review the results regarding the relationship of mentalization with depression. The overview underlined the fact that mentalization deficits are associated with chronic or treatment resistant depression. The limited amount of research restricts the opportunity to examine the different aspects of major depressive disorder in terms of difficulties of mentalization; however preliminary findings indicate that mentalization based approaches are promising both in understanding the underlying dynamics of MDD and in its treatment.

There is also data from inpatient groups, giving some idea about internalizing symptoms. Rothschild-Yakar et al. (2010) investigated the relationship between eating disorders and mentalization, and they found that low mentalization was associated with high symptoms of eating disorder. Additionally, they revealed that mentalizing capacity was protective for eating disorder symptoms even when some disadvantages, like low quality of mother relationship, exist.

Another data from an inpatient adolescent group was from the Ha et al. (2013) study, which investigated mentalization among a group with borderline personality disorder, as well as being diagnosed as internalizers and externalizers. Their research indicated a substantial difference in the mentalizing levels of

adolescents who are under or above the critical cut off for borderline personality disorder. Lower levels of mentalizing were associated with maladaptive internalizing symptoms.

Neglect, as a subcategory of child abuse, was also investigated in its relationship with mentalization. Perceptions of parental neglect and insecure attachment were also subject to the mentalization levels of adolescents, according to the Borelli et al. (2015) study. Their findings revealed that the mentalization level of the young person acts as a moderator for the relationship between parental neglect's strong association with insecure attachment. Despite parental neglect, only adolescents with low levels of mentalizing ability showed an insecure attachment style.

#### 4.1.1.3 Internalizers and externalizers in community samples

The majority of the studies reported so far focus on the impact of mentalization ability in relation with different psychopathological groups, either internalizing or externalizing. One of the rare community sample research projects was done in Germany, by Cropp et al. (2019). Their study design resembles the current one in certain characteristics. They also recruited adolescents between 15 and 18 years of age, from four high schools. Although their measures were mostly composed of detailed interviews, they measured mentalizing and adolescent psychopathology. Like the current research, they used YSR to assess internalizing and externalizing psychopathology. The regression analysis within their sample of 96 adolescents did not predict the factors for internalizing psychopathology. On the other hand, they found a relationship between externalizing symptoms, mentalization, and psychopathy. Their results support the idea that externalizing symptoms are

amplified with mentalization difficulties. Based on their research, Cropp et al. (2019) claimed that mentalizing problems are more related to the etiology of externalizing difficulties than internalizing difficulties. They inferred that enhancement of mentalizing capacity could be preventive for the development of externalizing symptoms, especially for those who have high levels of psychopathy.

Another community-based study investigated the typical development of mentalization in adolescents by using the Reflective Functioning Scale. Chow et al. 2017, developed and validated the adolescent version of the Reflective Functioning Scale, based on the adult and children's versions. Furthermore, they studied the relationship of reflective functioning with internalization and externalization. The data from Chow et al. (2017) showed a significant positive correlation between reflective functioning and internalization symptoms but they claimed that there is not such a relationship with externalization. The reflective functioning score of the adolescent was neither a mediator nor a moderator for externalizing symptoms in their study, which examined 95 adolescents. Based on their findings, they claimed that the impact of RF in externalization could be based on the internalizing symptoms, since co-occurrence of those was high in their sample. While the current study has different results for externalization, both studies found a significant relation with mentalizing capacity and internalizing symptoms. Chow et al. (2017) discussed this finding as a normal consequence of social-cognitive development of adolescent years. They claimed that with the heightened sensitivity about relationships with others and personal and other focused emotional reflections, adolescents start to think more about their inner mental states. In their theoretical framework, Fonagy et al. (2002) also claim that adolescent years are a turning point for abstract thinking and development of abilities of reflecting about self and others.

In this mode, adolescents think more about emotions and relationships, and they are also more sensitive about their own thinking. The growing complexity of their ability to make inferences about their own and other's mental states sometimes become overwhelming for adolescents and can cause either preoccupation with their own emotional states which causes anxiety or withdrawal from other mental activities to deal with the emotional burden. These explanations also serve for the results of the current study, since the heightened sensitivity about the inner mental state, or in other words higher levels of mentalization was associated with higher levels of anxious/depressed symptomology, measured by the internalizing score. In the current study, being a girl was found as a risk factor for the high mentalization- high internalization result, however Chow et al. (2017) did not find any difference in this sense. On the other hand, Chow and colleagues' sample has a relatively equal distribution of both sexes, whereas in the current one most of the cases are girls.

In contrast to most of the clinical studies, Chow et al.'s (2017) findings about externalizing behavior are not related to the level of mentalizing. They claimed that the attributed protective role of mentalization over aggressive behavior should be considered cautiously and should not be overgeneralized. They underline the fact that in their analysis, the co-occurrence of internalization and externalization cancelled out the impact of mentalization on predicting the severity of externalizing symptoms. However, in the current study internalizers, externalizers and the ones who showed both symptomatology were taken separately and the mentalization levels were found to be significantly different. In addition, only internalizers and only externalizers were different from each other. In the regression analysis these were entered to the equation removed from the combination effect and they both contributed to each other's predictive power. However, the better mentalization level, measured by the



better interest/curiosity score of the Reflective Functioning Scale did not significantly contribute to the regression model in externalization, whereas it was found to be significant in the regression model of internalization. Interestingly, the contribution of mentalization deficit scores were significant in the regression model of externalization. This result may contribute to the findings of Chow et al. (2017) study, as they did not associate higher levels of mentalization with lower levels on externalization. It may be interpreted that the non-existence of mentalization deficit can be preventative for externalizing behaviors rather than the existence of higher mentalization capacity. This approach should be replicated in further studies. Since the current study analyzed the role of mentalization on externalizing pathology with more participants separate from the co-occurrence of internalization, the results showing the relationship between these constructs can be considered as supporting the previous findings which attribute a protective role to mentalization on externalizing behavior. However, the current study is a community sample, and this result should not be generalized to clinical samples.

In short, studies focusing on internalizing and externalizing psychopathology show a clear distinction between good vs bad mentalizers. Low levels of mentalization are always associated with psychopathology. The studies investigating clinical populations show that low levels of mentalization are associated with internalizing psychopathology, while community sample results for internalization have different results. As is the case in the current study, mentalization levels of internalizers are better than those for externalizers.

#### 4.1.2 Empathy

Empathy is considered as a “conceptual cousin” of mentalization (Woynowski, 2015). Based on the overlapping features of these two constructs, the Basic Empathy Scale was used as a validation tool for mentalization measurement in the current study, creating an opportunity to examine internalizers and externalizers in terms of their empathy levels. The results indicated a difference between internalizers and externalizers both in affective and cognitive empathy scores, with statistically higher empathy scores for internalizers.

The Gambin and Sharp (2016) study revealed similar results. Empathy and its relation to psychopathology was the focus of their study, where they used the same instruments, The-Basic Empathy Scale and YSR to measure empathy and psychopathology, respectively in adolescents. Their results emphasize the distinction of affective and cognitive empathy with respect to psychopathology. Their study shows a strong relationship between internalizing psychopathology and affective empathy, for both genders, but especially for girls. In addition, they claim that affective empathy is both a better predictor of psychopathology and a better protective factor for certain types of psychopathologies, compared to cognitive empathy. Based on their results, Gambin and Sharp (2016) suggest a differentiation of the cognitive and affective components of empathy in therapeutic interventions for better results.

Based on similar findings in the literature about the strength in empathic understanding and its relation to certain symptoms, mostly internalizing symptoms, Tone and Tully (2014) discussed the construct as a “risky strength”, as a factor related to high levels of internalizing symptoms. The findings of the current study showing the strong relationship between high affective empathy and high levels of

internalizing symptomatology also supports the idea of “riskiness” of “empathic strength”.

Similar to the findings with the mentalization scales, empathy measurement also revealed results indicating that lower levels are more associated with psychopathology, and differences exist among externalizers and internalizers, the latter being better on empathizing, sometimes even in a self-destructive way.

#### 4.2 Demographic factors and mentalization

Distribution of mentalization among a relatively large sample of adolescents was one of the targets of this research study. The mentalization profile of a large group of adolescents is shown with tools in Turkish for the first time. The Turkish adaptation of The How I Feel Questionnaire, provides situations of relational conflict and responses of adolescents to these situations shed light on their mentalization level as well as emotion regulation strategies. As can be expected from the community sample and the specific tool, the distribution of the level of mentalization as measured by HIF is negatively skewed. This can be interpreted as follows; when there is a difficulty in mentalization, a self-rating measure can detect the problem, however, differentiation among the “above average” mentalization skills needs further investigation.

The use of the well-known mentalization measure of The Reflective Functioning Questionnaire in Turkish among the adolescent population created results similar to the findings of other studies in the literature. The distribution of RFQ subscales were nearly symmetrical, indicating a normal like distribution. Different versions of RFQ are used in different studies, therefore a one-to-one comparison is not valid. Luyten and Fonagy (2015) discuss the concept of

mentalization as a developmental achievement rather than a given constitutional entity. They argue that the quality of attachment is the major identifying factor in the development of mentalization studies that show differences in the RFQ scores of adolescent populations and adult populations, and they interpret this finding as the developmental aspect of mentalization capacity (Fonagy & Luyten, 2009; Keulers, et al., 2010; Borelli et al., 2015; Borelli et al., 2017; Taubner et al. 2013). The current study design is not adequate to search for the developmental perspective, since the age range is restricted.

The most dominant characteristic of the mentalization distribution in the current study population was the difference between boys and girls, to the advantage of girls. This finding is also similar to most of the existing research (Chow et al., 2017; Rutherford et al., 2012). On the other hand, one study (Bizzi et al., 2021) did not find a difference between the sexes in a community sample of adolescents, where they used the short version of the RFQ.

Gender differences in emotion regulation are well studied from the early years on, supported by data from preschool years onwards. Accumulated knowledge demonstrates that girls use more emotion words, have better emotion regulation strategies and their focus is more relational from very young years onward (Bell et al., 2005). Girls' relational focus continues as they mature (Maccoby, 2002; Crick & Zahn-Waxler, 2003), thinking and talking about the emotional aspects of relationships is seen more in girls than boys. Also, the expression of emotions differs in boys and girls. For example, when there is an interpersonal conflict, boys show overt aggression whereas girls behave in a relational manner (Underwood, 2003). Some studies (Brown & Gilligan, 1992; Tolman & Brown, 2001) demonstrate that, especially in the adolescent years, girls' need for approval from others increases and

this creates a sensitivity to others' minds. This results in behaving according to the expectations of others, which is seen as a risk factor, avoiding one's own ideas and emotions for the sake of the relationship. Maccoby (2002) underlines the importance of the difference in girls' behavior, which has large societal support -like being cooperative, other-focused, and polite- as a potential disadvantage for girls in mixed populations.

The scientifically supported differences of the advantages of girls in emotion regulation are reflected in the current study with robust findings of gender differences in mentalization. The differences in the distribution of emotion regulation, empathy and mentalization for boys and girls should be studied in detail, for intervention and prevention studies.

The current study contributes to the area of mentalization with two different measurement tools, to be used in Turkish with adolescent populations. The first tool, the How I Feel Questionnaire, is adapted for the first time into Turkish, with necessary cultural and up-to-date revisions. The second tool, the Reflective Functioning Questionnaire, is used for the first time in Turkish for adolescent populations. Both tools, with adequate psychometric properties revealed similar demographic results with community sample studies of the same kind. The tools can be used for further research in Turkish speaking populations.

#### 4.3 Limitations

The current research has its own strengths and limitations, which can be grouped into two major components as factors related to the research design and factors related to the implementation. This section will elaborate these factors with its possible implications.

Developing a tool in Turkish for the measurement of mentalization in adolescents and examining the fluctuation of mentalization ability in the community sample were two major foci for the study, which set the tone of the methodology as self-rating. Self-rating tools are advantageous in the sense that the target population - adolescents themselves- are the real responders about their own experiences. On the other hand, for certain types of problems or psychopathology, self-rating instruments might have been inadequate to capture the whole picture. Use of self-rating tools in exploring internalizers can create some limitations due to the vulnerability of the measurement method. Gambin and Sharp (2016) claim that factors like social desirability or mood of the subject can affect self-rating instruments and the correlations between internalizing symptoms and empathy related constructs. They suggest using more than one self-rating tool to reduce error variance or to include experimental methods. In the current research, the use of more than one self-rating tool for assessing similar constructs (empathy, mentalization, reflective functioning) could be seen as a strength in this sense.

A similar discussion can be true for the assessment of psychopathology, namely the internalizers and externalizers within the target population. YSR, as a self-rating tool was used as the only source for differentiating internalizers from externalizers. Although the YSR is thought to be reliable in this age group (Bordin et al., 2013), studies indicate differences when multiple informants are used (parents, teachers) (Berg-Nielson et al., 2003). Supporting information other than self-ratings could have strengthened the indication of externalizing or internalizing psychopathology. Since this self-rating measurement does not include any clinical assessment, and was only done in the community sample, results of this study cannot be extended to

clinical samples. Further and detailed investigation is needed for the relationship of mentalization in clinical populations.

In the design of the research, differences of cognitive abilities, specifically the ability to make logical inferences was considered and the Raven Matrices test was used to control for possible intellectual disability. Therefore, it can be claimed that the difficulties detected in the research cannot be explained by cognitive disabilities. However, intellectual ability was measured by a non-language task and the level of reading ability was not assessed. Some studies show correlations with language skills and mentalization (Cropp et al., 2019). There can be a possible influence of language abilities in the assessment of mentalization skills. In addition, the whole set of questions were long in the current design, which could have been a disadvantage for those with poorer reading skills. Language/ reading ability should be considered as a confounder in future research.

The second line of limitations can be explained under the heading of “limitations of implementation”. The major limitation of the study design which was caused by implementation restriction is the lack of test-retest opportunity for the HIF Questionnaire. Due to the limitations set by MoNE, re-testing the same students was not possible. MoNE restrictions also resulted in fewer participants, since the pairing of the online and paper-pencil components was difficult without the name check of the students, as discussed in the methods section.

Another handicap of implementation was the composition of the selected schools. The target was to have representation from all types of high schools in the education system. Therefore, data was also collected from “girls only” schools. However, there is no “boys only” school in the system, so there was a dominance in the girl population. In addition to this structural inequivalence of the sexes, the

obvious imbalance in being a volunteer for the study among girls also inflated the girl population.

The prolonged time to receive permission from MoNE postponed the start of data collection to the end of the education period. Data from some schools were collected at the end of education period and from others at the beginning of the next year. Although there is no variable directly vulnerable to time differences, the extended time in data collection should be noted. Also, due to the political conditions in the country, many parents did not want their children to participate in an activity where any kind of data would be collected about them. This has influenced the participation rates but has no impact on the actual results.

The qualitative part added to the HIF scale extended the time adolescents spent on the task and they were bored by the number of questions. They skipped the questions with very short answers which resulted in very limited qualitative information. A proper qualitative research design is needed to understand the initial reactions of the adolescents in the situations provoked by the vignettes.

The overall population reached is a relatively large sample, despite all the restrictions in implementation. The number of fully filled long questionnaires can also be considered as a strength of the study, thanks to the contributions from teachers supporting the research as well as the adolescents eagerly spending their time voluntarily.

#### 4.4 Clinical and research implications

Important inferences can be made based on certain findings of the current research. Mainly, the distribution of the mentalization measurements show the distinction



between girls and boys. Any implementation for enhancement of emotion regulation constructs should be developed considering the huge difference between the genders.

The seemingly advantageous position of girls in high levels of emotion regulation measurements, and specifically in mentalization, may not be that positive, as the main finding of the study suggests. High levels of mentalization skills were associated with high levels of internalizing psychopathology. Since internalizing psychopathology is more difficult to detect – due to its nature/symptomatology- special attention should be given to girls without externally seen problems. Preventative studies for communities or schools should adapt different strategies for those who are “too sensitive” to other’s feelings and thoughts.

An adequate level of mentalization is important for emotion regulation. On the other hand, as stated in Bizzi et al. (2021), poor mentalization skills can be a sign of emotional distress in the adolescent. Those who are not able to show mentalization skills, or those whose interpersonal relations are deteriorating should be followed closely for psycho-social support. In the current research, a “Likert-type self-rating of social capacity” was found to be predictive of mentalization ability and lack of it was related to internalizing symptoms. Therefore, even this very simple question can be a valid tool for school counselors or parents to easily scan for possible problems in an adolescent’s psychological world. Simple and frequent check of problem areas can serve as a protective measure for development of major psychopathology.

APPENDIX A

DISTRIBUTION OF GENDER WITHIN EACH SCHOOL AND GRADE

Grade	Prep			9			10			11			Total
	F	M	T	F	M	T	F	M	T	F	M	T	
School 1				14	15	29	38	39	77	14	11	25	131
%				7.9	40.5	13.6	23.5	57.4	33.5	7.6	26.2	11.1	
School 2				6	2	8	11	11	22	38	16	54	84
%				3.4	5.4	3.7	6.8	16.2	9.6	20.7	38.1	23.9	
School 3				13	2	15	4	4	8	8	7	15	38
%				7.3	5.4	7.0	2.5	5.9	3.5	4.3	16.7	6.6	
School 4				49	0	49	29	0	29	34	0	34	112
%				27.7	0.0	22.9	17.9	0.0	12.6	18.5	0.0	15.0	
School 5	7	19	26	15	14	29	5	7	12	4	0	4	71
%	63.6	100.0	86.7	8.5	37.8	13.6	3.1	10.3	5.2	2.2	0.0	1.8	
School 6				70	0	70	70	0	70	70	0	70	210
%				39.5	0.0	32.7	43.2	0.0	30.4	38.0	0.0	31.0	
School 7	4	0	4	10	4	14	10	4	14	16	8	24	56
%	36.4	0.0	13.3	5.6	10.8	6.5	5.6	10.8	6.5	8.7	19.0	10.6	
	11	19	30	177	37	214	162	68	230	184	42	226	700
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

APPENDIX B  
AGE AND GRADE DISTRIBUTION

		Age					Total
		14	15	16	17	18	
Grade	Prep	Count	9	20	0	0	29
		Percentage	31	69	0	0	1
	9	Count	42	130	39	1	212
		Percentage	19.80	61.30	18.40	0.50	100
	10	Count	0	35	162	32	230
		Percentage	0	15.20	70.40	13.90	100
	11	Count	0	0	32	167	225
		Percentage	0	0	14.20	74.20	100
	Total	Count	51	185	233	200	696
		Percentage	7.30	26.60	33.50	28.70	100

APPENDIX C

THE HOW I FEEL SCALE-ORIGINAL

INSTRUCTIONS: Please read the following stories and choose the answer that fits you best

**1. You want to be nice and help your mother with the dishes. When she goes out of the house, you start doing the dish–washing.**

***You dry the glasses, but when you put one away you drop it, and it breaks.***

What do you feel and why?	Tick here
I'm angry at the stupid glass	
I'm angry with myself because I've been so clumsy	
I'm disappointed because I wanted to do something good but everything went wrong	

What do you do?	Tick Here
Clear up and tell my mother about it	
Clear up and hope it's not noticed	
If my mother gets very upset, I'll offer to buy her a new glass	

**2. You are watching TV. Your father tells you to go to bed although it's not that late.**

What do you feel and why?	Tick Here
I don't feel anything because it's my father who decides	
I'm angry because it's unfair	
I'm surprised because I can usually stay up longer	
What do you do?	Tick Here
Go to bed	

Ask to stay up for a while	
Become tearful	

**3. A friend of yours has borrowed your bicycle. When you get it back, you find that the saddle is broken.**

What do you feel and why?	Tick Here
I'm disappointed because my friend hasn't told me about it	
I don't care, accidents happen so easily	
I'm sad because my bike isn't as nice as it used to be	

What do you do?	Tick Here
Destroy my friend's saddle	
Mend the saddle	
Tell my friend that I was upset	

**4. You are out playing with your dog. You know that your mother has told you not to let it off the lead. But you do it anyway so as to play basketball.**

**Suddenly, you see your dog running towards a big dog. The big dog bites your little dog in the leg. Your dog is bleeding.**

What do you feel and why?	Tick Here
I'm worried that my mother will get angry	
I'm angry at my dog, since it doesn't obey	
I'm disappointed at myself since I let the dog loose	

What do you do?	Tick Here
Become tearful	
Go home and make up a story that I didn't let the dog loose	
Go home and say what happened	

**5.**  
**You**

***have borrowed a CD from a friend. Before you give it back you notice that there is a scratch on it.***

What do you feel and why?	Tick Here
I feel stupid because I scratched the disk	
I feel sad because my friend may not trust me anymore	
I feel angry because they make such poor-quality disks	

What do you do?	Tick Here
Nothing, it isn't so serious	
Tell my friend about the scratch and apologize	
Offer to buy a new one	

***6. John is out playing. His mother then tells John to come in although his friends are allowed out longer.***

What does John feel and why?	Tick Here
He feels nothing, because his mother decides	
He is surprised because he's usually allowed out just as long as his friends	
He is ashamed because his mother let friends hear what she said	

What does John do?	Tick Here
Tries to discuss the chance of staying out longer	
Decides to play with his friends the next day instead	
Ignores what his mother says and carries on playing	

**7. Mathew has been throwing rubbers at Bill throughout the lesson. In the end Bill gets angry and throws one back.**

***Their teacher looks at Bill at just that moment. She gets angry and says: ‘What have I told you about throwing these things; stop it immediately’.***

What does Bill feel and why?	Tick Here
Nothing in particular; what he did wasn’t so serious	
He feels stupid because the teacher caught him out	
He’s disappointed with his teacher, who blames him without knowing the whole truth	

What does Bill do?	Tick Here
Says that both he and Mathew have been throwing the rubbers	
Tells the teacher that Mathew started it	
Nothing	

**8. A student you don’t know particularly well is being bullied by a group of other students in the schoolyard.**

What do you feel and why?	Tick Here
Nothing in particular; it’s not my problem	

I'm sad that people can do that kind of thing to each other	
I'm angry because bullies are stupid	

What do you do?	Tick Here
Nothing, because I'm afraid of getting involved	
Nothing, the student only has himself to blame	
Go up to them and tell them to stop	

***9. You and your friend are playing volleyball. Your friend wants to carry on with the game, but you want to go home.***

***You go away; your friend then kicks the ball at you, but it misses you and hits Lisa on the head. She starts to cry.***

What does your friend feel and why?	Tick Here
My friend feels nothing in particular; it wasn't so serious	
My friend is sorry to have hurt Lisa	
My friend is afraid that Lisa will get angry with him	

What does your friend do?	Tick Here
Tells Lisa not to get in the way	
Runs away	
Says sorry	

***10. Suppose that you heard in the dining hall that your best friend told lies about you to another classmate.***



What do you feel and why?	Tick Here
I'm sad because I thought we were best friends	
I'm worried that the classmate will believe what was said	
I feel nothing in particular; what my friend says isn't right anyway	

What do you do?	Tick Here
Get revenge by saying mean (i.e. bad) things about my friend	
Talk to my friend to get an explanation	
Become tearful	

**11. Lena and Maria are friends. Lena has got a new down jacket. Maria borrows it. When she is about to give the jacket back, she notices a tear in it. It can hardly be seen. If she mentions it to Lena she might have to buy a new one.**

What does Maria feel and why?	Tick Here
She feels nothing in particular; it's not so serious	
She feels sad at having ruined one of her friend's things	
She feels angry since she might have to pay for something she hasn't done on purpose	

What does Maria do?	Tick Here
Does not mention the tear	
Tells Lena about it and asks what they should do	
Says that she will buy a new jacket	

**12. A group of boys in Eric's class have broken a pane of glass in the gymnastics hall.**

***When Eric goes up and looks at the broken window, the gym teacher comes in and starts shouting at him.***

<b>What does Eric feel and why?</b>	<b>Tick Here</b>
Feels nothing in particular; he wasn't the one who did it	
Feels angry, because the teacher is stupid	
Feels insulted at being unjustly accused	

<b>What does Eric do?</b>	<b>Tick Here</b>
Tells the gym teacher it wasn't him who broke the glass	
Says who broke the glass	
Screams out that the gym teacher is a fool	

***13. You see another student stealing a mobile phone from a bag in the changing room.***

<b>What do you feel and why?</b>	<b>Tick Here</b>
I'm worried because I might get the blame myself	
I'm disappointed that one of my schoolmates would do such a thing	
I feel nothing in particular, because it doesn't concern me	

<b>What do you do?</b>	<b>Tick Here</b>
Tell the teachers, so they can put a stop to theft in school	
Nothing	
Tell the one who owns the mobile, so he or she can deal with the problem	

**14. Your class is to collect money for a school trip on Saturday. Your teacher has said that it's very important for everyone to take part.**

**The same day your parents want you to go with them to a restaurant, where they say there will be a surprise for you.**

What do you feel and why?	Tick Here
I feel sad, because I'd like to do both things	
I feel relieved at not having to get money for the class trip	
I feel worried that someone will be angry whatever I choose	

What do you do?	Tick Here
Go out with my parents and ignore the class trip	
Ask my parents to speak to the teacher	
Ask my parents if we can go to the restaurant some other day	

**15. There is a group of popular students in Martin's class. Martin would love to hang out with them. They are going to have a party next week.**

**One of these students asks Martin if he wants to come along. 'You'll have to fix a bit of booze, of course,' one of them says. Martin takes some out of a bottle at home.**

**A week later, Martin's elder sister is unhappy. Her pocket money has been suspended since their parents think she has taken alcohol from them. She has done this once before.**

What does Martin feel and why?	Tick Here
He feels worried that his parents and sister will realize that it was him and get angry	

He feels guilty because he has done wrong and his sister has got the blame	
He feels nothing in particular; he's not the one with whom the parents are angry	

<b>What does Martin do?</b>	<b>Tick Here</b>
Admits that he was the one who took the alcohol	
Compensates (i.e. repays) his sister for her pocket money	
Nothing	

APPENDIX D  
THE HOW I FEEL SCALE-TURKISH

Yönerge: Lütfen aşağıda sunulan kısa hikayeleri okuyun ve soruları cevaplayın

Hikaye 1: Annene bir iyilik yapmak istedin ve bulaşıkları yıkamaya karar verdin. Annen evden çıktığında işe koyuldun.

Bardakları kuruladın, ama bir tanesini kaldırırken elinden düşürdün ve kırıldı.

Ne hissedersin ve neden?

.....

- a) Aptal bardağa kızarım
- b) Bu kadar sakar olduğum için kendime kızarım
- c) Hayal kırıklığına uğrarım, çünkü iyi bir şey yapmaya çalışıyordum ve her şey kötü gitti.

Ne yaparsın?

.....

- a) Ortalığı temizlerim ve anneme olanları anlatırım
- b) Ortalığı temizlerim ve fark edilmemesini umarım
- c) Eğer annem çok üzülürse ona yeni bir bardak almayı öneririm

Hikaye 2: Televizyon seyrediyorsun. Saat çok da geç değil ama baban yatağa gitmeni söylüyor.

Ne hissedersin ve neden?

.....

- a) Hiçbir şey hissetmem, çünkü böyle şeylere babam karar verir.
- b) Kızarım çünkü bu haksızlık
- c) Şaşırırım, çünkü genelde daha geç saatlere kadar ayakta kalabilirim.

Ne yaparsın?

.....

- a) Yatağa giderim
- b) Biraz daha kalabilir miyim diye sorarım
- c) Ağlayacak gibi olurum

Hikaye 3: Bir arkadaşın bisikletini ödünç aldı. Geri aldığı anda selesinin kırılmış olduğunu fark ettin.

Ne hissedersin ve neden?

.....

- a) Arkadaşım bunu bana söylemediği için hayal kırıklığına uğrarım
- b) Umursamam, böyle kazalar hep olur

c) Üzülürüm, çünkü bisikletim eskisi kadar güzel değil  
Ne yaparsın?

- .....
- a) Ben de arkadaşımın selesini kırarım.
  - b) Seleyi tamir ederim
  - c) Arkadaşıma üzüldüğümü söylerim

Hikaye 4: Dışarda köpeğinle oynuyorsun. Annen tasmaşını bırakmamanı söylemişti. Ama sen yine de basketbol oynayabilmek için tasmayı bıraktın.

Birdenbire köpeğinin büyük bir köpeğe doğru koştuğunu görüyorsun. Büyük köpek senin köpeğinin bacağına ısırıldı. Köpeğinin bacağı kanıyor.

Ne hissedersin ve neden?

- .....
- a) Annem bana kızacak diye kaygılanırım
  - b) Köpeğim sözümü dinlemediği için ona kızarım.
  - c) Köpeği başı boş bıraktığım için kendime kızarım

Ne yaparsın?

- .....
- a) Ağlayacak gibi olurum
  - b) Eve gidip annemi köpeği benim bırakmadığıma inandıracak bir hikaye uydururum.
  - c) Eve gider ve neler olduğunu anlatırım

Hikaye 5: Arkadaşımdan bir CD ödünç aldın. Geri vereceğin sırada üzerinde bir çizik olduğunu fark ettin.

Ne hissedersin ve neden?

- .....
- a) CD'yi çizdiğim için kendimi aptal gibi hissedirim.
  - b) Arkadaşım bana bir daha güvenmeyeceği için üzülürüm.
  - c) Bu kadar kalitesiz CD'ler yaptıkları için kızarım.

Ne yaparsın?

- .....
- a) Hiçbir şey yapmam, o kadar da ciddi bir olay değil.
  - b) Arkadaşıma çizikten bahsederim ve özür dilerim.
  - c) Yeni bir CD almayı öneririm.

Hikaye 6: Cem dışarda oyun oynuyor. Arkadaşları daha geç saatlere kadar oynamaya devam edebildiği halde Cem'in annesi onu eve çağırıyor.

Cem ne hisseder ve neden?

- a) Hiçbir şey hissetmez, çünkü böyle şeylere annesi karar verir.
- b) Şaşırır, çünkü genelde dışarıda arkadaşları kadar geç kalmasına izin verilir.
- c) Utanır, çünkü annesi arkadaşlarının duyacağı şekilde söylemiştir.

Cem ne yapar?

- a) Dışarıda daha uzun kalabilmek için tartışmayı dener
- b) Arkadaşlarıyla oynamaya ertesi gün devam etmeye karar verir
- c) Annesinin söylediğini duymazlıktan gelir ve oynamaya devam eder

Hikaye 7: Mert ders boyunca Berk'e silgi atmıştır. Dersin sonunda Berk sinirlenir ve bir tanesini geri atar. Tam bu sırada öğretmen Berk'i görür ve kızarak "Ben size birbirinize bir şey atmayacaksınız demedim mi? Hemen kesin şunu" der.

Berk ne hisseder ve neden?

- a) Özel bir şey hissetmez, yaptığı pek de ciddi bir şey değildir.
- b) Öğretmene yakalandığı için kendini aptal gibi hisseder
- c) Tüm gerçeği bilmeden onu suçlayan öğretmeniyle ilgili hayal kırıklığına uğramıştır.

Berk ne yapar?

- a) Silgileri hem kendisinin hem de Mert'in attığını söyler.
- b) Öğretmene başlatanın Mert olduğunu söyler
- c) Hiçbir şey yapmaz

Hikaye 8: Çok iyi tanımadığın bir çocuk okulun bahçesinde başka çocuklar tarafından zorbalığa uğruyor.

Ne hissedersin ve neden?

- a) Özel bir şey hissetmem; benim sorunum değil
- b) İnsanlar birbirlerine böyle şeyler yaptığı için üzülürüm
- c) Sinirlenirim, çünkü zorbalar aptaldır

Ne yaparsın?

- a) Bir şey yapmam, başıma iş açmaktan korkarım
- b) Hiçbir şey yapmam, çocuğun kendi suçu sonuçta
- c) Onlara gidip durmalarını söylerim

Hikaye 9: Sen ve arkadaşın voleybol oynuyorsunuz. Arkadaşın oyuna devam etmek istiyor ama sen eve dönmek istiyorsun. Sen oyunu bırakıp uzaklaşıyorsun, arkadaşın sinirlenip topu sana doğru fırlatıyor, ama seni ıskalayıp Leyla'nın

kafasına çarpıyor. Leyla ağlamaya başlıyor.

Arkadaşın ne hisseder ve neden?

- a) Arkadaşım pek bir şey hissetmez, o kadar da ciddi bir olay değil
- b) Arkadaşım, Leyla'yı incittiği için üzülür
- c) Arkadaşım, Leyla'nın kendisine kızmasından korkar

Arkadaşın ne yapar?

- a) Leyla'ya "orada durmasana" der
- b) Kaçar
- c) Üzgün olduğunu söyler

Hikaye 10: Yemekhanede, en yakın arkadaşının başka bir sınıf arkadaşına seninle ilgili yalan söylediğini duyduğunu varsayalım.

Ne hissedersin ve neden?

- a) Üzülürüm, çünkü onun en iyi arkadaşım olduğunu zannediyordum.
- b) Sınıf arkadaşımın söylenenlere inanacağı konusunda endişelenirim.
- c) Özel bir şey hissetmem, arkadaşımın söyledikleri doğru değil sonuçta.

Ne yaparsın?

- a) Arkadaşım hakkında kaba (kötü) şeyler söyleyerek öç alırım
- b) Bir açıklama yapması için arkadaşım ile konuşurum
- c) Ağlamaklı olurum

Hikaye 11: Leyla ve Merve arkadaşlırlar. Leyla'nın yeni aldığı kaz tüyü montu Merve ödünç alır. Geri verecekken montta bir yırtık olduğunu fark eder. Yırtık zar zor görünmektedir. Leyla'ya söyleyecek olursa ona yeni bir mont alması gerekebilir.

Merve ne hisseder ve neden?

- a) Pek de özel bir şey hissetmez, çok ciddi bir durum değil.
- b) Bir arkadaşının eşyasını berbat ettiği için üzülür
- c) İsteyerek yapmadığı bir şeyi ödemek zorunda kalabileceği için öfkelenir

Merve ne yapar?

- a) Yırtıktan bahsetmez
- b) Leyla'ya yırtıktan bahseder ve ne yapmaları gerektiğini sorar



c) Yeni bir mont alacağını söyler

Hikaye 12: Erdem'in sınıfından bir grup genç spor salonundaki camlardan birini kırarlar.

Erdem yukarı çıkıp duruma bakarken beden eğitimi öğretmeni içeri girer ve Erdem'e bağtırmaya başlar.

Erdem ne hisseder ve neden?

- a) Pek bir şey hissetmez, kıran o değil sonuçta
- b) Öfkelenir, çünkü öğretmen aptaldır
- c) Haksız yere suçlandığı için aşığılanmış hisseder

Erdem ne yapar?

- a) Öğretmene camı kıranın kendisi olmadığını anlatır
- b) Camı kimin kırdığını söyler
- c) “Beden eğitimi öğretmeni aptal” diye bağırır

Hikaye 13: Başka bir öğrenciyi soyunma odasında bir çantadan cep telefonu çalarken görüyorsun.

Ne hissedersin ve neden?

- a) Kaygılanırım, çünkü ben de suçlanabilirim
- b) Okul arkadaşlarımdan biri böyle bir şey yaptığı için hayal kırıklığına uğrarım.
- c) Pek bir şey hissetmem, beni ilgilendirmmez

Ne yaparsın?

- a) Öğretmenlere söylerim, böylece okulda hırsızlığın önüne geçmek için bir şey yaparlar
- b) Hiçbir şey yapmam
- c) Cep telefonunun sahibine söylerim, böylece problemle o ilgilenir

Hikaye 14: Sınıfınızda Cumartesi yapılacak okul gezisi için para toplanıyor. Öğretmen herkesin katılmasının çok önemli olduğunu belirtti.

Aynı gün için anne ve baban ailece dışarıda yemeğe gitmek istiyorlar, senin için bir sürprizleri olduğunu belirttiler.

Ne hissedersin ve neden?

- a) Üzgün hissedirim çünkü her ikisini de yapmak isterim.
- b) Okul gezisine para vermek durumunda kalmayacağım için rahatlarım
- c) Hangisini seçersem seçeyim birileri bana kızacağı için endişelenirim

Ne yaparsın?

- .....
- a) Ailemle yemeğe gidip okul gezisine aldırmam
- b) Ailemden öğretmenle konuşmalarını isterim
- c) Aileme birlikte yemeğe başka gün gidebilir miyiz diye sorarım

Hikaye 15: Ayşe sınıf arkadaşları ile birlikte alışveriş merkezindeki kafeye gitmek istiyor. Bu hafta sonu hoşlandığı çocuğun doğum günü partisi var. Annesi sadece kardeşini de yanında götürürse gidebileceğini söyledi.

Ayşe ne hisseder ve neden?

- .....
- a) Kardeşine sinirlenir, hep ayağına dolanıyor.
- b) Tam istediği gibi olmasa da gidebileceğine sevinir, orada bir yolunu bulur ne de olsa.
- c) Hiçbir zaman arkadaşları gibi özgür olamadığı için ağlar

Ayşe ne yapar?

- .....
- a) Kardeşini alıp gider
- b) Annesine tepki olsun diye evde oturur
- c) Annesini ikna etmek için plan yapar

Hikaye 16: Ayşegül Irmak'ın komik bir fotoğrafını sınıf arkadaşlarının olduğu bir mesaj grubunda paylaştı. Irmak o şekilde görülmek istemiyordu, gruptan çıktı.

Ayşegül ne hisseder ve neden?

- .....
- a) Çok da umursamaz, Irmak hep böyle saçma tepkiler verir.
- b) Sınıf arkadaşları Irmak'ı sinirlendirdiği için kendisine tepki duyacaklar diye endişelenir.
- c) Arkadaşını rahatsız eden bir davranışta bulunduğu için kendini suçlu hisseder.

Ayşegül ne yapar?

- .....
- a) Bir şey yapmaz
- b) Irmak'tan özür diler
- c) Irmak'ın ne kadar saçma tepkiler verdiği konusunda sınıf arkadaşlarını ikna etmeye çalışır

Hikaye 17: Hasan'ın sınıfında bir grup popüler öğrenci var. Hasan onlarla takılmak istiyor. Gelecek hafta beraber maça gidecekler.

Öğrencilerden biri Hasan'a gelmek ister misin diye sorar. Diğeri de “tabii bizim gruba katılabilmek için biletleri sen almalısın” der. Ay sonu olduğu için Hasan'ın harçlığı bitmiştir. Evdeki acil durum parasının olduğu yerden kimseye söylemeden

biraz para alır.

Bir hafta sonra Hasan'ın ablası Esra çok sıkıntılı bir durumdadır. Ailesi habersizce parayı aldığını düşündükleri için Esra'nın cep harçlığını kesmiştir. Esra bunu daha önce bir kere yapmıştır.

Hasan ne hisseder ve neden?

.....

- a) Ailesi ve ablası parayı alanın kendisi olduğunu anlayıp kızacaklar diye endişelenir.
- b) Suçlu hisseder, çünkü yanlış davranan kendisi olduğu halde suçlanan ablası olmuştur.
- c) Özel bir şey hissetmez, ailesinin kızgın olduğu kişi kendisi değil sonuçta Hasan ne yapar?

.....

- a) Parayı alanın kendisi olduğunu itiraf eder
- b) Ablasına kesilen cep harçlığını öder
- c) Hiçbir şey yapmaz

APPENDIX E

REFLECTIVE FUNCTIONING QUESTIONNAIRE-TURKISH

	1	2	3	4	5	6
1. İnsanların ne düşündüğü ve ne hissettiği konusunda oldukça endişelenirim.						
2. Yaptıklarımın başkalarının duyguları üzerindeki etkisini dikkate alırım.						
3. Yakın arkadaşlarımdan ne düşündüğünü tam olarak bilirim.						
4. Ne hissettiğimi her zaman bilirim.						
5. Birinin nasıl hissediyor olduğunu gözlerine bakarak anlayabilirim.						
6. Ne hissettiğim konusunda sık sık kafam karışır.						
7. Yaptıklarımın nedenlerini her zaman bilmem.						
8. Sinirlendiğim zaman neden söylediğimi gerçekten bilmediğim şeyler söylerim.						
9. Başkalarının davranışlarının ardındaki anlamları genellikle merak ederim.						
10. Yakınlarım genellikle yaptığım şeylerin nedenini anlamakta zorlanır.						
11. Eğer dikkatli olmazsam başka bir insanın hayatında bir şeye engel olacağımı hissediyorum.						
12. Başka birinin ne yapacağını çoğunlukla tahmin edebilirim.						
13. Güçlü hisler genellikle düşüncelerimi bulandırır.						
14. Biri hakkındaki sezgilerimde neredeyse hiç yanılmam.						
15. İnsanların olayları kendi inanç ve deneyimlerine bağlı olarak oldukça farklı görebileceğine inanırım.						
16. Bazı zamanlar kendimi bazı şeyleri söylerken bulurum ve neden onları söylediğime dair bir fikrim yoktur.						
17. Davranışlarımdan ardındaki nedenler üzerine düşünmekten hoşlanırım.						
18. Sinirlendiğimde sonradan pişman olacağım şeyler söylerim.						
19. İyi bir zihin okuyucuyum.						
20. Güvensiz hissedersen başkalarını rencide edecek şekilde davranabilirim.						
21. Başka insanların ne hissettiğini genellikle tam olarak bilirim.						
22. Bazı şeyleri bazen nedenini gerçekten bilmeden yapıyorum.						
23. Bir tartışmada, karşımdaki kişinin bakış açısını aklımda tutarım.						
24. İnsanların davranışlarının nedenini anlamak onları affetmem için bana yardımcı olur.						
25. İnsanların onları anlama zahmetine girmek için fazla kafa karıştırıcı olduklarına inanıyorum.						

1 Kesinlikle Katılmıyorum	2 Kısmen Katılmıyorum	3 Katılmıyorum	4 Kısmen Katılıyorum	5 Katılıyorum	6 Kesinlikle Katılıyorum
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APPENDIX F  
YOUTH SELF REPORT

GENÇ KENDİNİ DEĞERLENDİRME ÖLÇEĞİ

Aşağıda gençleri tanımlayan maddelerin bir listesi bulunmaktadır. Her bir madde sizin **şu andaki ya da son 6 ay** içindeki durumunuzu belirtmektedir. Bir madde sizin için **çok ya da sıklıkla doğru ise 2, bazen ya da biraz doğru ise 1, hiç doğru değilse 0** sayılarını yuvarlak içine alınız. Lütfen tüm maddeleri işaretlemeye çalışınız.

0: Doğru değil (Bildiğiniz kadarıyla) 1: Bazen ya da biraz doğru 2: Çok ya da sıklıkla doğru

- 0 1 2 1. Yaşımdan çok daha çocuksu davranırım.
- 0 1 2 3. Çok tartışırım.
- 0 1 2 4. Başladığım etkinlikleri (oyunu, dersleri, işleri) bitiremem.
- 0 1 2 5. Hoşlandığım, zevk aldığım çok az şey vardır.
- 0 1 2 6. Hayvanları severim.
- 0 1 2 7. Övünür, hava atarım.
- 0 1 2 8. Bir konuya odaklanamam, dikkatini uzun süre toplayamam.
- 0 1 2 9. Kafamdan atamadığım, beni rahatsız eden bazı düşüncelerim vardır (mikrop bulaşma, simetri takıntısı, okul sorunları, bilgisayar gibi) (açıklayınız):
- 
- 0 1 2 10. Yerimde sakince oturamam
- 0 1 2 11. Gereken gayreti göstermeden, sırtımı tamamen büyüklere dayayıp her şeyi onlardan beklerim.
- 0 1 2 12. Yalnızlık hissederim.
- 0 1 2 13. Kafam karışık, zihnim bulanıktır.
- 0 1 2 14. Çok ağlarım.
- 0 1 2 15. Oldukça dürüstümdür.
- 0 1 2 16. Başkalarına kötü davranırım.
- 0 1 2 17. Çok hayal kurarım.
- 0 1 2 18. Kendime bilerek zarar verdiğim ya da intihar girişiminde bulunduğum olmuştur.
- 0 1 2 19. Hep dikkat çekmeye çalışırım.

- 0 1 2 20. Eşyalarımın zarar veririm.
- 0 1 2 21. Başkalarının eşyalarına zarar veririm.
- 0 1 2 22. Anne babamın sözünü dinlemem.
- 0 1 2 23. Okulda söz dinlemem.
- 0 1 2 24. Gerekenden az yerim, iştahsızım.
- 0 1 2 25. Başka çocuklarla pek geçinemem.
- 0 1 2 26. Hatalı davranışmdan dolayı suçluluk duymam, oralı olmam.
- 0 1 2 27. Başkalarını kıskanırım.
- 0 1 2 28. Ev, okul ya da diğer yerlerde kurallara uymam, karşı gelirim.
- 0 1 2 29. Bazı hayvanlardan, durumlardan (yüksek yerler) ya da ortamlardan (asansör, karanlık gibi) korkarım (okulu katmayınız).
- (açıklayınız): \_\_\_\_\_
- 0 1 2 30. Okula gitmekten korkarım.
- 0 1 2 31. Kötü bir şey düşünebileceğim ya da yapabileceğimden korkarım.
- 0 1 2 32. Kusursuz, dört dörtlük ve her konuda başarılı olmam gerektiğine inanırım.
- 0 1 2 33. Kimsenin beni sevmediği hissine kapılırım.
- 0 1 2 34. Başkalarının bana karşı olduğu, zarar vermeye ya da açığımlı yakalamaya çalıştığı hissine kapılırım.
- 0 1 2 35. Kendini değersiz, önemsiz, yetersiz hissederim.
- 0 1 2 36. Bir yerlerimi kaza ile sık sık incitirim.
- 0 1 2 37. Çok kavga çıkarırım, kavgaya karışırım.
- 0 1 2 38. Benimle çok dalga geçilir, bana çok sataşılır.
- 0 1 2 39. Başlı belada olan kişilerle dolaşırım.
- 0 1 2 40. Başkalarının işitmediği sesler ve konuşmalar işitirim. (açıklayınız): \_\_\_\_\_
- 0 1 2 41. Düşünmeden hareket ederim.
- 0 1 2 42. Başkalarıyla birlikte olmaktansa yalnız olmayı tercih ederim.
- 0 1 2 43. Yalan söyler ya da aldatırım.
- 0 1 2 44. Tırnaklarımı yerim.
- 0 1 2 45. Sinirli ve gerginimdir.
- 0 1 2 46. Kaslarım oynar, seğirmeler olur ve tiklerim vardır (açıklayınız): \_\_\_\_\_

- 
- 0 1 2 47. Geceleri kabus görürüm.
- 0 1 2 48. Başka çocuklar tarafından sevilmem.
- 0 1 2 49. Bazı şeyleri pek çok çocuktan daha iyi yaparım.
- 0 1 2 50. Çok korkak ve kaygılıyım.
- 0 1 2 51. Başım döner, gözlerim kararır.
- 0 1 2 52. Kendimi çok suçlu hissedirim.
- 0 1 2 53. Çok fazla yerim.
- 0 1 2 54. Kendimi sebepsiz yere çok yorgun hissettiğim olur.
- 0 1 2 55. Fazla kiloluyum.

**56. Sağlık sorunun olmadığı halde;**

- 0 1 2 a. Ağrı ve sızılarım olur. (baş ağrısı ve karın ağrısı dışında)
- 0 1 2 b. Baş ağrıları olur.
- 0 1 2 c. Bulantı, kusma duygusu olur
- 0 1 2 d. Gözle ilgili şikayetlerim olur (Gözlük, lens kullanma dışında)

(açıklayınız): \_\_\_\_\_

- 0 1 2 e. Döküntü, pullanma ya da başka cilt sorunları olur
- 0 1 2 f. Mide-karın ağrısı olur.
- 0 1 2 g. Kusmalarım olur

0 1 2 h. Diğer (açıklayınız): \_\_\_\_\_

- 0 1 2 57. İnsanlara fiziksel saldırıda bulunur, vururum.
- 0 1 2 58. Derimi ya da vücudumu yolar, saç ve kirpiğimi koparıyorum.

(açıklayınız): \_\_\_\_\_

- 0 1 2 59. İyi bir arkadaş olabilirim.
- 0 1 2 60. Yeni şeyler denemekten hoşlanırım.
- 0 1 2 61. Okul ödevlerimi tam ve iyi yapamam.
- 0 1 2 62. El, kol, bacak hareketlerimi ayarlama güçlüğü çekerim, sakarım.
- 0 1 2 63. Yaşlılarımdan çok, kendimden büyüklerle vakit geçirmeyi tercih ederim.
- 0 1 2 64. Yaşlılarımdan çok, kendimden küçüklerle vakit geçirmeyi tercih ederim.
- 0 1 2 65. Konuşmayı reddettiğim olur.

0 1 2 66. İstemeyerek de olsa, belli bazı davranışları tekrar tekrar yaparım (elini defalarca yıkama, kapı kilidini tekrar tekrar kontrol etme gibi)

(açıklayınız): \_\_\_\_\_

0 1 2 67. Evden kaçarım.

0 1 2 68. Çok bağırırım.

0 1 2 69. Sırlarımı kendime saklarım, hiç kimseyle paylaşmam.

0 1 2 70. Başka insanların var olmadığına inandığı şeyler görürüm.

(açıklayınız): \_\_\_\_\_

0 1 2 71. Topluluk içinde rahat değilimdir, başkalarının benim hakkımda ne düşünecekleri ve ne söyleyecekleriyle ilgili kaygı duyarım.

0 1 2 72. Yangın çıkartırım.

0 1 2 73. El becerilerim iyidir.

0 1 2 74. Gösteriştten hoşlanır, maskaralık yaparım.

0 1 2 75. Çok utangaç ve çekingenim.

0 1 2 76. Diğer çocuklardan daha az uyurum.

0 1 2 77. Gece ve/veya gündüz diğer çocuklardan daha çok uyurum.

(açıklayınız): \_\_\_\_\_

0 1 2 78. Dikkatim kolayca dağılır.

0 1 2 79. Konuşma problemim vardır.

(açıklayınız): \_\_\_\_\_

0 1 2 80. Haklarımı savunurum.

0 1 2 81. Evden bir şeyler çalarım.

0 1 2 82. Ev dışındaki yerlerden bir şeyler çalarım.

0 1 2 83. İhtiyacım olmadığı halde birçok şey biriktirim.

(açıklayınız): \_\_\_\_\_

0 1 2 84. Diğer insanların tuhaf bulduğu , yadırgadığı davranışlarım vardır.

(eşyaların belli bir düzende ve sırada olmasını istemem gibi).

(açıklayınız): \_\_\_\_\_

0 1 2 85. Diğer insanların tuhaf bulduğu , yadırgadığı düşüncelerim vardır

(bazı sayıları, sözcükleri tekrarlama ve bunları zihninden atamama gibi).

(açıklayınız): \_\_\_\_\_

0 1 2 86. İnatçıyım.



- 0 1 2 87. Ruhsal durumum ya da duygularım çabuk değişir.
- 0 1 2 88. İnsanlarla birlikte olmaktan hoşlanırım.
- 0 1 2 89. Şüpheliyimdir, kuşku duyarım.
- 0 1 2 90. Küfürlü ve açık saçık konuşurum.
- 0 1 2 91. Kendimi öldürmeyi düşünürüm.
- 0 1 2 92. Başkalarını güldürmeyi severim.
- 0 1 2 93. Çok konuşurum.
- 0 1 2 94. Başkalarına rahat vermem, onlara sataşır, onlarla çok dalga geçerim.
- 0 1 2 95. Çok çabuk öfkelenirim.
- 0 1 2 96. Cinsel konuları fazlaca düşünürüm.
- 0 1 2 97. İnsanları canlarını yakmakla tehdit ederim.
- 0 1 2 98. Başkalarına yardım etmekten hoşlanırım.
- 0 1 2 99. Sigara içerim, tütün koklarım.
- 0 1 2 100. Uyumakta zorlanırım.

(açıklayınız): \_\_\_\_\_

- 0 1 2 101. Dersleri asar, okuldan kaçırım.
- 0 1 2 102. Fazla enerjik değilim.
- 0 1 2 103. Mutsuz ve üzgünüm, depresyundayım.
- 0 1 2 104. Başka çocuklardan daha gürültücüyüm.
- 0 1 2 105. Sağlık sorunum olmadığı halde madde kullanırım

(içki ve sigarayı katmayınız)

(açıklayınız): \_\_\_\_\_

- 0 1 2 106. Başkalarına karşı dürüst olmaya çalışırım.
- 0 1 2 107. Güzel şakalardan hoşlanırım.
- 0 1 2 108. Hayatı kolay tarafından yaşamaktan hoşlanırım.
- 0 1 2 109. Elimden geldiğince başkalarına yardımcı olmaya çalışırım.
- 0 1 2 110. Karşı cinsiyetten biri olmayı isterim.
- 0 1 2 111. Başkalarıyla kaynaşmaktan, birlikte olmaktan kaçınırım.
- 0 1 2 112. Evhamlıyım, her şeyi dert ederim.

Lütfen yukarıdaki maddelerin dışındaki duygu, düşünce, davranış ve ilgi alanlarınızı yazınız.

APPENDIX G

BASIC EMPATHY SCALE

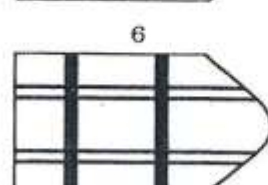
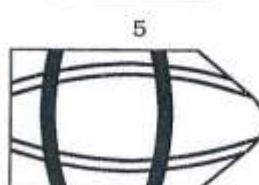
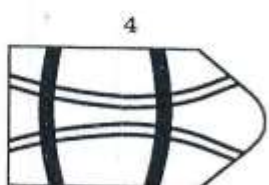
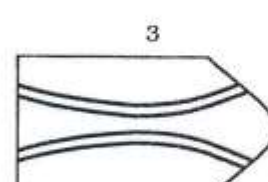
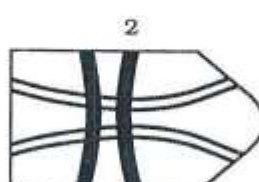
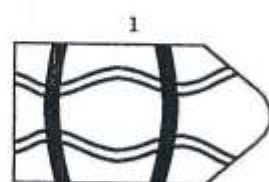
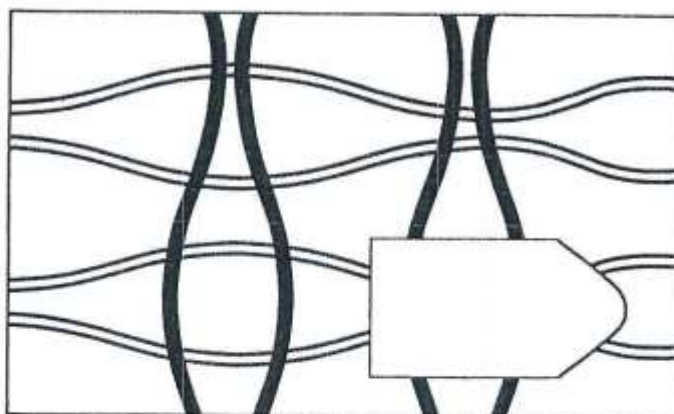
Aşağıda size uyan ve uymayan özellikler sıralanmıştır. Lütfen her maddeye NE ÖLÇÜDE KATILIP KATILMADIĞINIZI uygun kutuyu (X) ile işaretleyerek belirtiniz. Lütfen cevap verirken olabildiğince dürüst olunuz.	Kesinlikle katılmıyorum	Katılmıyorum	Ne katılıyorum ne katılmıyorum	Katılıyorum	Kesinlikle katılıyorum
1) Arkadaşımla duyguları beni pek etkilemez.	1	2	3	4	5
2) Bir şeye üzülmüş bir arkadaşla biraz vakit geçirdikten sonra genellikle kendimi üzgün hissedirim.					
3) Arkadaşımla bir şeyleri iyi yaptığına duyduğu mutluluğu anlayabiliyorum					
4) İyi bir korku filmindeki karakterleri izleyince korkarım					
5) Başkalarının duygularından hemen etkilenirim.					
6) Arkadaşımla korktuğunu anlamakta güçlük çekerim.					
7) Başka insanları ağlarken gördüğümde üzülmem					
8) Başka insanların duyguları beni hiç ilgilendirmez					
9) Birileri kendini” iyi hissetmiyorsa” genelde nasıl hissettiklerini anlarım					
10) Arkadaşımla korktuğunu genellikle anlarım.					
11) Televizyonda ya da filmlerde üzüntülü bir şeyler izlerken çoğunlukla ben de üzülürüm.					
12) İnsanların ne hissettiğini çoğunlukla onlar bana söylemeden anlayabilirim.					
13) Kızgın birini görmek hislerimi etkilemez.					
14) İnsanların neşeli olduğunu genellikle anlarım.					
15) Bir şeylerden korkan arkadaşla bir aradaysam genelde ben de korkarım					
16) Arkadaşımla kızgın olduğunu genellikle hemen fark ederim.					
17) Çoğunlukla arkadaşla duyguları içinde boğuluyormuşum gibi hissedirim.					
18) Arkadaşımla mutsuzluğu bana bir şey hissettirmez					
19) Arkadaşımla hissettiklerinin genellikle farkında değilimdir.					
20) Arkadaşımla mutlu oldukları anları anlamakta zorlanırım.					

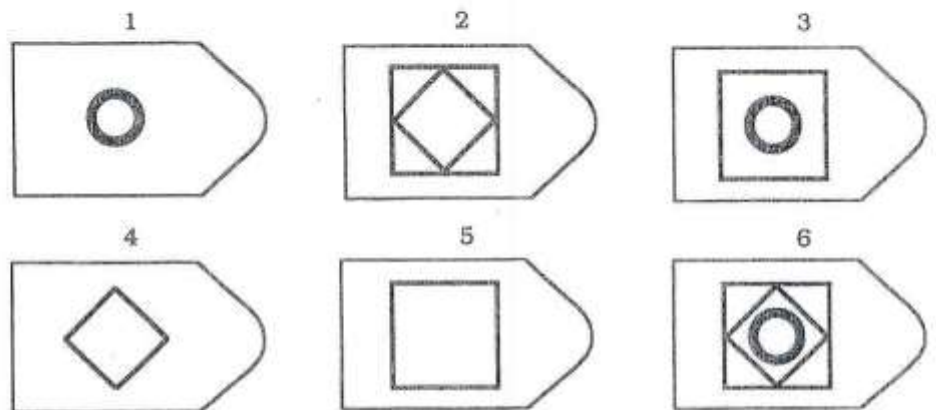
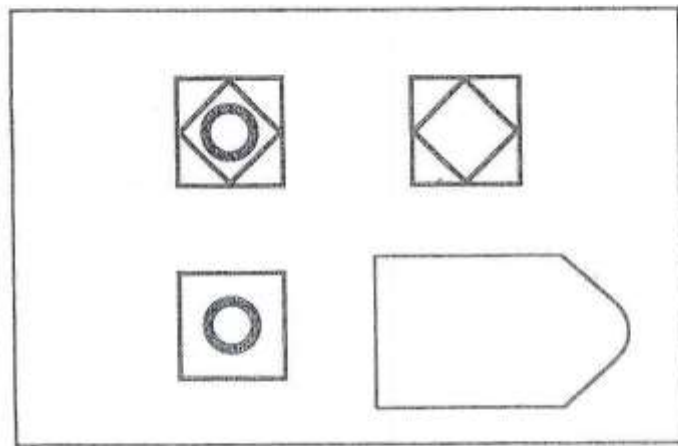
APPENDIX H  
DEMOGRAPHIC QUESTIONNAIRE

<b>İsim-Soyisim</b>					
<b>Cinsiyet</b>					
<b>Doğum Tarihi</b>					
<b>Okul</b>					
<b>Sınıf/ Şube</b>					
<b>Okul No</b>					
<b>Formun Doldurulduğu Tarih</b>					
<b>Velinizden imzalı onam formunu getirdiniz mi?</b>					
<p><b>Ailenizin temel ihtiyaçları ile gelirinizi ve harcamalarınızı birlikte düşündüğünüzde, aşağıdakilerden hangisi hanenizin şu anki mali durumunu daha iyi tanımlar?</b></p> <ol style="list-style-type: none"><li>1. Sık sık yemek ve kira gibi temel ihtiyaçlarımız için bile yeterli paramız olmaz</li><li>2. Aydan aya ancak temel ihtiyaçlarımızı idare edebilecek kadar paramız var</li><li>3. Temel ihtiyaçlarımızı rahatça karşılayabiliyoruz</li><li>4. Rahatça yaşamak için yeterli gelirimiz var</li></ol>					
<p><b>Lütfen aşağıdaki alanlarda kendinizi değerlendiriniz.</b> Sosyal, akademik ve davranışsal alanlarda kendiniz için; 1 (çok kötü) ile 5 (çok iyi) arasında bir puan veriniz. <b>Sosyal:</b> Arkadaş ilişkileri, büyüklerle ilişkiler gibi <b>Akademik:</b> Ders başarısı, ödev sorumluluğu gibi <b>Davranışsal:</b> Toplum içindeki davranışlar, kurallara uyma gibi</p>					
	1	2	3	4	5
Sosyal					
Akademik					
Davranışsal					

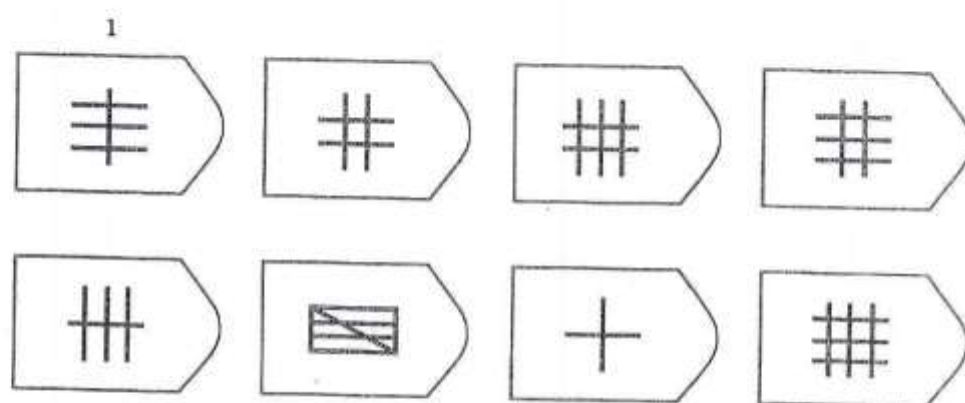
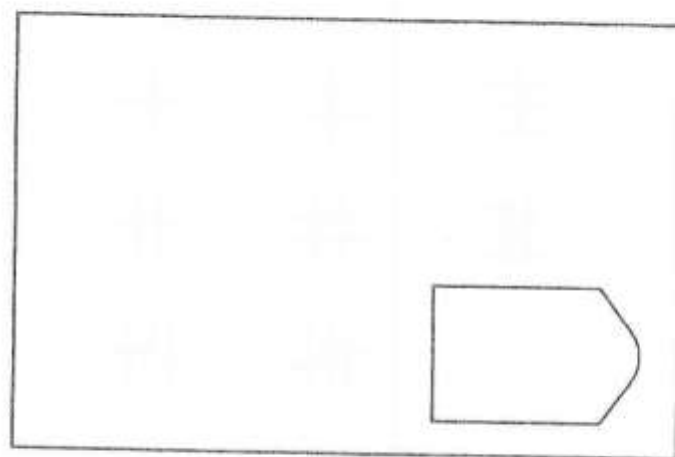
APPENDIX I  
RAVEN MATRICES

A1

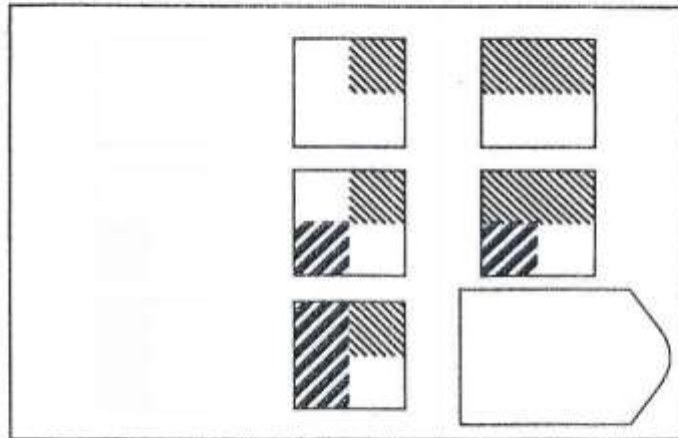




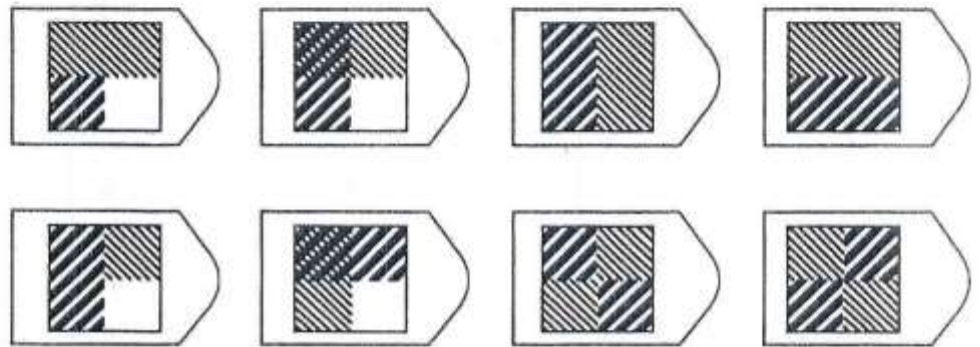
C4



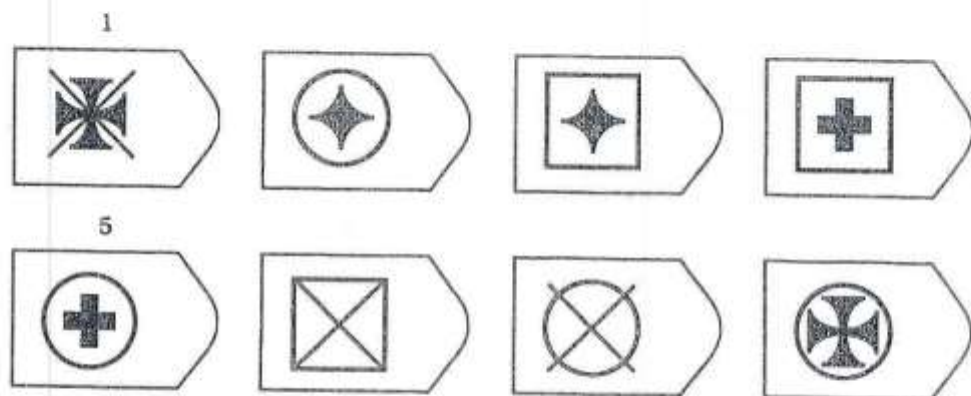
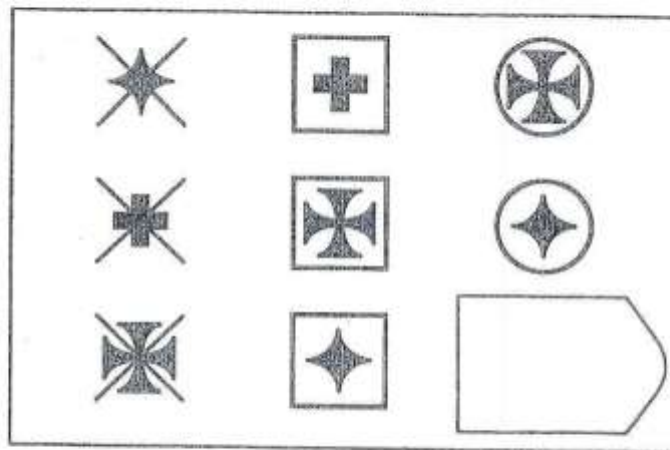
C12



1

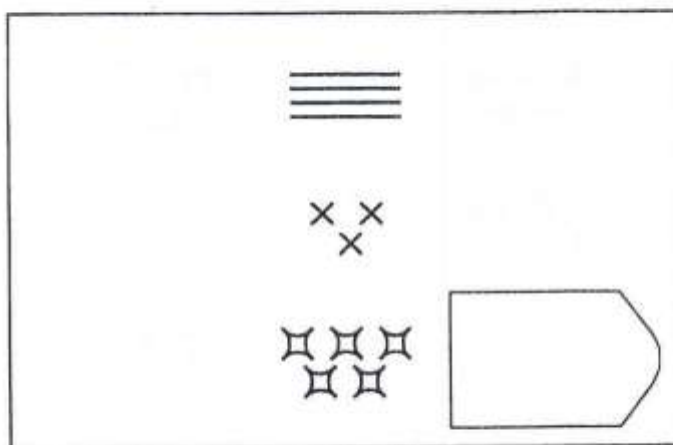


D7

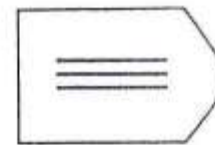
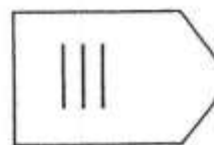




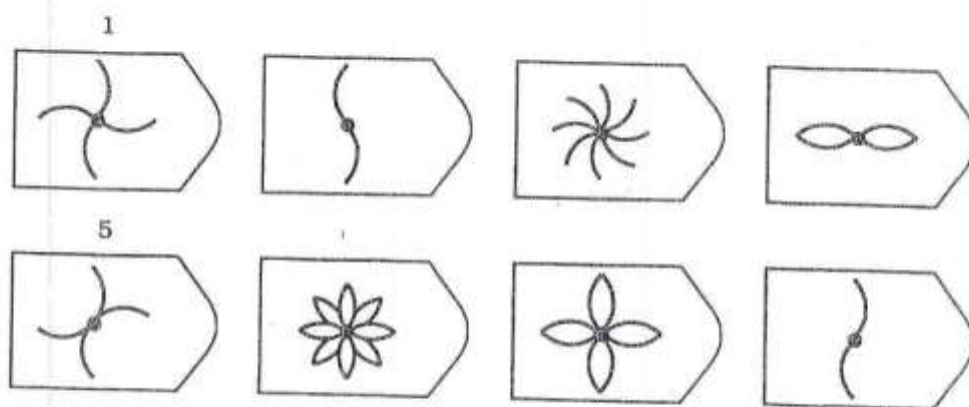
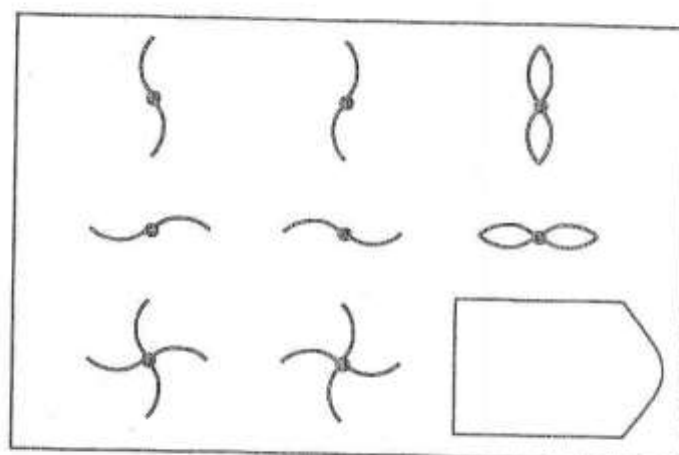
D12



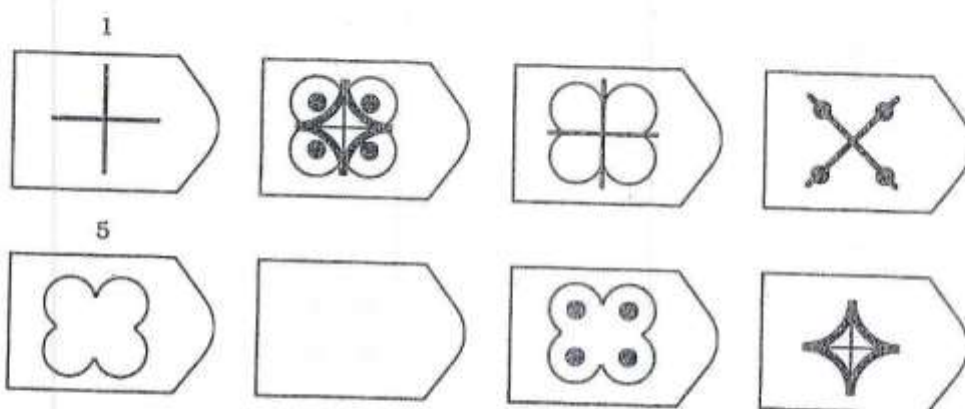
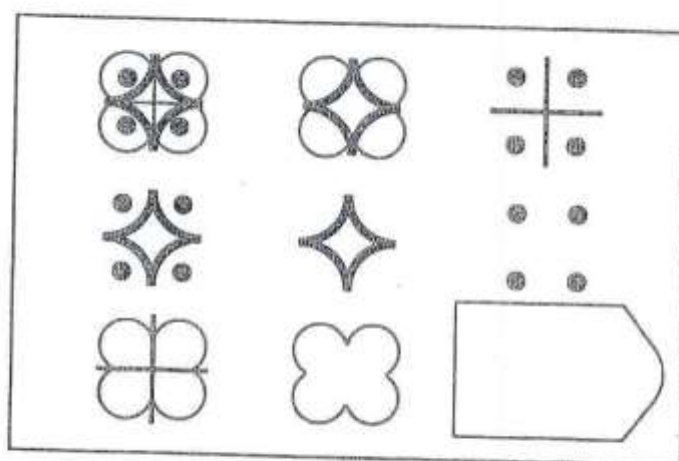
1



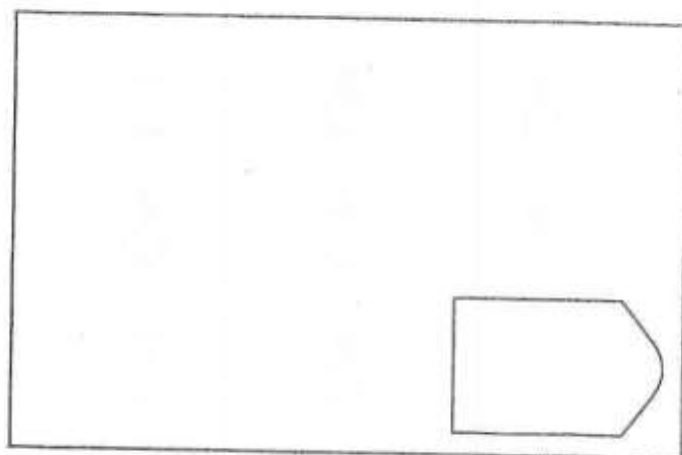
E1



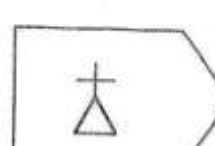
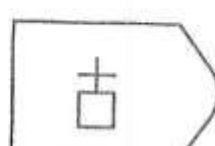
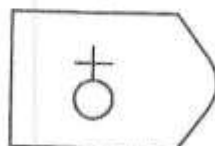
E5



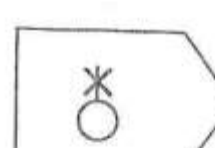
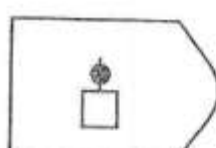
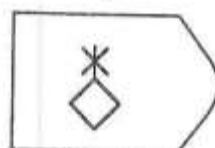
E7



1



5



APPENDIX J

INVITATION FOR PILOT STUDY

Sevgili Genç Arkadaşım,

Bir konuda yardımına ihtiyacım var. İngilizce’de kullanılan bir ölçeğin Türkçe’sini oluşturmaya çalışıyorum. Amaç gençlerin farklı durumlarda karşısındakilerin duygu ve düşüncelerini nasıl anladıklarını görebilmek. Ölçekte bazı hikayeler var, böyle durumlarda neler hissedeceğin ve nasıl davranacağın soruluyor. Önce içinden geldiği gibi cevap vermeni bekliyorum; sonrasında da sana sunulan seçeneklerden birini seçmeni. Bu ölçeğin Türkçe çevirisinin uygun olup olmadığı konusunda görüşlerin bana çok yardımcı olacaktır.

- Cümleler anlaşılıyor mu?
- İfadelerde sana yakın gelmeyen, biz bunu böyle kullanmayız dediğin bir şey var mı?
- Hikayeler senin yaşitlarının karşılaştığı tipte durumları mı anlatıyor? Yoksa büyükler gençlerin yaşadıklarını anlamaya biraz uzak mı kalmış?
- Bu soruların Türkiye’de yaşayan 12-18 yaş gençler için anlam taşıyacağını düşünür müsün?

Görüşlerin bilimsel araştırma için kullanacağımız ölçeğin geliştirilmesine katkı sağlayacak. Şimdiden çok teşekkürler.

Ceyda Dedeoğlu

Dear Young Friend,

I need your help on a something. I am trying to develop the Turkish version of a questionnaire which is originally in English. The purpose of the questionnaire is to assess the ability of adolescents to understand the feelings and thoughts of other people in different situations. The questionnaire includes some vignettes, asking for your thoughts and feelings in those situations. I want you to answer the questions as it appears to you initially; afterwards, you are asked to choose among the answer options.

Your opinion about the Turkish translation of the questionnaire will help me tremendously.

- Are the sentences understandable?
- Is there any awkward phrase that you think you will not be using like that?
- Are the contents of the vignettes appropriate for your age? Or do you think that the adults are miles away from the world of adolescents?
- Do you think that these questions will be meaningful for young people aged 12-18, living in Turkey?

Your thoughts will contribute to the development of our questionnaire which will be used for scientific research. Thanks in advance.

Ceyda Dedeoğlu

APPENDIX K  
CONSENT FORM

KATILIMCI BİLGİ VE ONAM FORMU

**Araştırmayı destekleyen kurum:** Boğaziçi Üniversitesi

**Araştırmacının adı:** Gençlerde Zihinselleştirme Becerisinin Farklı Yönlerinin Araştırılması

**Proje Yürütücüsü:** Doç. Dr. Serra Müderrisoğlu & Prof. Dr. Güler Fişek

**E-mail adresi:** [serra@boun.edu.tr](mailto:serra@boun.edu.tr) / [fisekgul@boun.edu.tr](mailto:fisekgul@boun.edu.tr)

**Telefonu:** 0212 359 7324

**Araştırmacının adı:** Uzm. Psk. Ceyda Dedeoğlu

**E-mail adresi:** [ceydadedeoglu@gmail.com](mailto:ceydadedeoglu@gmail.com)

**Telefonu:** 0212 351 1754

Sayın Veli,

Boğaziçi Üniversitesi Psikoloji Bölümü öğretim üyesi Dr. Serra Müderrisoğlu ve Dr. Güler Fişek “Gençlerde Zihinselleştirme Becerisinin Farklı Yönlerinin Araştırılması” adı altında bilimsel bir araştırma projesi yürütmektedir. Bu çalışmanın amacı gençlerin hem kendilerinin hem de başkalarının duygu, düşünce, niyet ya da isteklerini anlayabilme ve yorumlayabilme becerisini anlamak, bu becerinin farklı özelliklerdeki gençlerde nasıl bir seyir izlediğini irdelemektir. Bu çalışmanın yapılabilmesi için Boğaziçi Üniversitesi Etik Kurulu’ndan, Milli Eğitim Bakanlığı’ndan ve okul müdürünüzden izinler alınmıştır. Bu araştırmada bize yardımcı olmanız için çocuğunuzun katılımını onaylamanızı rica ediyoruz. Kararınızdan önce araştırma hakkında sizi bilgilendirmek istiyoruz. Bu bilgileri okuduktan sonra çocuğunuzun araştırmaya katılmasına izin verirsiniz, lütfen bu formu imzalayıp kapalı bir zarf içinde bize ulaştırınız.

Araştırmamızda gençlere empati becerisi, kendi duygu ve düşüncelerini değerlendirebilme becerisi, başkalarının niyetini anlayabilme becerisi, mantıksal çıkarımlarda bulunabilme becerisini ölçen ve kendi davranışlarını değerlendirmelerini isteyen anketler uygulanacaktır. Uygulamalar, okulun öngördüğü zaman dilimi içerisinde sınıf ortamında ve öğretmen ve araştırmacının gözetiminde gerçekleştirilecektir. Uygulamanın bir kısmını kağıt-kalemle doldurulacak ölçekler, bir kısmını da sağlanacak güvenli bir internet bağlantısı üzerinden doldurulacak sorular oluşturmaktadır. Tüm soruların tamamlanması gençlerin yaklaşık 45 dakikasını almaktadır. Uygulama sonrasında tüm veriler eğitilmiş psikologların gözetiminde analiz edilecektir. Değerlendirmeler tamamlandığında hem size hem de

çocuğunuza kendi doldurduğu kısımlarla ilgili genel bir değerlendirme yapan bir mektup iletilecektir. Çocuğunuzun doldurduğu ölçeklerin sonuçlarında yaşitlarının ortalamasından çok farklı bir durum göze çarparsa bu durum ve durumla ilgili alınabilecek önlemler size ve çocuğunuza mektup içerisinde bildirilecektir. Mektuplar kapalı zarfta adınıza özel iletilecek olup okul idaresi ya da görevlilerinden herhangi biri ile paylaşılmayacaktır. Okul yönetimi ile herhangi bir gencin bireysel sonuçlarına ilişkin herhangi bir veri paylaşılmayacaktır. Okuldaki genel durum hakkında bilgi verebilecek ve ayırıştırıcı olmayacak bazı yüzdeler okul yönetimine iletilecektir.

Araştırmaya katılım, gençler için herhangi bir risk içermemektedir. Ölçeklerde sorulan sorular ve düşünülmesi istenen konuların gençlerin kendi duygu ve düşünceleri ile ilgili farkındalık artırıcı nitelik taşıyabilir. Mektuplarda iletilecek bilgiler de sizleri, eğer var ise, önlem alınması gereken bir konu hakkında bilgilendirici nitelik kazanabilir.

Araştırmanın sonunda okulunuzun talebi doğrultusunda ergen gelişimi konusunda bir seminer düzenlenecektir.

Bu araştırmaya katılmak tamamen isteğe ve sizin onayınıza bağlıdır. Çocuğunuzun katılımını onaylamanız durumunda çalışmanın herhangi bir aşamasında herhangi bir sebep göstermeden onayınızı çekmek hakkına da sahiptir. Bu araştırmanın farklı okulları ve sınıfları kapsadığını vurgulamak istiyoruz. Araştırma projesi hakkında ek bilgi almak istediğiniz takdirde lütfen Boğaziçi Üniversitesi Psikoloji Bölümü Öğretim Üyesi Doç. Dr. Serra Müderrisoğlu ile temasa geçiniz (Telefon: 0212 359 7324, Adres: Boğaziçi Üniversitesi, Psikoloji Bölümü, 34342 Bebek, İstanbul).

Eğer çocuğunuzun bu araştırma projesine katılmasını kabul ediyorsanız, lütfen bu formu imzalayıp kapalı bir zarf içerisinde bize geri yollayın.

Ben, (onay verenin adı) ....., yukarıdaki metni okudum ve çocuğumun katılması istenen çalışmanın kapsamını ve amacını, gönüllü olarak üzerime düşen sorumlulukları tamamen anladım. Çalışma hakkında soru sorma imkanı buldum. Bu çalışmayı istediğim zaman ve herhangi bir neden belirtmek zorunda kalmadan bırakabileceğimi ve bıraktığım takdirde herhangi bir olumsuzluk ile karşılaşmayacağımı anladım.

Bu koşullarda söz konusu araştırmaya kendi isteğimle, hiçbir baskı ve zorlama olmaksızın çocuğumun katılmasına onay veriyorum.

Formun bir örneğini aldım / almak istemiyorum (bu durumda araştırmacı bu kopyayı saklar).

Katılımcının VELİSİNİN Adı-Soyadı: .....

İmzası: .....

Tarih (gün/ay/yıl): ...../...../.....

Araştırmacının Adı-Soyadı: Ceyda Dedeoğlu

İmzası:.....

Tarih (gün/ay/yıl):...../...../.....

APPENDIX L

MONE APPROVAL PROCESS AND THE CHANGES MADE IN THE  
QUESTIONNAIRE

In Turkey, to be able to do any kind of intervention at schools, a permission is received from the relevant department of the Ministry of Education. The current study aimed to collect data from different parts of the city, therefore application was done to the Istanbul Provincial Directorate of the Ministry of National Education. (If the study was limited to one of the sub-provinces, the permission the application would have been submitted to that sub-province). For the application, all the details of the procedure and the materials were submitted to the research approval committee of MoNE provincial directorate.

At the initial phase, the committee asked for a change for the design of the questionnaires since they all headed with information asking for the name of the student. All the questionnaires were changed, and this information line was deleted. At the second phase, the committee rejected the application and asked for necessary corrections for the below mentioned areas:

1. Name or signature information cannot be asked from the students
2. Use of “whats-app message” phrase in one of the vignettes of HIF was not found appropriate since it was considered as advertisement
3. Use of an example of gambling in one of the vignettes of HIF was not found appropriate
4. Asking for the use of alcohol in Youth Self Report was not found appropriate.

The first objection was about the consent form. In the consent form, there were two separate parts of approval, one for the parent and the other for the student. Parent approval is legally necessary for the information to be gathered. Student part was



added by the researcher since the target population was at the age range of 14-18 and receiving their own consent is in line with the participation right of Convention on the Rights of Children. However, since MoNE did not allow the researcher to receive signatures from the students, that part was deleted. This rejection also asked for deleting the name of the student from the consent form, which caused difficulties in data merger (which is explained in the relevant section).

The second objection was for a phrase used in one of the vignettes, which was added in the pilot implementation. Based on the feedback from the adolescent participated to the pilot study, more contemporary and youth-friendly language was selected from the everyday life of young people. However, since the daily used apparatus is owned by a private company, that phrase was deleted, and necessary correction was done in the wording of the vignette.

The third rejection was about the use of an example about gambling. The committee found it inappropriate to ask r students. The original of the vignette was asking for a situation where a youngster was stealing alcohol from parents. In the pilot study, this item was found culturally inappropriate and was changed with gambling. This question was trying to assess reactions to delinquent behavior and impulsivity, since it is frequently seen in adolescent years. However, MoNE did not allow this item and the vignette is changed with taking money from home, unfortunately omitting the addiction like behavior like alcohol or gambling.

The last rejection was about a change in Youth Self Report questionnaire, which is a well-established tool, widely used in research and clinical settings. MoNE committee asked for deleting the item which is asking for alcohol use in adolescents. A detailed report was re-submitted to the committee, explaining about the questionnaire psychometric properties, the importance of using a reliable instrument as a whole and

the appropriateness of the instrument since it has been used hundreds of times in different research. Examples were given showing the use of the questionnaire in research done by the Ministry of Health. In addition, official opinion of the developer of the Turkish version of the Questionnaire was also submitted. Unfortunately, the committee did not allow that question to be asked at the schools, therefore the question was deleted from the whole questionnaire.

After applying all the requests to the relevant documents, the MoNE committee approved the research. Since the approval process took a long time, the data collection procedure expanded to the next education year.

APPENDIX M  
SAMPLE FEEDBACK LETTER

<b>OKUL</b>	
<b>2017-2018 Eğitim Yılındaki Sınıf</b>	
<b>Okul No<sup>4</sup></b>	
<b>Cinsiyet</b>	

Sevgili Öğrenci ve Sayın Veli,

Öncelikle, doktora çalışmamın bir parçası olarak yaptığım araştırmaya katılım gösterdiğiniz ve katılıma izin verdiğiniz için tekrar teşekkür etmek isterim. Size isminizle hitap edemediğim için üzgünüm. Milli Eğitim İl Müdürlüğü’nden alınan araştırma iznine göre öğrencilerin isimlerinin toplanması uygun olmadığı için sadece okul numarası ve sınıf bilgisi üzerinden iletişim kurabiliyorum. Bu mektubu araştırmaya katılımınız durumunda size sonuçlarınızla ilgili bilgi verme sözümün gereği olarak hazırladım.

Çalışmanın genel amacı gençlerin, başkalarının duygu ve düşüncelerini, davranışlarının altında yatan nedenleri anlayabilme kapasitelerini ölçebilmektir. Bu çalışmaya katılarak Türkiye’de gençlerin bu alandaki becerilerini ölçen ilk aracın geliştirilmesine katkıda bulundunuz.

Bu mektuptaki veriler, çalışmaya katıldığınız dönemdeki durumunuza ilişkindir, bu bilgi göz önüne alınarak değerlendirilmelidir. Bazı veriler genel eğilimi, bazı veriler de içinde bulunduğunuz yaş döneminin özelliklerini içermektedir.

Çalışmayı tamamlayıcı bazı ölçümler de çalışma yapıldığı dönemde bazı davranış alanlarındaki zorluklarınızı ve güçlü yanlarınızı taramaktaydı. Bu bilgileri de sizlere sunuyoruz. Bu bilgiler, ölçeklere dayanılarak elde edildiği için herhangi bir şekilde bir klirik tanrı ya da belirleyici/ayırt edici bir özellik içermez. İçinde bulunduğunuz 6 aylık döneme ait genel bir eğilim gösterir. Ölçekleri doldurduğunuz dönemle benzer bir duygu durumu içindeyseniz ve mektubunuzda rehberlik servisine başvurulması ile ilgili bir öneri varsa bunu ihmal etmemenizi öneririz.

Mektupta yer alan bazı bilgilerin kendinizi tanımaya ve geliştirmeye katkı sağlamasını umuyor, katılımınız ve katkılarınız için tekrar teşekkür ediyorum.

Sevgi ve saygılarımla,

Uzm. Psk. Ceyda Dedeoğlu  
Boğaziçi Üniversitesi  
Klinik Psikoloji Doktora Adayı  
[ceydadedeoglu@gmail.com](mailto:ceydadedeoglu@gmail.com)

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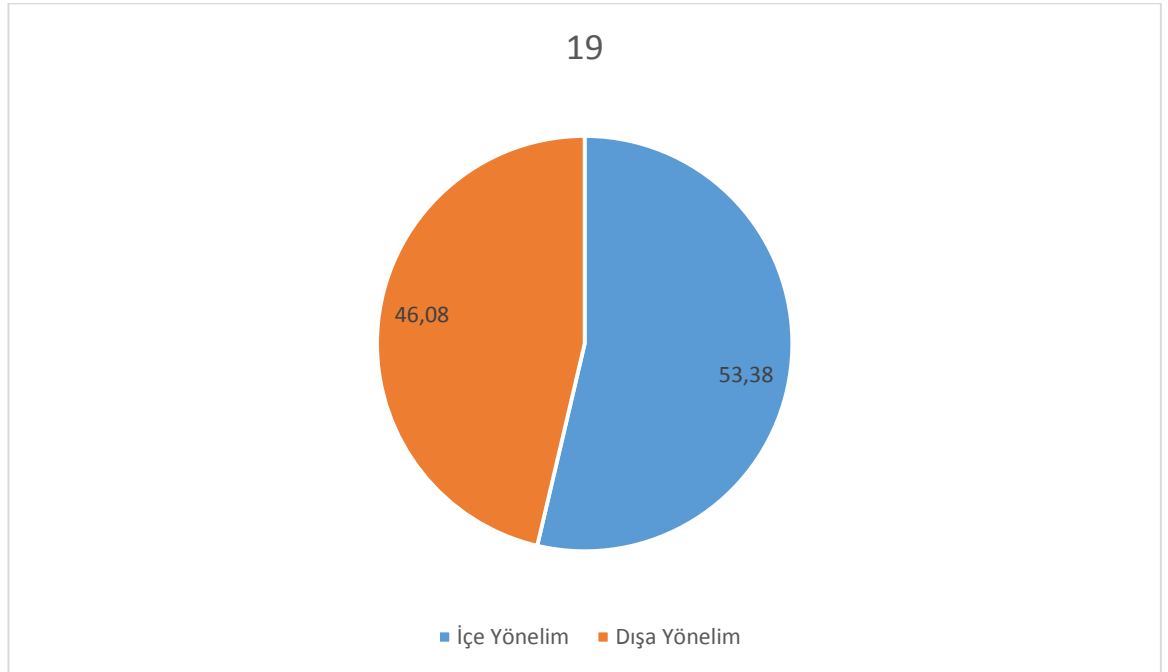
<sup>4</sup> Mektuptaki okul numarası ve sınıf/şube bilgisi doğru değilse hemen araştırmacıya teslim etmeniz ve size ait mektubu talep etmenizi rica ederiz.

## EMPATİ BECERİSİ

Bilişsel empati alanında çalışmaya katılan lise öğrencilerinin %	49,61'inden	iyi sonuç elde ettin.	Empati geliştirilebilen bir beceridir. Kişisel gelişim alanı olarak belirlemek ister misin?
Duygusal empati alanında çalışmaya katılan lise öğrencilerinin %	43,92'sinden		
Genel empati becerisinde çalışmaya katılan lise öğrencilerinin %	44,85'inden		

\*Bilişsel empati, bir kişinin belirli bir durumda nasıl düşündüğünü anlayabilme olarak tanımlanabilir. Duygusal empati ise bu durum karşısında karşınızdakinin nasıl hissettiğini anlayabilmektir.

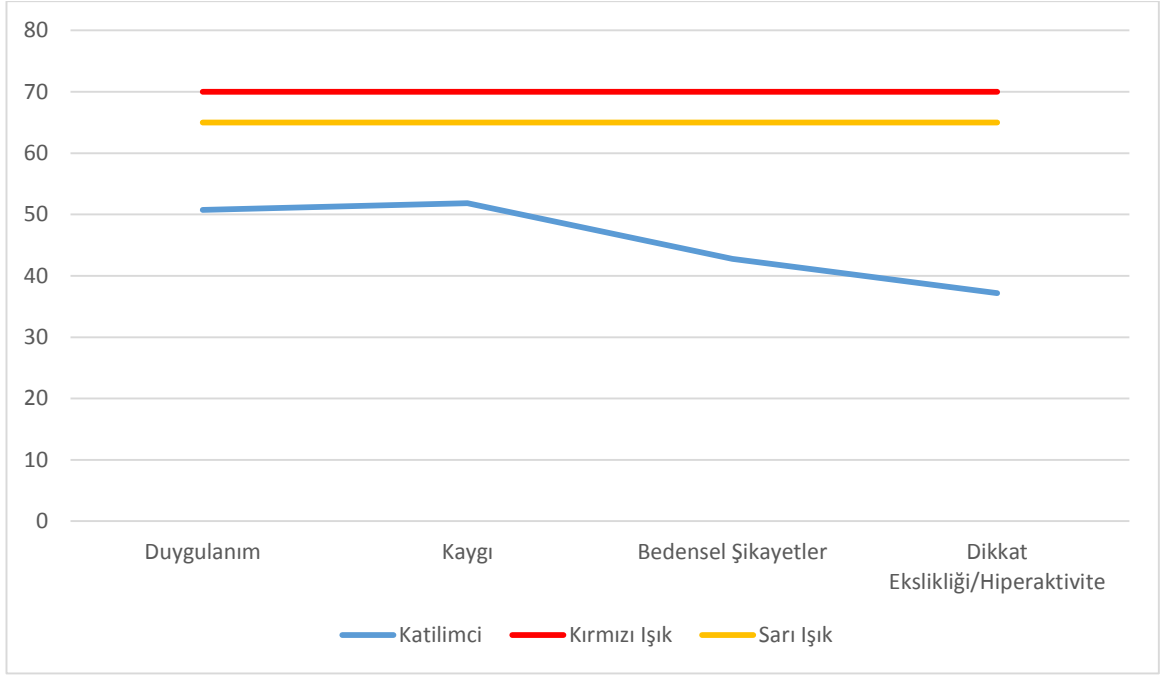
## DAVRANIŞSAL GÖSTERGELER



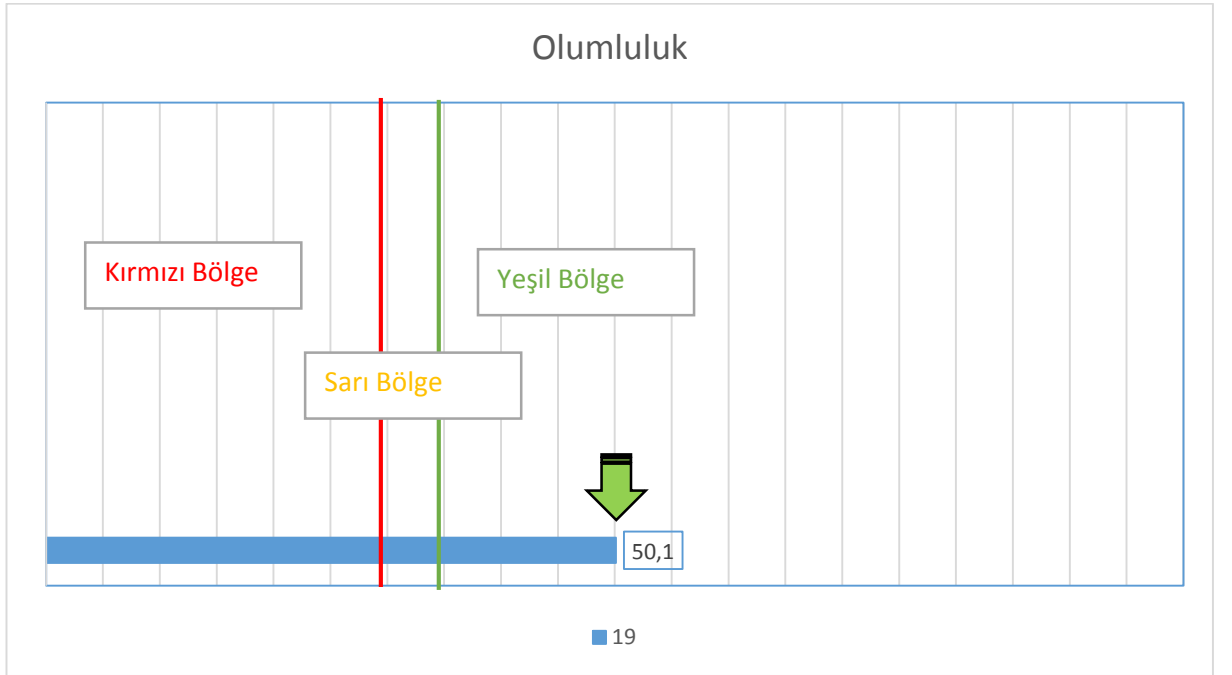
\*İçe yönelim: Problemler ya da sıkıntı veren durumlar olduğunda kişinin bunları kendi içine dönük bir şekilde göstermesi/yaşaması

\*Dışa yönelim: Problemler ya da sıkıntı veren durumlar olduğunda kişinin bunları kendisi dışındakilere de yansıtarak göstermesi/yaşaması

Not: Herhangi biri daha iyi ya da kötü anlamına gelmez, sıkıntılı durumlarda belirtilerin nasıl görüleceğine ilişkin bir fikir verir. Her bireyde hem içe hem dışa yönelen belirtiler görülür. Bazı bireylerde bir yöndeki ağırlık çok daha belirgindir. Siz kendinizde hangisini daha çok görüyorsunuz? Sonuçlarla yaşadıklarınız paralel mi? Yaşınız büyüdükçe farklılaştığınızı düşünüyor musunuz? Üstünde düşünmeye değer!



\*Bu grafikte sarı ışığın (x işaretli çizginin) üzerinde olduğunuz herhangi bir nokta varsa rehberlik servisine danışmanızı öneririz.



\*Bu grafikte yeşil bölgede olmak yaşınızdan beklenen olumlu özelliklerin ağırlıkta olduğunu göstermektedir. Sarı ya da kırmızı bölgeye denk gelen bir sonuç çıktıysa sizi zorlayan bazı hayat olaylarının etkisi altında olma ihtimaliniz yüksektir. Rehberlik servisine başvurarak bu konuda destek istemenizi öneririz.

**ZİHİNSELLEŞTİRME (Başkasının duygusunu, düşüncesini, davranışlarının arkasında yatan niyeti kavrayabilme)**

Zihinselleştirme becerisini ölçen araçlarda “zihinsel karmaşa” alt alanında çalışmaya katılan lise öğrencilerinin %	57,25’inden	iyi sonuç elde ettin.	Başkalarının zihinsel durumunu (hangi duygu-düşüncelerin hakim olduğunu) anlama konusunda yaşlılarla benzer şekilde bazen aklın karışıyor olabilir. Özel bir destek ihtiyacı görülüyor.
Zihinselleştirme becerisini ölçen araçlarda “zihinsel merak” alt alanında çalışmaya katılan lise öğrencilerinin %	54,45’inden	iyi sonuç elde ettin.	Başkalarının zihinsel durumuna gösterdiği ilgi/merak yaşlıların seviyesinde. Geliştirmek için özel bir desteğe ihtiyacın görünmüyor. Ama insan ilişkilerini yönetmenin önemli olacağı bir gelecek seni bekliyor, bu alanda yapacağın her türlü yatırım senin avantajına olacaktır.
Zihinselleştirme becerisini ölçen araçlarda “aşırı kesinlik” alt alanında çalışmaya katılan lise öğrencilerinin %	85,49’undan	iyi sonuç elde ettin.	Tebrikler. Başkalarının zihninde neler olup bittiğini düşünüp onların neler hissedebileceğine dair tahminlerde bulunurken yanılabilirliğini de göz önünde bulunduruyorsun. Bu özellik seni ilişkileri yönetme konusunda daha yetkin ve esnek kılar. Esnekliğini devam ettirebilmeni dileriz.

- 1) Zihinselleştirme= Başkalarının duygularını, düşüncelerini, davranışlarının arkasındaki nedenleri anlayabilme, kavrayabilme, doğru tahminlerde bulunabilme ; aynı zamanda kendi duygu ve davranışlarımızı da benzer bir analizden geçirebilme becerimizdir.
- 2) Zihinselleştirme becerisini iyi kullanmak insan ilişkilerini kolay idare etmemize, iletişim kazalarını önlememize yardımcı olur.
- 3) Her bireyin zihinselleştirme becerisinin zaman zaman kısıtlandığı dönemler olabilir. Başkasını anlamaya çalışırken doğru soruları sorarak zihnimizde oluşan ön varsayımları doğrulamak önemlidir.
- 4) Zihinsel karmaşa yaşayan bireyler karşı tarafın duygu, düşünce, niyetini okuma konusunda zihinlerini netleştirmede zorlanır, çoğunlukla anlayamadıklarını düşünürler.
- 5) Bir kişinin duygu ve davranışlarını ve arkasında yatan niyeti anlamaya çalışmak, merak etmek, zihinselleştirme becerilerimizin gelişkin olduğunun göstergesidir.
- 6) Bazen karşı tarafın duygu, düşünce ya da niyetini o kadar iyi anladığımıza inanırız ki, yanılabilirliğimizi aklımıza getirmeyiz. Başkalarının zihinsel durumu ile ilgili hep doğru kestirimlerde bulunduğunu düşünen bireyler yanılabilir ve ilişkilerini zedeleyebilirler. Bu noktada zihinsel esnekliğe ihtiyaç duyulmaktadır.

# APPENDIX N

## THE DISTRIBUTION OF THE SES LEVEL FOR EACH SCHOOL

			SES				Total
			Difficulty even in basic needs	Barely enough for basic needs each month	We can easily meet our basic needs	We have enough income to live comfortably	
SCHOOL	1	Count	3	30	65	32	130
		% within School	2,3%	23,1%	50,0%	24,6%	100,0%
		% of Total	,4%	4,3%	9,4%	4,6%	18,7%
	2	Count	0	6	50	28	84
		% within School	0,0%	7,1%	59,5%	33,3%	100,0%
		% of Total	0,0%	,9%	7,2%	4,0%	12,1%
	3	Count	0	5	22	11	38
		% within School	0,0%	13,2%	57,9%	28,9%	100,0%
		% of Total	0,0%	,7%	3,2%	1,6%	5,5%
	4	Count	1	24	63	22	110
		% within School	,9%	21,8%	57,3%	20,0%	100,0%
		% of Total	,1%	3,5%	9,1%	3,2%	15,8%
	5	Count	0	4	17	49	70
		% within School	0,0%	5,7%	24,3%	70,0%	100,0%
		% of Total	0,0%	,6%	2,4%	7,1%	10,1%
	6	Count	0	28	104	77	209
		% within School	0,0%	13,4%	49,8%	36,8%	100,0%
		% of Total	0,0%	4,0%	15,0%	11,1%	30,1%
	7	Count	1	1	7	45	54
		% within School	1,9%	1,9%	13,0%	83,3%	100,0%
		% of Total	,1%	,1%	1,0%	6,5%	7,8%
Total	Count		5	98	328	264	695
	% within School		,7%	14,1%	47,2%	38,0%	100,0%
	% of Total		,7%	14,1%	47,2%	38,0%	100,0%

APPENDIX O

MEANS AND STANDARD DEVIATIONS OF RAVEN TOTAL  
FOR EACH SCHOOL

School	N	Mean	Std. Deviation	Std. Error
1	131	4,02	1,591	,139
2	84	6,74	1,432	,156
3	38	5,92	1,549	,251
4	111	4,81	1,881	,178
5	71	7,13	1,206	,143
6	210	6,66	1,240	,086
7	54	6,50	1,645	,224
Total	699	5,88	1,871	,071



# APPENDIX P

## MEAN SCORES OF BES ACCORDING TO SCHOOLS

School		N	Mean	Std. Deviation	Std. Error
Empathy Total	1	131	68,18	9,52	0,83
	2	75	70,92	8,59	0,99
	3	28	72,79	11,57	2,19
	4	90	70,58	9,76	1,03
	5	62	71,81	9,67	1,23
	6	202	76,72	9,92	0,70
	7	53	78,28	8,97	1,23
Empathy Cognitive	1	131	34,09	5,28	0,46
	2	75	34,99	5,24	0,60
	3	28	36,29	7,20	1,36
	4	90	34,54	5,66	0,60
	5	62	34,60	5,03	0,64
	6	202	37,06	5,08	0,36
	7	53	38,32	4,31	0,59
Empathy Affective	1	131	36,61	6,98	0,61
	2	75	38,44	7,30	0,84
	3	28	38,79	8,30	1,57
	4	90	38,34	6,77	0,71
	5	62	37,21	7,60	0,96
	6	202	39,66	7,15	0,50
	7	53	39,96	6,55	0,90

APPENDIX Q

MEAN HIF VALUES ACCORDING TO SCHOOLS

	N	Mean	Std. Deviation	Std. Error
1	131	172,71	21,33	1,86
2	74	181,57	20,41	2,37
3	28	177,17	25,54	4,83
4	90	177,08	24,11	2,54
5	61	176,13	28,24	3,62
6	202	181,71	16,82	1,18
7	53	180,53	17,66	2,43

# APPENDIX R DIFFERENCES BETWEEN YSR GROUPS

Significant differences among YSR groups are indicated as \*

	RFQ Uncertainty/ Confusion				RFQ Interest Curiosity				RFQ Excessive Certainty				Empathy Affective				HIF TR Total			
	N	I	E	B	N	I	E	B	N	I	E	B	N	I	E	B	N	I	E	B
N																				
I	*				*												*			
E	*					*							*	*			*	*		
B	*	*	*		*		*		*								*	*		

N= None    I= Internalizers    E= Externalizers    B=Both

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