THE RELATIONSHIP BETWEEN MATERNAL PSYCHOLOGICAL WELL-BEING, SENSITIVITY AND TODDLERS' OBSERVED ATTACHMENT SECURITY IN A SOCIO-ECONOMIC RISK GROUP

A THESIS SUBMITTED TO THE
GRADUATE SCHOOL OF SOCIAL SCIENCES
OF
OZYEGIN UNIVERSITY

BY

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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF MASTER OF ARTS
IN
DEPARTMENT OF PSYCHOLOGY

MAY 2019

ABSTRACT

A secure relationship between a caregiver and a child is one of the important predictors of positive developmental outcomes in childhood. Previous studies demonstrated that low socio-economic level, maternal mental health symptoms and maternal insensitivity were associated with the formation of insecure relationship (Teti, Gelfand, Messinger, & Isabella, 1995; Radke-Yarrow, 1991; Lyons-Ruth, Connell, Grunebaum, & Botein, 1990). Further, these studies depicted that poor maternal mental health when combined with low SES (Casady, Diener, Isabella, & Wright, 2001) can actually hinder maternal sensitivity and child's secure attachment (Campell et al., 2004; Gedaly & Leerkes, 2016). However, so far, the relationship between maternal mental health, and maternal sensitivity and attachment security in early childhood has not be shown in a high-risk group such as low-SES. Therefore, this study aims to investigate maternal mental health symptomatology and sensitivity association with toddlers' attachment security in a low-SES Turkish sample and whether the relationship between maternal mental health symptomatology and attachment security of toddlers mediated by the maternal sensitivity. The one-hundred and forty-eight mothers (M_{age}=30.44 years, *SD*=4.7) and their toddlers between the age of 12 to 38 months old (M_{age}=23.18 months, *SD*=6.7) recruited for the study. In 2 to 3-hours home-visits, mothers' relationships with their toddlers were video-recorded and then they filled out a pack of questionnaires including a demographic form, Brief Symptom Inventory (BSI). The mother-child dyads were coded independently by trained coders for Maternal Behavior Q-Sort (MBQS) and toddlers' attachment security coded with Attachment Q-Sort (AQS). The correlation analysis showed that maternal mental health negatively, while maternal sensitivity was positively associated with toddlers' attachment security and this relationship is

remained significant in hierarchical regression analysis even after controlling for socioeconomic status. The results showed that maternal sensitivity did not significantly mediated the link between maternal mental health symptomatology and toddlers' attachment security. The present study showed the impact of socioeconomic and maternal factors on toddlers' attachment security in a disadvantaged group, which would facilitate for developing preventive interventions that specifically address maternal mental health directly for such high-risk groups.

Keywords*:* SES, maternal mental health symptomatology, maternal sensitivity, attachment security, toddlerhood.

ÖZET

Bakım veren ve çocuk arasındaki güvenli bağlanma ilişkisi, çocukluk dönemindeki olumlu gelişimin önemli belirleyicilerinden biridir. Önceki çalışmalar, düşük sosyo-ekonomik düzey, anne ruh sağlığı ve anne duyarsızlığının güvensiz bağlanma ile ilgili olduğunu göstermiştir (Teti, Gelfand, Messinger, & Isabella, 1995; Radke-Yarrow, 1991; Lyons-Ruth, Connell, Grunebaum, & Botein, 1990). Ayrıca bu çalışmalar, düşük anne ruh sağlığının ile düşük sosyo-ekonomik düzeyle (Casady, Diener, Isabella, & Wright, 2001) bir araya geldiğinde anne duyarlılığına ve çocuğun güvenli bağlanmasına mâni olabileceğini göstermiştir (Campell et al., 2004; Gedaly & Leerkes, 2016). Bununla birlikte, bugüne kadar, çalışmalar erken çocukluk dönemindeki bu faktörler ile bağlanma güvenliği arasındaki ilişkiyi tam olarak incelememiştir. Bu nedenle, bu çalışma, anne ruh sağlığı semptomları ve duyarlılığının, erken çocukluk dönemindeki çocukların bağlanma güvenliği ile olan ilişkisini düşük sosyo-ekonomik gelir düzeyindeki Türk örnekleminde incelemeyi ve anne duyarlılığının, anne ruh sağlığı semptomları ile bağlanma güvenliği arasındaki ilişkiye aracılık edip etmediğini araştırmayı amaçlamaktadır. 12-38 ay (*Ort*. = 23.18, *S* =6.7) arasında çocuğu olan 148 anne (*Ort*. = 30.44, *SD* = 4.7) araştırmaya alındı. Anne-çocuk çiftleri 2 ila 3 saat arasında eğitimli gözlemciler tarafından evlerinde ziyaret edildi ve tüm katılımcılar gözlem boyunca anne-çocuk davranışlarını kodlamak üzere kayıt altına alındı. Annelerin duyarlılığı Anne Davranışları Sınıflandırma Seti (ADSS) ile ve çocukların bağlanma güvenliği ise Bağlanma Davranışları Sınıflandırma Seti (BDSS) kodlanıldı. Annelerin ruh sağlığı semptomları Kısa Semptom Envanteri (KSE) ile ve demografik bilgeleri ise verilen anketlerle elde edildi. Sonuçlar, anne ruh sağlığı semptomları ve çocukların bağlanma güvenliğinin negatif olarak ilişkiliyken anne duyarlılığı ve bağlanma

güvenliğinin pozitif olarak ilişkili olduğunu göstermiştir ve bu ilişki sosyo-ekonomik düzey ile kontrol edildiğinde dahi korunmuştur. Bununla birlikte, annelerin duyarlılığı, anne ruh sağlığı semptomları ve erken çocukluk dönemindeki çocukların bağlanma güvenliği arasındaki ilişkiye aracılık etmemiştir. Bu çalışma sosyoekonomik ve anneliğe ait faktörlerin küçük çocukların bağlanma güvenliği üzerindeki etkisini sosyal olarak dezavantajlı bir grupta göstermiştir ve özellikle bu gibi yüksek riskli gruplarda yapılan sınırlı önleyici müdahaleler geliştirmek için önemli bilgiler sağlamıştır.

***Anahtar Kelimeler**:* Sosyo-ekonomik düzey, anne ruh sağlığı semptomları, anne duyarlılığı, bağlanma güvenliği, erken çocukluk dönemi.

ACKNOWLEDGEMENTS

First, I would like to thank my thesis supervisor Assist. Prof. Gizem Arıkan for being a supportive advisor and investing her time for my thesis project. She has always been open to my questions and supported me whenever I need help during my thesis project. She was warm, sympathetic and it was a great opportunity to work with her.

Second, I would like to thank my committee members Asisst. Prof. İbrahim Acar and Assoc. Prof. Mehmet Harma for accepting be a part of thesis committee and put their valuable comments on my thesis.

Third, I would like to thank all the research assistants and undergraduate students of Ozyegin University Relationship Research Laboratory for their enormous effort for completing home observations and coding the behaviors of mothers and children. Further, I would like to thank the participated mothers who accepted to be a part of this research project and opened the doors of their homes to us.

Lastly, I would like to thank my mother who inspired me to work on maternal sensitivity and attachment security. And special thanks to my two important secure attachment figures Denizcan Özay and Hazal Öztekin. They were always responsive and supportive whenever I needed to be calm, loved and cared.

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CHAPTER 1

INTRODUCTION

The relationship between mother and child is an important predictor for healthy development of child both psychologically (McLeod & Shanahan, 1993) and physically (Farrell, Simpson, Carlson, Englund, & Sung, 2017). Further, the socioeconomic status and maternal mental health are two critical factors that shape the relationship between mother-child and the attachment style of the child (Raikes & Thompson, 2005). The longitudinal studies demonstrated the negative impact of maternal mental health problems and socio-economic status (SES), not only for early years of childhood but also for adolescence and adulthood (Van IJzendoorn & Bakermans-Kranenburg, 2010; Weinfield, Sroufe, & Egeland, 2000).

Attachment theory proposes that the quality of the relationship between children and primary caregivers, who serves *proximity maintenance*, *safe haven* and *secure base* functions, predict children's ability to form "*a tie to their caregivers*" (Bowlby, 1969), namely, attachment. Primary caregivers with these functions called *attachment figures* and the relationship quality that they establish with their children contribute to formation of *secure* or *insecure* attachment (Ainsworth, Blehar, & Waters, 1978). Insecure attachment is divided into two, namely, *anxious ambivalent* and *avoidant attachment* and characterized with *hyperactivating* and *deactivating* strategies at the times of attachment system activation (Ainsworth et al., 1978; Moss, Gosselin, Parent, Rousseau, & Dumont, 1997).

Findings demonstrated that insecurely attached children have higher tendency to develop psychopathology (Green & Goldwyn, 2002; Heubner & Thomas, 1995), behavioral problems (Vondra, Shaw, Swearingen, Cohen, & Owens, 2001), low self-

esteem (Pinto, Verissimo, Gatinho, Santos & Vaugh, 2015), difficulty in peer relationships (Chen & Santo, 2016) and romantic relationships (Collins, Cooper, Albino, & Allard, 2002) unlike securely attached children. Therefore, it is essential to understand the underpinnings of insecure attachment in children. In order to examine how insecure attachment is formed, research mostly focused on the environmental (Fearon et al., 2006; Bokhorst et al., 2003) and maternal (Cummings & Davis, 1994; Lovejoy, Graczyk, O'Hare, & Neuman, 2000) factors such as SES (Bakermans-Kranenburg, van IJzendoorn, & Kroonenberg, 2004; Cyr, Euser, Bakermans-Kranenburg, & Van IJzendoorn, 2010; Diener, Nievar, & Wright, 2003; Falco et al., 2014; Shaw & Vondra, 1995; van den Boom, 1994), maternal mental health (Radke-Yarrow, 1991) and maternal sensitivity (Ainsworth, Blehar, Waters, & Wall, 1978; Bailey, Redden, Pederson, & Moran, 2016; Posada et al., 1999).

Maternal sensitivity refers to mothers' warmth, acceptance, non-intrusive and prompt responsive behaviors in everyday caregiving practices (Tamis-LeMonda & Baumwell, 2010). Sensitive mothers are aware of their children's current emotional state, soothe and guide them when the children reach the limit of their own emotion and self-regulation abilities (Landry, Swank, Assel, Smith, & Vellet, 2001; Landry, Smith, & Swank, 2006). Mothers' acknowledgment and responsiveness towards their children's emotions are requirements for the quality of the mother-child attachment relationship (Bailey, Redden, Pederson, & Moran, 2016). According to Thompson (2006), the mechanism behind the relationship between maternal sensitivity and toddlers' attachment security can be explained with two reasons. First, maternal sensitivity helps children emotion regulation during the distress and it helps children to understand that how to regulate themselves during the unwanted situations such as separation from the mother. Second, sensitivity increases the toddlers' self-efficacy

since children who receives responsive answers from their caregiver can understand what to do get a positive response from someone else. Therefore, these underlying mechanisms can help children to form secure attachment.

In other words, maternal sensitivity bolsters the formation of secure attachment relationship between mother and child (Meins, Fernyhough, Fradley, & Tuckey, 2001; Pederson & Moran, 1995), whereas maternal insensitivity may impinge on the development of secure relationship (Ainsworth, Bell, & Stayton, 1974; Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2005; Gedaly & Leerkes, 2016). One of the fundamental contributors for maternal insensitivity is maternal mental health problems (Booth, Macdonald, & Youssef, 2018), which is also a risk factor for insecure attachment (Pederson & Moran, 1996).

Over the decades, the wide array of research has shown that both poor maternal mental health (Teti, Gelfand, Messinger, & Isabella, 1995; Radke-Yarrow, 1991; Lyons-Ruth, Connell, Grunebaum, & Botein, 1990) when combined with low SES (Casady, Diener, Isabella, & Wright, 2001) can actually affect maternal sensitivity and child's secure attachment (Campell et al., 2004; Gedaly & Leerkes, 2016). Conger and Donnellan (2007) proposed that the negative effects of *economic hardship* or *economic pressures* (i.e., low income, high debts and assets, negative financial events) shared a link with parent's emotional behavioral problems and disruptions in parenting practices. For instance, parents who experience economic hardship avoid giving warnings and promoting positive behaviors of their children. Besides, they tend to use harsher parenting practices rather than explaining the situation in a more sensitive way which in turn potentially elevate risk of attachment insecurity (Conger & Donnellan, 2007). Since the socio-economic disadvantages worsens mothers' mental health well-being while decrease their sensitive caregiving

behaviors, it is noteworthy to investigate the association between maternal mental health well-being, maternal sensitivity and toddlers' attachment security such risk groups. Studies on this relationship has been demonstrated in western culture (Bakermans-Kranenburg, van IJzendoorn, & Kroonenberg, 2004; Campell et al., 2004; Lyons-Ruth, Connell, Grunebaum, & Botein, 1990) but the number of studies from eastern culture is limited (Jin, Jacobvitz, Hazen, & Jung, 2012; Rothbaum, Weisz, Pott, Miyake, & Morelli, 2000).

In Turkey, the attachment research mostly focused on middle childhood (Sumer & Anafarta Sendag, 2009), adolescents (Gungor & Sumer, 2000), late adolescents (Sumer, 2006) and adults (Arikan & Karanci, 2012; Sumer & Gungor, 1999). To the best of my knowledge, only one research project that specifically focuses on early childhood period has been conducted with eighty-five Turkish mothers and their children between the ages of 10 to 50-months reported a positive association between maternal sensitivity (Sumer, Selcuk, Gunaydın, Salman, & Harma, 2008), maternal education and toddlers' secure attachment (Sumer, Sayıl, & Berument, 2016). However, not only in their studies (Sumer, Selcuk, Gunaydın, Salman, & Harma, 2008; Sumer, Sayıl, & Berument, 2016) but also in others that focus on early childhood and toddlerhood (Baydar et al., 2014; Baydar & Akcinar, 2015), environmental and maternal risk factors are hardly addressed. In order to fill this gap in the literature, in my study I examine how maternal sensitivity and child's attachment security vary based on mothers' mental health symptomatology in a high risk, low SES sample.

1.1 Attachment and Attachment Security

Attachment theory explains the relationship between the child and his/her primary caregiver as a biological underpinning emotional bond (Bowlby, 1969),

unique to human species. Infants experience extended periods of time in infantile helplessness, and therefore identifying the attachment figure, who is trustworthy and responsive, and demonstrates three functions of attachment (Bowlby, 1958, 1969; Ainsworth & Bowlby, 1991), namely, *proximity maintenance, secure base, and safe haven* (Bowlby, 1969), is vital for the survival.

Proximity maintenance refers to children's desire to establish closeness to their primary caregiver (Bowlby, 1969). If children experience closeness to their caregivers and the caregiver fulfills the *secure base* function, they can continue to explore their world easily, proceed to play and socialize around their attachment figures (Bretherton, 1992). Further, when the children feel anxious, afraid, tired or sick, they look for protection and comfort from their attachment figures (Ainsworth, 1985; Bowlby, 1977). If this protection and comfort or *safe haven* function of provided, the child develops capacity to trust others (Ainsworth, 1985; Bowlby, 1977; Cooper, Hoffman, & Powel, 2009).

According to the theory, children who find affection, in their relationship with their responsive caregivers, are more prone to form *secure attachment* relationship (Bowlby, 1969), unlike the children whose mothers are aloof, unreliable and unresponsive (Ainsworth, Bell, & Stayton, 1974) as demonstrated in Mary Ainsworth's home observation studies. In her *Uganda* (1967) and *Baltimore* (1978) *studies,* Ainsworth indicated that *secure* children intently explore their surroundings and when their mothers disappear, these children tended to show distress. These securely attached children can be easily soothed by their mothers' touch, greeting or vocalization (Ainsworth, 1967; Ainsworth & Bowlby, 1991). In contrast, children with *insecure* attachment show distress (e.g., crying) even in the presence of their mothers and they could not be easily relieved upon their mothers' return (Ainsworth,

1967). In her observations, there was a relationship between individual differences in maternal behaviors and child behaviors (Ainsworth, Bell, & Stayton, 1974). For example, some of the mothers followed their children's signals (e.g. crying, smiling, pointing) while others had difficulty to detect and respond to these signals (Ainsworth & Bell, 1970; Bell & Ainsworth, 1972; Ainsworth & Bowlby, 1991). This difference in mothers' responsiveness has been found to be an important predictor for *attachment security,* which later systematically and experimentally investigated in *Strange Situation Paradigm (SSP) (*Ainsworth, Blehar, Waters, & Wall, 1978).

The SSP categorized three attachment styles, namely, *secure (type B), insecure-avoidant (type A), insecure-ambivalent/resistant (type C)* in a 20-minute psychometric lab procedure for 9 to 18 months old children (Ainsworth & Bell, 1970; Ainsworth, Blehar, Waters, & Wall, 1978). *Securely* attached children show distress in the absence of their mothers, but they can be easily soothed by their mothers at the same time whereas *insecure-avoidant* children mostly do not exhibit distress and they do not look for contact with their mothers when they return (Sroufe & Waters, 1977). On the other hand, *insecure-ambivalent/resistant* children show intimate close relationship during the presence of mother. When their mother is not sufficiently near them, they become highly disturbed and their distress continues even after reunion with their mothers and numerous maternal attempts to soothe them (Ainsworth & Bell, 1970).

In addition to these three (*type A, type B, type C*) attachment styles, in mother-child dyads researchers observed a set of child behaviors that were hard to categorize (Main & Hesse, 1990; Main & Solomon, 1990). These children displayed opposing behaviors during the procedure and they concurrently displayed both

secure and insecure behaviors upon their mothers' return (Main & Solomon, 1990). Later, Main and Solomon (1990) defined disorganized attachment for those children, who show complex behaviors due to their caregivers' frightening, hostile, abnormal (Main & Hesse, 1990) and extremely unresponsive (Lyons-Ruth, Bronfman, & Parsons, 1999) behaviors. Although SSP is a valid measurement tool to identify attachment styles of toddlers, it focuses to a limited age range of 9 to 18 months. Further, the assessment takes place in a laboratory environment and narrows the range of observed maternal behaviors that can be relevant and potentially observable in home setting (van IJzendoorn, Vereijken, Bakermans-Kranenburg, & Riksen-Walvaren, 2004). To overcome these challenges, researchers developed Attachment Q-Sort (Waters, 1995).

Attachment Q-Sort (Waters, 1995), involving 90 child behaviors sorting and ranking, assesses 12-48 months old children's *secure base* and exploratory behaviors in natural contexts (e.g. home environment). A number of studies (van Dam & van Ijzendoorn, 1988; Solomon & George, 1999; van Ijzendoorn, Vereijken, Bakermans-Kranenburg, & Riksen-Walwaren, 2004) demonstrated concordance between SSP and AQS in predicting attachment security of infants (Vaugh & Waters, 1990) and toddlers (Howes & Hamilton, 1992), indicating Attachment Q-Sort is a valid measurement technique to identify secure attachment behaviors of children (Pederson & Moran, 1996). Furthermore, preveious studies that used AQS showed that the factors such as sensitivity/responsiveness (Casady, Diener, Isabella, & Wright, 2001; Sumer et al., 2008), mental health and socio-economic status (Coyl, Roggman, & Newland, 2002) are potent to shape the mother-child attachment relationship. As a consequence, since this thesis project aims to investigate the association between maternal mental health symptomatology, sensitivity and

toddlers' attachment security of children between 12 to 38 months old in low-SES Turkish sample, the AQS was used.

1.2 Maternal Sensitivity

Maternal sensitivity is a comprehensive term that refers to accessibility of mother within the child-mother interaction (Ainsworth, 1969), mother's capactiy to read the child's signals (Ainsworth et al., 1978) and giving relevant responses (Biringen, Matheny, Bretherton, Renouf, & Sherman, 2000) to these signals. A considerable amount of research stressed out the positive influence of maternal sensitivity on developmental trajectories (Meins, Fernyhough, Fradley, & Tuckey, 2001) such as socio-emotional (Leekers, Blankson, & Brein, 2009), cognitive (Finch, Johnson, & Phillips, 2015) and mental health development (Stams, Juffer, & Van Ijzendoorn, 2002). Particularly, maternal sensitivity emphasized as one of the tenets of secure mother-child relationship (De Wolff & Van IJzendoorn, 1997) and measured predominantly with *Ainsworth Maternal Sensitivity Scales (AMSS), Emotional Availability Scales (EAS), Maternal Behavior Q-Sort (MBQS).*

First, Ainsworth utilized *Ainsworth Maternal Sensitivity Scales (AMSS)* in her original studies, which is based on longer than fifteen-hour home and laboratory observations for each participant (Ainsworth, 1969; Ainsworth et al., 1971). AMSS clusters sensitive caregiving behaviors under four subheadings namely, maternal awareness to infant's signals, precise interpretation of these signals, giving relevant responses and being punctual in response times. Findings from a longitudinal study observing 49 German mother-child dyads in home environment when the infants were 2, 6 and 10 months old via AMSS, showed that sensitive mothers' children depict less insecure behaviors during the SSP, when they were 12 months old (Grossman et al., 1985).

Second, *Emotional Availability Scales (EAS)* (Biringen et al., 1998) is another empirical method that measures maternal sensitivity within multi-dimensional construct, including both maternal and child scales. EAS basically focused on the idea that mothers' emotional availability (e.g. responsiveness and promptness) is positively associated with children's tendency to use their mothers' as secure base (Biringen et al., 1998). These emotionally available mothers' children are more likely to form secure relationships (Biringen, Derscheid, Vliegen, Closson, & Easterbrooks, 2014; Easterbrooks & Biringen, 2000; Ziv et al., 2000).

Finally, Pederson and Moran (1995) expanded *AMMS* since it was insufficient to detect unique indicators of maternal sensitivity (e.g., sharing same speed with child's mood and pace) in different contexts. Maternal Behavior Q-Sort (MBQS; Pederson & Moran, 1995) consists of 90 items based on the quality of maternal caregiving behaviors and each item is coded by trained observers and distributed to three different piles from 1 to 9 (e.g. 1 to 3 least representative behavior of mother whereas 7 to 9 most representative behavior of maternal sensitivity). This Q-Sort methodology's validity demonstrated in many studies (Bailey, Waters, Pederson, & Moran, 1999; Ekmekci et al., 2015; Emmen, Malda, Mesman, Ekmekci, & van Ijzendoorn, 2012; Pederson & Moran, 1995) and it has been used in different contexts (Pederson et al., 1990; Posada et al., 1999; Posada et al. 2002) and cultures including Turkey (Posada, Carbonell, Alzate, & Plata, 2004; Sümer et al., 2008).

The concordance of these three sensitivity measurements was demonstrated in Borhn, Lee and Bornstein (2018) study with 50 European-American mothers-infant dyads. Both *EAS* and *MBQS* significantly and positively related to *AMMS*. Nevertheless, *MBQS* has much larger correlation with *AMMS*, which is the "gold

standard" of maternal sensitivity measures (Bohrn et al., 2018). Also, MBQS offers applicability in various context and provides a more comprehensive and precise measurement method than others. Therefore, in the current study in order to examine the association between maternal sensitivity, toddlers' attachment security and maternal mental health symptomatology, MBQS was used.

1.3 Maternal Mental Health Symptomatology

Mental health can be described as absence of mental diseases and individual's ability of dealing with daily stressors in full function with a sentiment of self-worth and willingness to form positive relationships (Bhugra, Till, & Sartorius, 2013). Mental health problems are common and can play a critical role for parents and their children (Gelfand & Teti, 1990). A meta-analysis of 174 studies demonstrated that 1 in every 5 adults experienced mental health issues within past twelve months of assessment time and 29.2% had a mental health disorder at least once in their life time (Steel et al., 2014). According to World Health Organization ([WHO], 2008) females are likely to experience more mental health problems, specifically depression. Depressed mothers can be less responsive to their infants' cues and they are inadequate to provide stimulating environment for their children (Downey & Coyne, 1990). Also studies depicted that lack responsiveness, which derives from maternal mental health problems, may resulted in detrimental effects on infants' and toddlers' cognitive (Kurstjens & Wolke, 2001; Kiernan & Maria Carmen, 2008; Milgrom, Westley, & Gemmill, 2004; Sohr-Preston & Scaramella, 2006), socio-emotional (Cogill, Caplan, Alexandra, Robson, & Kumar, 1986; Lyons-Ruth, Connell, & Grunebaum, 1990), behavioral development (Beck, 1999; Caplan, Cogill, Alexandra, Robson, Katz, & Kumar, 1986; Elgar, McGrath, Waschbusch, Stewart, & Curtis, 2004) and child's physical growth (Stewart, 2007). In addition to these

factors, the maternal mental health problems are associated with insecure attachment in infancy (Lyons-Ruth, Zoll, Connell, & Gruneboun; 1986; Lyons-Ruth, Connell, & Grunebaum, 1990; Radke-Yarrow, 1991) and toddlerhood (Coy, Roggman, & Newland, 2002; Cichetti, Rogosch, & Toth, 1998; Martins & Gaffan, 2000; Radke-Yarrow, Cummings, Kuczynski, & Chapman, 1985).

Toth, Cicchetti, Rogosch and Sturge-Apple (2009) found that attachment insecurity is higher among the 20 months-old toddlers, if the mothers have depression history, compared to mothers without history. The maternal hostility was emphasized as one of the possible explanations for relationship between maternal depression and insecure attachment (Coy et al., 2002; Lovejoy, Graczyk, O'Hare, & Neuman, 2000; Lyons-Ruth, Connell, Zoll, & Stahl, 1987). Since depression mostly accompanies with distress, depressed mothers are likely to be hostile and show lower sensitivity toward their toddlers' daily needs (e.g. feeding or putting the baby sleep) which, in turn, leads to insecure attachment (Lovejoy, Graczyk, O'Hare, & Neuman, 2000; Lyons-Ruth, Lyubchik, & Wolfe, 2002). Moreover, the high level of maternal anxiety was also found to be an important factor for maternal insensitivity (Mount, Crockenberg, Barrig Jo, & Wagar, 2010) and the formation of positive mother-child relationship (Stein et al., 2012). For instance, Nicol-Harper, Harvey, and Stein (2007) showed that mothers in postnatal period with high trait anxiety were less able to provide sensitive-responsive caregiving during play sessions to their infants between the ages of 10 to 14 months old. These effects of maternal mental health problems are not limited to postnatal period (Moehler, Brunner, Wiebel, Reck, & Resch, 2006) as demonstrated in longitudinal studies (Luoma et al., 2001).

In their review paper, Beardslee, Bemporad, Keller and Klearman (1983), children who were raised by parents with mental health disorders are more likely to

experience depression in their adulthood. A longitudinal study also demonstrated that maternal mental health problems when the person is 30 months old, is associated with adult attachment insecurity at the age of 30 (Slominski, Sameroff, & Rosenblum, 2011). Consequently, maternal mental health has a key role in individuals' mental health development and attachment security through the childhood (Cummings & Davies, 1994), to adolescence and adulthood (Cooper, Fearn, Willets, Seabrook, & Parkinson, 2006; Fendrich, Warner, & Weismann, 1990). As previous studies shown the potent impact of maternal mental health symptomatology on maternal sensitivity and toddlers' attachment security in early childhood, how risk factors other than maternal mental health symptomatology such as SES contribute to maternal insensitivity and insecure attachment must be examined.

1.4 Socioeconomic Status

The socioeconomic status (SES) does not have single definition and, in generally, the parental education and family household income were found as the most robust indicator of SES (Ensminger & Fotherhgill, 2003). The effects of socioeconomic status on child development have been intensively studied in the literature and in general, high SES buffers negative parenting behaviors (e.g., hostility, insensitivity, unresponsiveness) and increases the likelihood of positive developmental outcomes of the children (Letourneau, Duffett-Leger, Levac, Watson, & Young-Morris, 2011; Shaw & Vondra, 1995) such as secure attachment (Diener, Nievar, & Wright, 2003). In various studies, low SES emphasized as a risk factor for families (Duncan & Brooks-Gunn, 2000) since it increases daily stress and anxiety of parents (McLoyd, 1990) which, in turn, parental mental health problems, insensitivity and hostility towards their infants (Conger et al., 1992; Conger &

Donellan, 2007). This relationship also revealed in different meta-analyses (Cyr, Euser, Bakermans-Kranenburg, & Van IJzendoorn, 2010; De Wolff & van IJzendoorn, 1997; Mesman, van IJzendoorn, & Bakermans-Kranenburg, 2012) demonstrating the negative association between low socio-economic background, sensitive parenting behaviors and secure attachment of children. For instance, a study found that mothers with four years college degree demonstrate higher level of sensitivity when compare to mothers without high school degree or less (Tamis-LeMonda, Briggs, McClowry, & Snow, 2009). Even though previous studies underlined the low socio-economic status as a risk factor for maternal sensitivity and child's secure attachment, there are limited number of studies focusing on the relationship between maternal sensitivity, attachment security and other risk factors, in particular mental health (Raikes & Thompson, 2005).

Recently, Newland, Crnic, Cox and Koonce (2013) showed early economic disadvantages significantly associated with maternal mental health symptoms (i.e., depression, anxiety, hostility, somatization) and maternal sensitivity. They also depicted that higher level of maternal depression and somatization predict lower level of maternal sensitivity (Newland, Crnic, Cox, & Koonce, 2013). Besides, in Coyl, Roggman and Newland's study (2002) maternal depression and economic stress (e.g., not able to pay bills) among 169 U.S. mothers affected their 14 months old infants' attachment security. They also underlined that infants who have mothers with higher level of depressive symptoms and stress are more likely to show insecure attachment in mother-rated Attachment Q-Sort. Consequently, previous studies demonstrated the relationship between economic hardship, increased level of anxiety, stress and depressive symptoms among parents, and their contribution to insensitive caregiving behaviors and insecure attachment (Bolger, DeLongis,

Kessler, & Schilling, 1989; Conger & Donnellan, 2007; DeLongis, Folkman, & Lazarus, 1988). In the line with previous studies, I presented my model in order to investigate the association between maternal mental health symptomatology, maternal sensitivity and toddlers' attachment security among low-SES Turkish sample which I will cover in the next section.

1.5 Present Study Model

The existing literature revealed the negative impact of economic difficulties and problems in both maternal psychological well-being and parenting practices (McLoyd, 1990; Conger et al. 1992; Conger & Donnellan, 2007). Moreover, the detrimental impact of adverse parenting practices on children's emotional, behavioral, cognitive and physical development were emphasized in different studies (Conger et al., 1992; McLoyd, 1990; Conger & Donnellan, 2007). As a result, the present study aims to examine (See Figure 4) how maternal mental health symptomatology is associated with maternal sensitivity and toddlers' attachment security in a low SES group. The research questions and hypothesis were indicated above.

R1: Does toddlers' attachment security positively associated with maternal sensitivity?

H1: I hypothesized that sensitivity will be positively associated with toddlers' attachment security.

R2: Does maternal mental health symptomatology negatively associated with sensitivity?

H2: I hypothesized that maternal mental health symptomatology will be associated with sensitivity negatively.

R3: Does maternal mental health symptomatology negatively associated with toddlers' attachment security?

H3: I hypothesized that maternal mental health symptomatology will be associated with toddlers' attachment security negatively.

R4: Does maternal sensitivity the relationship between maternal mental health symptomatology and toddlers' attachment security

H4: Maternal sensitivity will mediate positive relationship between maternal mental health symptomatology and toddlers' attachment security.

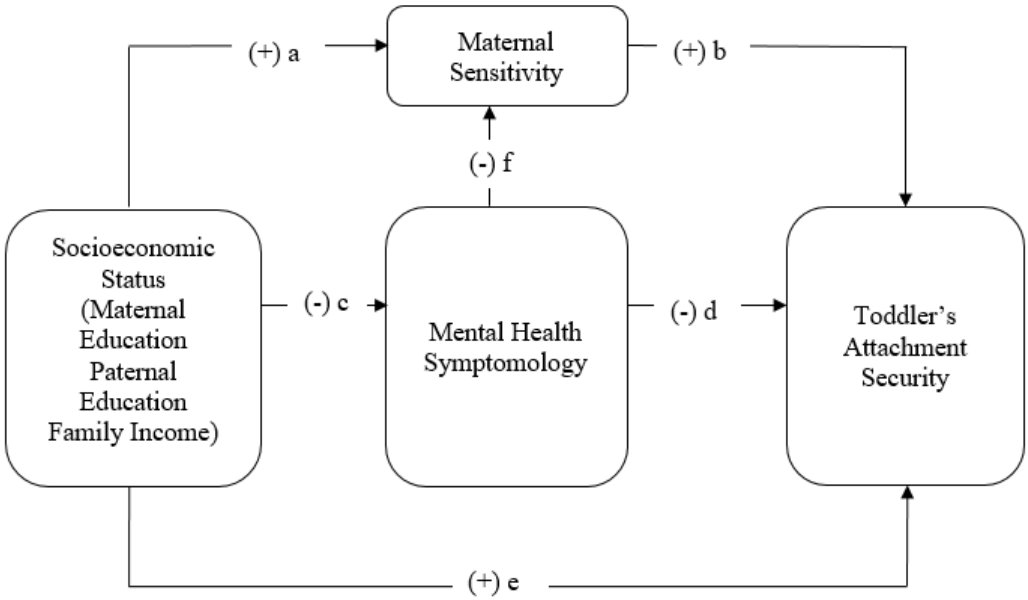


Figure 1. Present Study Model

Note: Abbreviations in the figure refer to: (a) proposed positive association between socio-economic status and maternal sensitivity; (b) proposed positive association between maternal sensitivity and toddler's attachment security; (c) proposed negative association between low socio-economic status and mental health symptoms of mothers; (d) proposed negative association between mental health symptoms of mothers and toddler's attachment security; (e) proposed positive association between socio-economic status and toddlers' attachment security; (f) proposed negative association between maternal mental health symptoms and maternal sensitivity.

CHAPTER 2

METHOD

2.1 Participants

One hundred forty-eight mothers (M_{age}=30.44 years, *SD*=4.7) and their toddlers between the age of 12 to 38 months old (M_{age}=23.18 months, *SD*=6.7) participated in this study. The power analysis for the present study model completed by G*Power (3.1.9.4) software and it indicated that minimum 77 samples is required with %80 power. Since the present study was a part of larger intervention project, the data collection procedure continued even after reaching the required number of participants.

There were three inclusion criteria for the participants: (1) being the primary caregiver of the child as a mother (2) not having of any serious health issues (both mother and child), (3) having monthly income less than TL 5000[1] and (4) not having 4-years university degree for the mothers. The participants recruited via advertising in municipalities, community health centers, parents in public schools or the acquaintance of research assistants and undergrad students. Also, individual home visits were done with Sancaktepe City Council in order to enhance recruitment.

2.2 Measures

2.2.1. Demographic Forms

Mothers were asked to report their demographic characteristics marital status, education level (i.e., primary school, middle school etc.), employment status of themselves and their spouses' and monthly income in household. Demographic characteristics of mothers are provided in Table 1.

Table 1. Demographic information.

[1] The poverty threshold in Turkey is 4.997TL when the study started at 2015.

	N	Percentage
Marital Status		
Married	147	98
Single	2	1.3
Remarried	1	0.7
Maternal Education Level		
Illiterate	3	2
Literate	5	3.4
Elementary School	47	31.8
Secondary School	31	20.9
High School	44	29.7
Collage (2 Years)	18	12.2
Total House Hold Income		
850 TL and below	4	2.7
From 851 TL to 1500 TL	32	21.6
From 1501 TL to 3000 TL	80	54.1
From 3001 TL to 5000 TL	30	20.3
From 5001 TL to 7500 TL[1]	2	1.4

[1]=These two people were not discarded since they have education lower than 4 years University degree.

2.2.2. Maternal Behavior Q-Sort

MBQS (Pederson & Moran, 1995) measures the quality of mothers' caregiving behaviors based on 90 items such as maternal sensitivity (i.e., "Mother is able to understand why her baby show distress".), reciprocal-give and take behaviors (i.e., "The baby's responses indicates that interactions are equally excited."),

perceived relationship between the mother-child dyads (i.e., “Mother enjoys interacting with her baby.”) and appropriate responses of mothers to children’s signals (i.e., “Mother is aware of her baby’s signals and needs even she occupies with any other tasks.”). This observation-based measurement is completed with Q-Sort methodology by trained coders. First, coders distribute 90 items roughly into three piles (30-items for each pile) according to the resemblance of the behavioral characteristics of the mother (e.g., most representative behaviors of the mother, neither typical nor atypical behaviors of the mother, least representative behaviors of the mother). Then, items are sorted from one to nine including 10 items under each score (e.g., 1 for least representative behaviors and 9 for most representative behaviors).

In this study, the Q-Sort procedure was completed with a develop software program in Metu-Q Soft (TUBITAK; Project no: 105K102). The items of the Q-Sort were randomly displayed for the coder to put each item into piles. All videos were coded by two trained independent coders and their inter-rater reliability, which varied between .80 to .95, was computed. The average of coders’ scores were taken and their correlation with Turkish “criterion score”, which was available in METU Q-Soft from the Turkish adaptation and validity study (Sumer et al., 2008), representing ideal sensitivity mother (Pederson & Moran, 1995), was calculated. The scores vary between -1 (i.e., ideally least sensitive mother) to +1 (i.e., ideally most sensitive mother), as the participant’s score close to +1 mother close to ideal sensitive mother. The mean global sensitivity score was .56 for mothers with elementary school education, .50 for the secondary and high school graduated mothers in the previous Turkish study (Sumer et al., 2008; Sumer, Berument, & Sayıl, 2016). The mean score of mothers’ sensitivity was .64 in the current study.

2.2.3 Attachment Q-Sort

Toddlers' attachment security in relation to their mothers were assessed by Attachment Q-Sort (AQS) (Waters, 1995). AQS consists of 90 items that describe children's secure base behaviors (e.g., "Child uses his mother as a secure base, he moves away in order to explore his environment and returns when he finishes his exploration.") among a wide range mother-child interaction. Similar to MBQS, coders distribute 90 items roughly into three piles (30-items for each pile) according to the resemblance of the behaviors to the child (e.g., most characteristic behaviors of the child, neither typical nor atypical behaviors of the child, least representative behaviors of the child). Then, items are sorted from one to nine, including 10 items under each score (e.g., 1 to 3 least representative behaviors, 7 to 9 for most representative behaviors).

In this study, all videos were coded by two trained independent coders, whose inter-rater reliabilities varied between .80 to .97. Then the average of two coders' AQS ratings were computed to calculate the attachment security scores of the children based on the criterion score for "ideal secure child" (Waters, 1995), in METU-Q Soft. The METU-Q Soft the software developed for AQS and MBQS coding and score calculation (Sumer et al., 2008). The Turkish version of AQS was translated and validated in Turkish sample previously in another TUBITAK Project (No: 105K102). Toddlers' mean attachment security score was .22 for children between the 12-18 months, .19 for children between the 19-24 months old and .26 for the children older than 24 months old in the previous Turkish study (Sumer et al., 2008; Sumer, Berument, & Sayıl, 2016). The mean score of toddlers' attachment security was .33 for the children between the 12-38 months old in the current study.

2.2.4 Brief Symptom Inventory (BSI)

The mothers' current mental health status is measured by Brief Symptom Inventory (BSI) (Derogatis, 1992). The BSI was first developed with 90 items (Derogatis, 1992). Later, in its revised and a short form was introduced with 53 items (Derogatis & Lazarus, 1994). Participants were asked to respond to questions about their experiences in 1-week period in a 4-point Likert-scale (0=Never, 4=Always). In this study, the Turkish version of BSI (Şahin, Batıgün, & Uğurtaş, 2002) which has five dimensions, namely, anxiety, depression, somatization, hostility and negative self, was used. Participants' total mental health status score were calculated by taking the average score of all items. The Cronbach's alpha coefficient for the factor subscales vary between .70 (depression subscale) to .88 (somatization) for the Turkish version of BSI (Şahin, Batıgün, & Uğurtaş., 2002). In this study, the total scale has .96 Cronbach's alpha coefficients. The Cronbach alpha values of the subscales are as follows; anxiety .88, depression .89, somatization .81, for negative-self .87, hostility .73 in current study.

2.3 Procedure

The data collection started after study was approved by Ozyegin University, Ethic Committee (see Appendix A) and the funding was granted by Scientific and Technological Research Council of Turkey (Project no: TUBITAK3501-114K813). The current study is part of a larger research, which aimed to adapt and measure effectiveness of the 8-week DVD based Circle of Security Parenting (COS-P) program in Turkish low SES mothers and their toddlers. The recruitment chart of the study is provided below (see Figure 5). In the present thesis project, only 1st wave of data was analyzed to examine the association between maternal mental health symptomatology, maternal sensitivity and toddlers' attachment security.

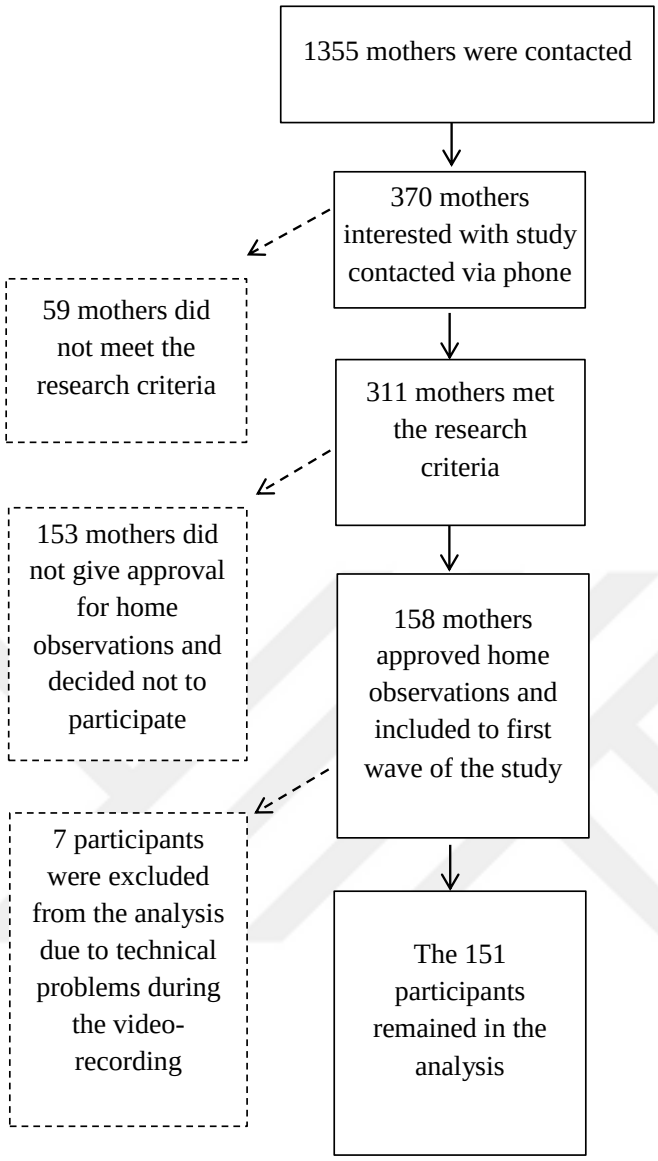


Figure 2. The Research Inclusion Criteria.

After contacting the mothers who gave verbal consent to participating the study suitable hours for mothers and children (i.e., sleeping time of the toddler) were checked and got an appointment from mothers and they were notified that the video recording will start as soon as observers arrive to the premises. The trained observer/s did the 2 to 3 hours home visits while child and mother were alone. Upon arrival, participants were given the consent forms by observers and asked to continue their daily routine such as feeding the baby, cleaning home, or doing laundry. The whole home-visit procedure was video-taped using a wide-angle digital video camera

(SJ5000; SJCAM, Shenzhen, China) to examine both mother-child behaviors to code mothers' sensitivity behaviors and toddlers' attachment security. Following the 1st hour of naturalistic observation, a pack of questionnaire was given the participants including demographic forms and Brief Symptom Inventory (BSI) (Derogatis, 1992) (See Appendix B) while the recording was preceded. The questions were read to 3 participants who were not able to read questions due to the illiteracy by the observer. The remaining participants filled out the scales on their own. Two-pair of trained independent coders were given access to view the recorded videos online in their private PCs, in order to code mothers' sensitivity (MBQS; Pederson & Moran, 1995) and toddlers' attachment security (AQS; Waters, 1995). AQS and MBQS coding teams were independent and same individuals did not code the videos except for the supervisor of the thesis project.

2.4 Data Analysis

The present study aimed to examine the association between maternal sensitivity, toddlers' attachment security and mothers' mental health symptomatology in a low SES Turkish sample. Therefore, first correlation analyses were completed. Secondly, in order to investigate the unique contributions of independent variables' (maternal mental health and maternal sensitivity) impact on toddlers' attachment security the hierarchical regression was completed while the maternal education level and family income were assigned as control variables. Lastly, since this current study hypothesized that maternal sensitivity will mediate positive relationship between maternal mental health symptomatology and toddlers' attachment security the mediation analysis was completed with SPSS Macro by Hayes (2018).

2.4.1 Data Screening

The missing values, normality and outliers were detected according to data screening method of Tabachnick and Fidell (1996). In this study, there were 158 participants, but 8 of them discarded from the analysis due to technical problems during video-recording and 1 participant's video was shorter than 1 hour. The maternal mental health status' subscales and total score were calculated. Then, univariate outliers were checked by calculating Z-Scores of each variable for multivariate outliers Mahalanobis distance was calculated and one outlier detected. Univariate outliers were dealt according to Tabachnick and Fidel (1996) and the multivariate outlier was excluded. Then, the 148 participants remained in the analysis.

CHAPTER 3

RESULTS

3.1 Correlation Analysis

The Pearson's correlation coefficients revealed that the maternal sensitivity and toddlers' attachment security were positively correlated with each other (r = .38, p = .00). Further, total maternal mental health symptomatology score of mothers was negatively correlated with both maternal sensitivity (r = -.21, p = .00) and toddlers' attachment security (r = -.23, p = .00). According to results, all maternal mental health variables were highly correlated with each other therefore, the total score of maternal mental health symptomatology were used in further analysis. Further, both the maternal education level (r = .40 p = .00) and paternal education level (r = .40, p = .00) were highly correlated with total family household income and the composite score of SES were calculated for the further analysis as in the study of Gündüz, Yağmurlu, and Harma (2015). The means, standard deviations (See Table 2) and the Pearson correlation coefficients of the variables were provided above (See Table 3). The present thesis project rejects the null hypothesis and H_1, H_2 and H_3 were supported.

Table 2. Descriptive statistics of the study variables.

Variables	*M*	*SD*	Min	Max	Skew	Kurt
1.Toddlers'Attachment Security	.33	.18	-.22	.65	-0.74	0.46
2.M Sensitivity	.64	.14	.12	.84	-1.80	3.31
3.M Depression	1.07	.88	0	3.5	.96	.14
4.M Anxiety	.71	.70	0	3.08	1.52	2.17
5.M Negative Self	.79	.73	0	3.25	1.23	1.08
6.M Hostility	.91	.67	0	3.03	1.12	1.07
7.M Somatization	.73	.70	0	3.00	1.36	1.36
8.Total Mental Health Symptoms Score	.84	.66	0	2.94	1.14	.85
9.M Education Level	4.09	1.19	1	6	-0.16	-.58
10.P Education Level	4.47	1.45	2	8	.43	-.55
11.Family Income	2.96	.76	1	5	-0.11	0.18
12.Socioeconomic Status	.003	2.42	-6.0	5.3	.08	-.58

M= Maternal

P= Paternal

Table 3. The Pearson Correlation of the study variables. *N*=148

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1.Toddlers'Attachment Security	–	.38**	-.30**	-.22**	-.24**	-.12	-.13	-.23**	.31**	.22**	.17*	.29**
2.M Sensitivity		–	-.21*	-.22*	-.17*	-.24**	-.14	-.21**	-.18*	-.20*	.18*	.23**
3.M Depression			–	.84**	.83**	.72**	.80**	.94**	-.22**	-.17*	-.09	-.20*
4.M Anxiety				–	.81**	.74**	.78**	.93**	-.27**	-.23**	-.13	-.26**
5.M Negative Self					–	.75**	.67**	.90**	-.27**	-.17*	-.07	-.18*
6.M Hostility						–	.62**	.84**	-.22**	-.21**	-.10	-.22**
7.M Somatization							–	.86**	-.19*	-.17*	-.14	-.24**
8.Total Mental Health Symptoms Score								–	-.26**	-.21*	-.12	-.24**
9.M Education Level									–	.40**	.63**	.84**
10.P Education Level										–	.40**	.74**
11.Family Income											–	.84**
12.Socioeconomic Status												–

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

M= Maternal

P= Paternal

3.2 Hierarchical Regression Analysis for the Toddlers' Attachment

The predictors of toddlers' attachment security were tested in a hierarchical regression analyses according to present study's model. To test collinearity issue between the independent variables the multicollinearity has been checked before the hierarchical regression analysis. The results indicated that the multicollinearity was not an issue (*Socioeconomic Status, Tolerance = .90, VIF = 1.105, Maternal Mental Health Symptomatology, Tolerance = .91, VIF =1.097, Maternal Sensitivity, Tolerance = .91, VIF = 1.089*).

In the first step of the hierarchical regression analyses, the socioeconomic status was entered, and explained 8.7% of the variance in toddlers' attachment security (F (1, 146) = 13,92, p =.000, R^2=*.087*) (See Table 3). In the second step, total maternal mental health symptomatology score was added into equation and explained 2.9% of the variance (F (1, 145) = 4,82, p=.030, R^2=*.029*). In the last step, maternal sensitivity was added into the model and explained 8.7% of unique variance explained (F (1, 144) = 15,748, p =.000, R^2=*.087*). The total model was explained 20% of variance in toddlers' attachment security. These results indicated that there was a possible mediator role of maternal sensitivity between the total maternal mental health symptomatology score and toddlers' attachment security (See Table 4). The mediation analysis of maternal sensitivity between total maternal mental health symptomatology score and toddlers' attachment security was tested with test SPSS Process Macro (Hayes, 2018).

Table 4. The hierarchical regression predicting the toddlers' attachment security.

Step	Predictors	B	β	ΔR^2 (Step)	Adjusted R^2 (model)
1	Socioeconomic Status	.02	.29***		
				.08***	.08
2	Socioeconomic Status	.01	.25**		
	M Total Mental Health Score	-.04	-.17*		
				.02*	.10
3	Socioeconomic Status	.01	.19*		
	M Total Mental Health Score	-.03	-.12		
	M Sensitivity	.38	.30***		
				.08***	.18

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

M=Maternal

3.3 Mediation Analysis of the Maternal Sensitivity Between the Maternal Mental Health Symptomatology and Toddlers' Attachment Security

The mediator effect of maternal sensitivity on the relationship between maternal mental health symptomatology and toddlers' attachment security was examined with SPSS Process Macro (Hayes, 2018). The socioeconomic status was added as covariates into mediation analysis. The results revealed that the maternal mental health symptomatology was significantly predict toddlers' attachment security (*B*= -.047, *SE*=.021, *p*=.029, %95 CI [-.0905,.0048]. Further, the results revealed that the maternal mental health symptomatology was significantly predict maternal sensitivity (*B*=-.036, *SE*=.017, *p*=.039, %95 CI [-.0714,.0018]. Also, maternal sensitivity was significantly

predicting toddlers' attachment security (*B*= .386, *SE*=.09, p=.000, %95 CI [.1942,.5795]. Lastly, the results revealed that, controlling for maternal sensitivity (mediator), the maternal mental health symptomatology was not significantly predicting toddlers' attachment security (*B*= -.033, *SE*=.02, p=.112, %95 CI [-.0749,.0080]. The indirect effect was -.0142, *SE*=.00 with %95 CI [-.0358,.0023] which including zero, so the results indicated that there is no mediation effect (see Figure 6). The present thesis project did not reject the null hypothesis in terms of the mediation effect so the H_4 was not supported.

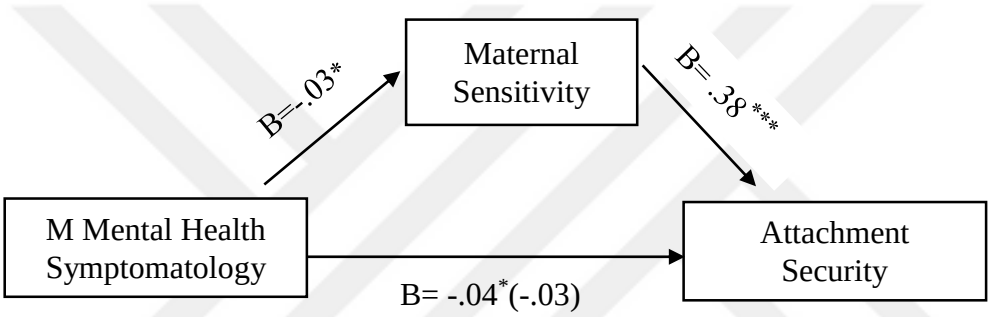


Figure 3. The Mediation Model for Attachment Security.

Note: The figure indicates that there is no indirect effect of maternal sensitivity in the maternal mental health symptomatology and attachment security.
* p <.05. ** p < .01, *** p < .001
M=Maternal

CHAPTER 4

DISCUSSION

Based on existing literature the socio-economic adversity increases parents' mental health symptomatology and decreases their involved parenting practices which may, in turn, attachment insecurity (McLoyd, 1990; Conger et al., 1992; Conger & Donellan, 2007). In the line with previous studies, I hypothesize that maternal mental health symptomatology would be negatively associated with toddlers' attachment security and maternal sensitivity would be positively associated with toddlers' attachment security in low SES Turkish mothers with toddlers. The results showed a negative association between maternal mental health symptomatology and toddlers' attachment security and a positive association between maternal sensitivity and toddlers' attachment security in low SES high-risk sample even when controlled for socioeconomic status. In all, these results were consistent with previous studies in the literature regarding the relationship between maternal mental health, maternal sensitivity and attachment security of children (see Toth, Cicchetti, Rogosch, & Sturge-Apple, 2009; Radke-Yarrow, 1991; Lyons-Ruth, Zoll, Connell, & Gruneboun; 1987).

The significant negative relationship between maternal mental health symptomatology and child's attachment security was consistent with meta-analyses (van IJzendoorn Goldberg, Kronenberg, & Frenkel, 1992; Martins & Gaffan, 2000) and empirical studies (Cicchetti, Toth, & Rogosh, 1999; De Mulder & Radke-Yarrow, 1991) which showed that maternal mental illnesses (e.g. schizophrenia, depression and other effective disorders) increase the likelihood of insecure attachment classification in middle and upper income families. Also, the results of the current study were in line with studies conducted with low-SES samples which demonstrated a significant negative relationship between lower maternal mental health and attachment insecurity

(Egeland & Sroufe, 1981; Spieker & Booth, 1988). As indicated in the literature, the lower socio-economic level increases the parents' level of anxiety, stress and depressive symptoms which, in turn, increased level of insecure attachment among their children (Bolger, DeLongis, Kessler, & Schilling, 1989; Conger et al., 1992; Conger & Donnellan, 2007; DeLongis, Folkman, & Lazarus, 1988; McLoyd, 1990). This tendency was present in the current study sample. Although, the current sample consists of low SES mothers, both maternal education and income explained the variance in child's attachment security in addition to maternal mental health symptomatology. The present study's result also in agreement with Coyl, Roggman and Newland's (2002), they assessed toddlers' attachment security with same measurement methods of this study, and they found low-income mothers with a higher-level depressive symptom likely to have insecure attachment according to mother-rated AQS. Therefore, according to the aforementioned findings in the literature and current study's findings, the low socio-economic status and low maternal education potentially increase mothers' mental health symptomatology and they become more distant during the interaction with their children which may lead to the negative association between the maternal mental health symptomatology and attachment security.

In Turkey, there are limited number of studies which examined the impact of maternal mental health symptomatology on early childhood. Karabekiroğlu, Rodopman Arman and Berkem (2008) found that mothers' depression diagnosis was significantly associated with internalizing, externalizing and psychiatric problems in their children between the ages of 14-43 months old. Moreover, Ozyurt and Elikucuk (2017) found that depressive symptoms of low and middle-income mothers were positively associated with developmental language delay in children between the 24-72 months old. This result may be due to the fact that depressive mothers have less communication with

their children which impinge on language development. The maternal mental health symptomatology's negative impact on childhood development are not limited to these examined factors but also was found to have associations with attachment security of toddlers. However, Turkish studies did not directly address maternal mental health symptomatology's impact on attachment security. The current study found that maternal mental health symptomatology negatively associated with toddlers' attachment security and its unique contribution to toddlers' attachment security was remained significant even when controlled for socioeconomic status.

I also hypothesized that maternal sensitivity would be positively associated with toddlers' attachment security in low-SES Turkish sample. The result showed that mothers' maternal sensitivity was positively associated with observed attachment security of toddlers among low-SES Turkish sample similar to existing literature (van IJzendoorn, Vereijken, Bakermans-Kranenburg, & Rikensen-Walraven, 2004; Egeland & Farber, 1984; Isabella, 1993; Pederson & Moran, 1996; Smith & Pederson, 1988). In the line with current study, Pederson, Moran, Sitko, Campell, Ghesquire, and Acton (1990) used similar assessment methods for maternal sensitivity and attachment security and found these two variables were positively associated with each other. Furthermore, the studies in non-Western cultures were also accord with the current study's finding, they mostly depicted similar patterns in terms of the sensitivity-attachment security relationship (Posada et al., 2002; Valenzuela, 1997; van IJzendoorn & Sagi, 2008).

The studies in Turkey mainly focused on adapting attachment and sensitivity scales, measurements (Kavlak & Şirin, 2009; Kocayörük, 2010; Selçuk, Günaydın, Sümer, & Uysal, 2005; Sümer, Berument, & Sayıl, 2016) or intervention programs for low-SES samples (Metin Orta, 2015) into Turkish culture. Similar to the present study, Yerlioğlu's (2010) study depicted that observed attachment security of children between

the ages of 3 to 6 years old in a laboratory environment via AQS was significantly correlated with maternal sensitivity measured using AMSS. Further, in the line with current study a research project (Sümer et al., 2008; Sümer, Berument, & Sayıl, 2016) found a positive significant relationship between toddlers' attachment security and mothers' sensitivity in home observations. However, the low socio-economic status was not an inclusion criterion and the effects of socio-economic status on the sensitivity-security relationship were not the research interest of these aforementioned Turkish studies in early-childhood. Therefore, the current study contributes to the Turkish attachment literature by examining the relationship between observed maternal sensitivity and attachment security of children among low-SES Turkish sample. The present study provides consistent results with both international and Turkish literature, depicts both observed maternal sensitivity and attachment security of children associated with each other among toddlers between the ages of 12 to 38 months old low-SES Turkish sample.

Lastly, in the present study I hypothesized that maternal sensitivity mediates the relationship between maternal mental health symptomatology and toddlers' attachment security. However, the results showed that maternal sensitivity did not significantly mediate the relationship between maternal mental health symptomatology and toddlers' attachment security. The four different explanations could be behind this result. First possible reason for this result is the characteristic of sample. The participated mothers were not clinically referred and previous researches were found that the relationship between sensitivity and toddlers' attachment security much weaker among clinical sample of mothers (De Wolff & Van IJzendoorn, 1997). Further, the insecure attachment style was more frequently observed among the children of unipolar and bipolar depressed mothers when compare to mothers without mental health

symptomatology (Radke-Yarrow, Cummings, Kuczynski, & Chapman, 1985). Therefore, future studies may consider to examine the mediational effect of maternal sensitivity on the relationship between maternal mental health symptomatology and toddlers' attachment security in clinically referred sample of mothers.

The second possible explanation for this insignificant mediation might be Turkish parents' coparenting behaviors. Due to characteristics of Turkish culture, Turkish families are more prone to live close to extended family members (Ataca, Kağıtçıbaşı, & Diri, 2005) and these extended family members, especially grandmothers, more likely to be involve caregiving (Sever, 1989). If the child receives sensitive caregiving from one of the extended family members instead of her mother, then this caregiver may buffer the negative impacts of maternal mental health symptomatology of mothers. Further, the question of who is attachment figure of the child arises. Thus, the future study may think consider the role of extended family members on caregiving behaviors and their mental health symptomatology on toddlers' attachment security rather than solely examining the mothers' sensitivity and mental health well-being.

Another possible explanation for this result, might be mothers' mentalization abilities which is defined as the ability to understand the child's intentions, feelings, mental states and being open to interpret the children's internal world in a positive manner (Fonagy, Steele, Steele, Moran, & Higgitt, 1991). Early meta-analyses (De Wolff & van Ijzendoorn, 1997; Goldsmith & Alansky, 1987) underlined that the effects of maternal sensitivity on child's attachment security may not be as robust as emphasized in early studies since these meta-analytic studies found much smaller effect sizes than Ainsworth's original study (Pederson et al., 2014). Therefore, a study re-examined the maternal sensitivity with 71 mother-infant dyads and emphasized that

attachment security was mostly associated with mothers' ability to read child's mental states (i.e., predicting infants' beliefs, feelings or intentions) rather than giving prompt responses to explicit cues and physical needs of the child (Meins, Fernyhough, Fradley, & Tuckey; 2001). This means that the level of mothers' reflective which can be defined as the pre-request of sensitive caregiving behaviors (Laranjo, Bernier, & Meins, 2008; Lundy, 2003; Meins, 1999). Consequently, the mothers' mentalization abilities may better explain toddlers' attachment security as previously indicated in a meta-analysis (Zeegers, Colonnesi, Stams, & Meins, 2017). For instance, a study found that middle-class mothers who were less able to interpret their children's internal world positively, were more likely to have insecure infants in SSP paradigm (Koren-Karie, Oppenheim, Dolev, Sher, & Etzion, Carasso, 2002). Although there are limited number of studies completed on mentalization with high-risk samples (Alvarez-Monjarâs, McMahon, & Suchman, 2019; Schechter et al., 2008), a study found that there is a positive correlation between mothers' mentalization abilities, sensitivity, and attachment security and this relationship remained significant even when controlled for socio-demographic risk factors (Stacks et al., 2014). Since the significant impact of mothers' mentalization abilities over and above socio-demographic variables, mothers in the current study may be low in mentalization and this may contribute to the relationship between maternal mental health and toddlers' attachment security more than sensitivity. Hence, future studies should examine the role of mothers' mentalization abilities while taking into account maternal sensitivity to explain the relationship between maternal mental health and toddlers' attachment security.

Lastly, the reason behind this result might be the different accumulation of the scores into different ranges during the observations. There were two parts of the videos. First, mothers were asked to continue their daily routine. In the second part mothers

instructed to fill out a questionnaire pack. For some mothers, this might have created stress and they might have changed their attitudes and behaviors towards their children. However, the MBQS was coded for the full 2-3 hours period rather than first and second part. This may lead to accumulation of the scores into the more middle range since some mothers were sensitive in the first part but not much in the second part. Further analysis might be relevant in order to identify the differences between two parts of the videos.

The main strength of this study is that both maternal sensitivity and toddlers' attachment security assessed via standardized observational methods by different coders whom trained for either MBQS or AQS. The independent coders rated both mothers' sensitivity and toddlers' attachment security individually. The MBQS increases the validity of measurement since observers coded mothers' behavior in more naturalistic environment with the wide-range of behaviors when compared to self-reported mother-child relationship questionnaires with a higher risk for social desirability. Also, previous studies showed that the convergent validity of AQS with SSP remained only if the items are sorted by trained coders rather than parents (Tarabulsy, Avgaustis, Philips, Pederson, & Moran, 1997; Tarabulsy et al., 2008; van Ijzendoorn, Vereijken, Bakermans-Kranenburg, & Riksen-Walwaren, 2004; Vaughn & Waters, 1990). Therefore, in the present study using trained coders for both maternal sensitivity and toddlers' attachment security measures increases the validity of the assessment.

The present study is subjected to four limitations. Firstly, this study has a cross-sectional design and the causal interpretations are not possible. Therefore, future studies may consider a longitudinal design to investigate risk factors associated to attachment security. Secondly, maternal sensitivity scores obtained from the video-recordings and participated mothers may not behave in their usual manner and they may alter their

behaviors due to observer effect. For instance, sometimes mothers get angry and tend to show physical violence (e.g., slap in the face of the child) and the child pretends as she or he experienced it before and deliberately avoid from the mother. However, even the child shows avoiding behaviors from the physical violence (e.g., running or hiding the face) and mother reports that she sometimes applies to physical violence, this behavior was not observed during any of the observation since the whole observation process recorded with a video camera. In future studies, mothers can be visited at home before video-recordings to meet with the observers. Therefore, they may feel more comfortable during the actual home observation and avoid artificial interactions with their children and behave more naturally. Third, three participated mothers were illiterate in the present study and observers' read the questionnaire in order to obtain their mental health symptomatology scores. These three mothers may have underscored their mental health symptoms due to social desirability. Lastly, in the present study only maternal factors' impact on sensitivity and attachment security were assessed. However, the relationship between mother and child is reciprocal and previous studies indicated that the difficult temperament of the child may decrease caregivers' sensitive caregiving behaviors (Wachs, 2006). Thus, if a mother has a child with difficult temperament, this may decrease mother's observed sensitive caregiving behaviors, so future studies should also control for the impact of infant's temperament on the mother-child attachment relationship.

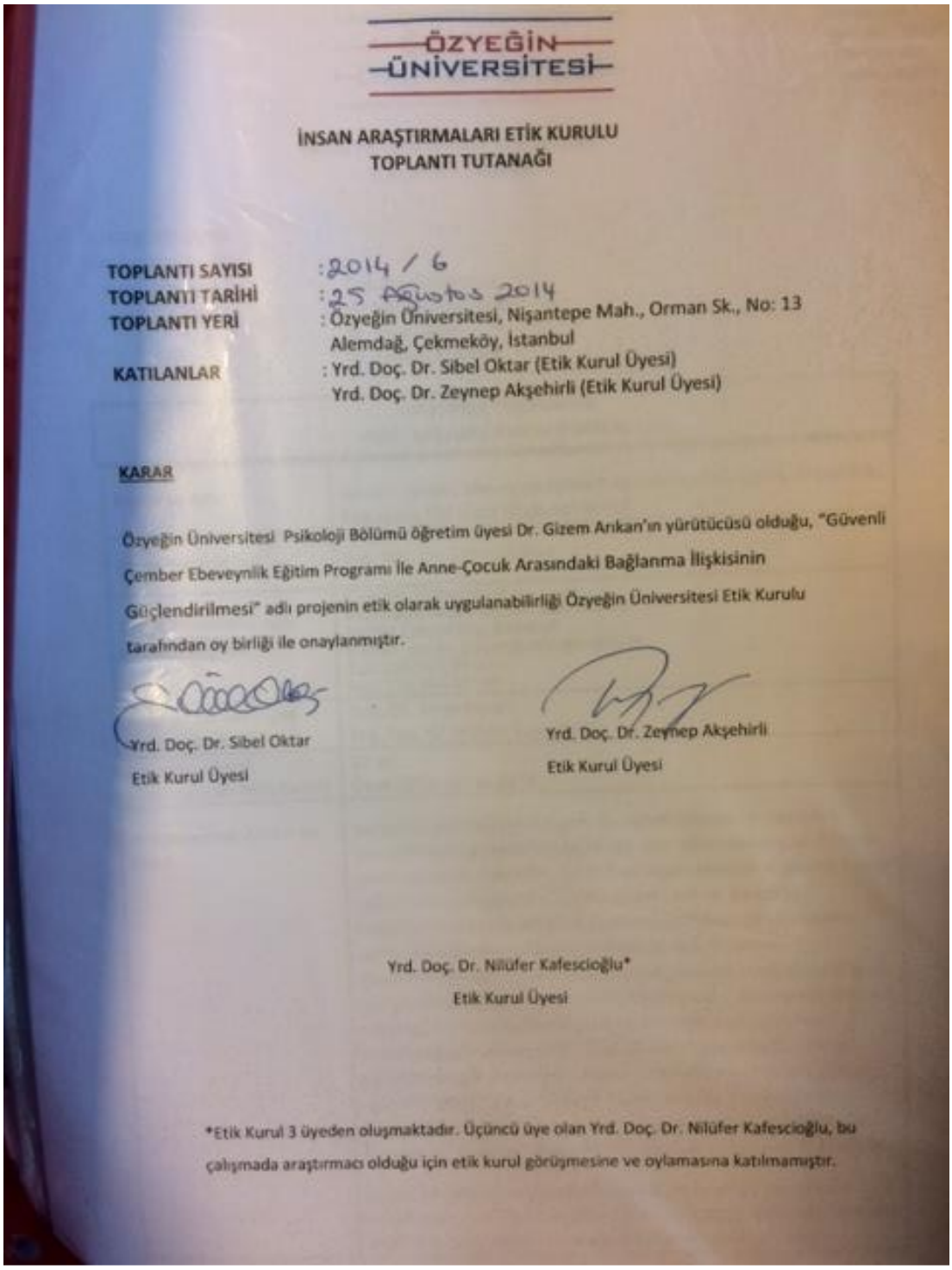
To conclude, the current study suggests that the maternal mental health symptomatology potentially decrease mother's sensitive caregiving behaviors which probably, in turn, the negative association between maternal mental health symptomatology and attachment security in socially a disadvantaged group. Further, even the present study's sample did not consist clinical sample of mothers it was found

that maternal mental health symptomatology explains unique variance in toddlers' attachment security in a subclinical low-SES sample. These findings consistent with the previous studies which found that maternal mental health symptoms have negative significant impact on sensitive caregiving behaviors (Gerdes et al., 2007) and toddlers' attachment security (Lyons et al., 1986). A study found that early interventions programs for parent training in risk-groups can reduce the maternal depressive symptoms even when the mothers have a mild level of depression (Chazan-Cohen et al., 2007). The findings of the present study also serve as a base for planning interventions and suggests that both maternal sensitivity and toddlers' attachment security could benefit from preventive intervention studies that address maternal mental health directly.

In Turkey, one intervention study that aimed to improve low-SES mothers' sensitivity via Video-Feedback Intervention Program (VIPP) and found that mothers' who receive feedback from the program facilitators showed improvement in their sensitivity behaviors (Metin-Orta, 2015). Hence, different from previous preventive intervention studies regarding the maternal sensitivity (Metin-Orta, 2015) and attachment security (Corapci & Arikan, 2017) conducted in Turkey, the current study not only underlined the impacts of maternal sensitivity but also emphasized the maternal mental health on toddlers' attachment security in a low-SES Turkish sample. For both mental health professionals and policy makers, these findings of the present study can be used to develop targeting interventions at mother-child dyads in risk groups to reduce adverse impact of socioeconomic status and maternal mental health symptomatology on sensitive caregiving behaviors and prevent children from its adverse effects on toddlers' attachment security in Turkey.

APPENDICIES

Appendix A. Ethic Committee Approval



ÖZYEĞİN ÜNİVERSİTESİ

İNSAN ARAŞTIRMALARI ETİK KURULU
TOPLANTI TUTANAĞI

TOPLANTI SAYISI : 2014 / 6
TOPLANTI TARİHİ : 25 Ağustos 2014
TOPLANTI YERİ : Özyeğin Üniversitesi, Nişantepe Mah., Orman Sk., No: 13 Alemdağ, Çekmeköy, İstanbul
KATILANLAR : Yrd. Doç. Dr. Sibel Oktar (Etik Kurul Üyesi)
Yrd. Doç. Dr. Zeynep Akşehirli (Etik Kurul Üyesi)

KARAR

Özyeğin Üniversitesi Psikoloji Bölümü öğretim üyesi Dr. Gizem Arıkan'ın yürütücüsü olduğu, "Güvenli Çember Ebeveynlik Eğitim Programı İle Anne-Çocuk Arasındaki Bağlanma İlişkisinin Güçlendirilmesi" adlı projenin etik olarak uygulanabilirliği Özyeğin Üniversitesi Etik Kurulu tarafından oy birliği ile onaylanmıştır.

Yrd. Doç. Dr. Sibel Oktar
Etik Kurul Üyesi

Yrd. Doç. Dr. Zeynep Akşehirli
Etik Kurul Üyesi

Yrd. Doç. Dr. Nilüfer Kafescioğlu*
Etik Kurul Üyesi

*Etik Kurul 3 üyeden oluşmaktadır. Üçüncü üye olan Yrd. Doç. Dr. Nilüfer Kafescioğlu, bu çalışmada araştırmacı olduğu için etik kurul görüşmesine ve oylamasına katılmamıştır.

Appendix B. Scales in Questionnaire Pack

DEMOGRAPHICS

Çalışmaya Katılan Çocuğunuzla İlgili Sorular:

1. Çocuğunuzun Adı ve Soyadı: _____

2. Çocuğun Doğum Tarihi: Gün____ Ay_____ Yıl_____.

3. Çocuğun Cinsiyeti: Erkek__ Kız__

4. Evde anne ve baba dışında birlikte yaşadığınız *başka yetişkinler* var mı? Evet ___ Hayır ___

Varsa yakınlık derecesiyle birlikte kimler olduğunu lütfen yazınız_____

5. Evdeki *diğer çocukları* (kardeşler, evde sürekli sizinle kalan akraba çocukları vb. gibi) lütfen yazınız.

Çocukla olan yakınlığ	Çocuğun cinsiyeti	Çocuğun doğum tarihi	Aynı evde yaşıyorsanız işaretleyiniz.

Aşağıdaki tabloda çocuğunuza hangi aylarda, kimlerin baktığı sorulmaktadır. Bakan kişi ve/veya kişilerin altına X işareti koyunuz. Birden çok kişi bakmış veya bakıyorsa ilgili tüm kişilerin altına X işareti koyunuz.

	Aylar	**Çocuğun Bakımı**						
		Çocuğun Annesi	Çocuğun Babası	Çocuğun Anneannesi	Çocuğun Babaannesi	Yuva-Kreş/ Anaokulu	Yakınınız/ arkadaşınız	Diğer: (lütfen aşağıya yazınız)
6.	0-3 ay							
7.	4–6 ay							
8.	7–12 ay							
9.	13-24ay							
10.	24 ay ve yukarısı							

12. Medeni haliniz (uygun olan seçeneğin altındaki rakamı daire içine alınız).

Evli	Ayrılmış veya Boşanmış	Dul	Yeniden evlenmiş
1	2	3	4

Aşağıdaki bilgileri kendiniz ve eşiniz için doldurunuz.(Eşiniz hayatta değilse o sütunu boş bırakınız.)

		Sizin:	Eşinizin:
13.	Yaşınız:		
14.	Mesleğiniz:		
15.	Şu anda yaptığınız iş:		
16.	Toplam kaç yıl okudunuz:		

17. En son bitirdiğiniz okulu aşağıdaki kutucuklardan birini işaretleyerek gösteriniz.

1.Okur – yazar değil			4.Ortaokul Mezunu			7.Üniversite Mezunu (4 yıllık)		
2.Okur-yazar			5.Lise Mezunu			8.Yüksek Lisans Mezunu		

3. İlkokul Mezunu			6.Yüksek Okul Mezunu (2 yıllık)			9. Doktora Mezunu		

18. Aylık olarak eve giren toplam para miktarı (maaşlar, kira gelirleri ve diğer tüm yan gelirlerin toplamı) nedir? (lütfen birini işaretleyiniz.)

1	Ayda 850 YTL ve altı		3	Ayda 1501 – 3000 YTL		5	Ayda 5001 – 7500 YTL	
2	Ayda 851 – 1500 YTL		4	Ayda 3001 – 5000 YTL		6	Ayda 7501 YTL ve üzeri	

Breif Symptom Inventory

KSE: Aşağıda, insanların bazen yaşadıkları belirtilerin ve yakınmaların bir listesi verilmiştir. Listedeki her maddeyi lütfen dikkatle okuyun. Daha sonra, o belirtinin **SİZDE BUGÜN DAHİL, SON BİR HAFTADIR NE KADAR VAR OLDUĞUNU** yandaki bölmede uygun olan yere işaretleyiniz. Her belirti için **sadece bir yeri işaretlemeye** ve **hiçbir maddeyi atlamamaya** özen gösterin. Yanıtlarınızı işaretleyiniz. Eğer fikir değiştirirseniz ilk yanıtınızı siliniz. Yanıtlarınızı aşağıdaki ölçeğe göre değerlendiriniz: **Bu belirtiler son bir haftadır sizde ne kadar var?** **0-Hiç yok, 1-Biraz var, 2-Orta Derecede var, 3-Epey var, 4-Çok fazla var**		**Hiç Yok**	**Biraz Var**	**Orta Derecede Var**	**Epey Var**	**Çok Fazla Var**
1.	İçinizdeki sinirlilik ve titreme hali	0	1	2	3	4
2.	Baygınlık, baş dönmesi	0	1	2	3	4
3.	Bir başka kişinin sizin düşüncelerinizi kontrol edeceği fikri	0	1	2	3	4
4.	Başınıza gelen sıkıntılardan dolayı başkalarının suçlu olduğu duygusu	0	1	2	3	4
5.	Olayları hatırlamada güçlük	0	1	2	3	4
6.	Çok kolayca kızıp öfkelenme	0	1	2	3	4
7.	Göğüs (kalp) bölgesinde ağrılar	0	1	2	3	4
8.	Meydanlık (açık) yerlerden korkma duygusu	0	1	2	3	4
9.	Yaşamınıza son verme düşünceleri	0	1	2	3	4
10.	İnsanların çoğuna güvenilmeyeceği hissi	0	1	2	3	4
11.	İştahta bozukluklar	0	1	2	3	4
12.	Hiçbir nedeni olmayan ani korkular	0	1	2	3	4
13.	Kontrol edemediğiniz duygu patlamaları	0	1	2	3	4
14.	Başka insanlarla beraberken bile yalnızlık hissetmek	0	1	2	3	4
15.	İşleri bitirme konusunda kendini engellenmiş hissetmek	0	1	2	3	4
16.	Yalnızlık hissetmek	0	1	2	3	4
17.	Hüzünlü, kederli hissetmek	0	1	2	3	4
18.	Hiçbir şeye ilgi duymamak	0	1	2	3	4
19.	Ağlamaklı hissetmek	0	1	2	3	4

20.	Kolayca incinebilme, kırılmak	0	1	2	3	4
21.	İnsanların sizi sevmediğine, kötü davrandığına inanmak	0	1	2	3	4
22.	Kendini diğerlerinden daha aşağı görme	0	1	2	3	4
23.	Mide bozukluğu, bulantı	0	1	2	3	4
24.	Diğerlerinin sizi gözlediği ya da hakkınızda konuştuğu duygusu	0	1	2	3	4
25.	Uykuya dalmada güçlük	0	1	2	3	4
26.	Yaptığınız şeyler tekrar tekrar doğru mu diye kontrol	0	1	2	3	4
Bu belirtiler son bir haftadır sizde ne kadar var?		**Hiç Yok**	**Biraz Var**	**Orta Derecede Var**	**Epey Var**	**Çok Fazla Var**
27.	Karar vermede güçlükler	0	1	2	3	4
28.	Otobüs, tren, metro gibi umumi vasıtalarla seyahatlerden korkmak	0	1	2	3	4
29.	Nefes darlığı, nefessiz kalmak	0	1	2	3	4
30.	Sıcak-soğuk basmaları	0	1	2	3	4
31.	Sizi korkuttuğu için bazı eşya, yer yada etkinliklerden uzak kalmaya çalışmak	0	1	2	3	4
32.	Kafanızın “bomboş” kalması	0	1	2	3	4
33.	Bedeninizin bazı bölgelerinde uyuşmalar, karıncalanmalar	0	1	2	3	4
34.	Günahlarınız için cezalandırılmanız gerektiği	0	1	2	3	4
35.	Gelecekle ilgili umutsuzluk duyguları	0	1	2	3	4
36.	Konsantrasyonda (dikkati bir şey üzerinde toplama) güçlük/zorlanmak	0	1	2	3	4
37.	Bedeninizin bazı bölgelerinde zayıflık, güçsüzlük hissi	0	1	2	3	4
38.	Kendini gergin ve tedirgin hissetmek	0	1	2	3	4
39.	Ölme ve ölüm üzerine düşünceler	0	1	2	3	4
40.	Birini dövme, ona zarar verme, yaralama isteği	0	1	2	3	4
41.	Bir şeyleri kırma, dökme isteği	0	1	2	3	4
42.	Diğerlerinin yanındayken yanlış bir şeyler yapmamaya çalışmak	0	1	2	3	4
43.	Kalabalıklarda rahatsızlık duymak	0	1	2	3	4
44.	Bir başka insana hiç yakınlılık duymamak	0	1	2	3	4
45.	Dehşet ve panik nöbetleri	0	1	2	3	4
46.	Sık sık tartışmaya girmek	0	1	2	3	4
47.	Yalnız bırakıldığında/kalındığında sinirlilik hissetmek	0	1	2	3	4
48.	Başarılarınız için diğerlerinden yeterince takdir görmemek	0	1	2	3	4
49.	Yerinde duramayacak kadar tedirgin hissetmek	0	1	2	3	4
50.	Kendini değersiz görmek/değersizlik duyguları	0	1	2	3	4

51.	Eğer izin verirseniz insanların sizi sömüreceği duygusu	0	1	2	3	4
52.	Suçluluk duyguları	0	1	2	3	4
53.	Aklınızda bir bozukluk olduğu fikri	0	1	2	3	4

REFERENCES

Ainsworth, M. D. (1985). Attachments across the life span. *Bulletin of the New York Academy of Medicine, 61,* 792-812.

Ainsworth, M. D. (1967). Infancy in Uganda: infant care and the growth of love. Oxford, England: Johns Hopkins Press.

Ainsworth, M. D. S. (1969). Object relations, dependency, and attachment: A theoretical review of the infant-mother relationship. *Child Development, 40*, 969-1025.

Ainsworth, M. D. S., Bell, S. M., & Stayton, D. F. (1974). Infant-mother attachment and social development: Socialization as a product of reciprocal responsiveness to signals. In M. P. M. Richards (Ed.), *The integration of a child into a social world* (pp. 99-135). New York, NY, US: Cambridge University Press.

Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall S. (1978). *Patterns of Attachment: A Psychological Study of the Strange Situation*. Hillsdale, NJ: Erlbaum.

Ainsworth, M. D., & Bell, S. M. (1970). Attachment, exploration, and separation: Illustrated by the behavior of one-year-olds in a strange situation. *Child Development, 41*, 49-67.

Ainsworth, M. S., & Bowlby, J. (1991). An ethological approach to personality development. *American Psychologist, 46*, 333-341.

Arikan, G., & Karanci, N. (2012). Attachment and coping as facilitators of posttraumatic growth in Turkish university students experiencing traumatic events. *Journal of Trauma & Dissociation, 13,* 209-225.

Ataca, B., Kagitcibasi, C., & Diri, A. (2005). The Turkish family and the value of children: Trends over time. The value of children in cross-cultural perspective. In G. Trommsdorff, & B. Nauck (Eds.), *The value of children: Case studies from eight societies* (pp. 121-142). Lengerich: Pabst Science Publishers.

Bailey, H. N., Redden, E., Pederson, D. R., & Moran, G. (2016). Parental disavowal of relationship difficulties fosters the development of insecure attachment. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement, 48,* 49-59.

Bailey, H. N., Waters, C. A., Pederson, D. R., & Moran, G. (1999). Ainsworth revisited: An empirical analysis of interactive behavior in the home. *Attachment & Human Development, 1,* 191-216.

Bakermans-Kranenburg, M. J., Van Ijzendoorn, M. H., & Juffer, F. (2003). Less is more: meta-analyses of sensitivity and attachment interventions in early childhood. *Psychological Bulletin, 129,* 195-215.

Bakermans-Kranenburg, M. J., van IJzendoorn, M. H., & Kroonenberg, P. M. (2004). Differences in attachment security between African-American and white children: Ethnicity or socio-economic status? *Infant Behavior and Development, 27,* 417-433.

Bakermans-Kranenburg, M. J., Van IJzendoorn, M. H., & Juffer, F. (2005). Disorganized infant attachment and preventive interventions: A review and metaanalysis. *Infant Mental Health Journal: Official Publication of The World Association for Infant Mental Health, 26*, 191-216.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.

Baydar, N., & Akcinar, B. (2015). Ramifications of socioeconomic differences for three year old children and their families in Turkey. *Early Childhood Research Quarterly, 33*, 33-48.

Baydar, N., Küntay, A. C., Yagmurlu, B., Aydemir, N., Cankaya, D., Göksen, F., & Cemalcilar, Z. (2014). "It takes a village" to support the vocabulary development of children with multiple risk factors. *Developmental Psychology, 50*, 1014-1025.

Beardslee, W. R., Bemporad, J., gung, M. B., & Klerman, G. L. (1983). Children of parents with major affective disorder: a review. *The American Journal of Psychiatry, 140*, 825-832.

Beck, C. T. (1999). Maternal depression and child behaviour problems: a metaanalysis. *Journal of Advanced Nursing, 29*, 623-629.

Bell, S. M., & Ainsworth, M. D. S. (1972). Infant crying and maternal responsiveness. *Child Development, 43*, 1171-1190.

Bhugra, D., Till, A., & Sartorius, N. (2013). What is mental health?, *International Journal of Social Psychiatry, 59*, 3-4.

Biringen, Z., Derscheid, D., Vliegen, N., Closson, L., & Easterbrooks, M. A. (2014). Emotional availability (EA): Theoretical background, empirical research using the EA Scales, and clinical applications. *Developmental Review, 34*, 114-167.

Biringen, Z., Matheny, A., Bretherton, I., Renouf, A., & Sherman, M. (2000). Maternal representation of the self as parent: Connections with maternal sensitivity and maternal structuring. *Attachment & Human Development, 2*, 218-232.

Biringen, Z., Robinson, J. L., & Emde, R. N. (1998). Manual for scoring the emotional availability scales. *Unpublished manuscript*.

Bohlin, G., Hagekull, B., Germer, M., Andersson, K., & Lindberg, L. (1989). Avoidant and resistant reunion behaviors as predicted by maternal interactive behavior and infant temperament. *Infant Behavior and Development, 12*, 105-117.

Bohr, Y., Putnick, D. L., Lee, Y., & Bornstein, M. H. (2018). Evaluating caregiver sensitivity to infants: measures matter. *Infancy, 23*, 730-747.

Bokhorst, C. L., Bakermans-Kranenburg, M. J., Pasco Fearon, R. M., Van Ijzendoorn, M. H., Fonagy, P., & Schuengel, C. (2003). The importance of shared environment in mother–infant attachment security: A behavioral genetic study. *Child Development, 74*, 1769-1782.

Bolger, N., DeLongis, A., Kessler, R. C., & Schilling, E. A. (1989). Effects of daily stress on negative mood. *Journal of Personality and Social Psychology*, *57*, 808-818.

Booth, A. T., Macdonald, J. A., & Youssef, G. J. (2018). Contextual stress and maternal sensitivity: A meta-analytic review of stress associations with the Maternal Behavior Q-Sort in observational studies. *Developmental Review*, *48*, 145-177.

Bowlby, J. (1958). The nature of the child's tie to his mother. *International Journal of Psycho-analysis*, *39*, 350-373.

Bowlby, J. (1969). *Attachment and Loss: Vol. 1 Attachment*. New York: Basic Books, I

Bowlby, J. (1977). The making and breaking of affectional bonds: I. Aetiology and psychopathology in the light of attachment theory. *The British journal of Psychiatry*, *130*, 201-210.

Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental Psychology*, *28*, 759-775.

Campbell, S. B., Brownell, C. A., Hungerford, A., Spieker, S. J., Mohan, R., & Blessing, J. S. (2004). The course of maternal depressive symptoms and maternal sensitivity as predictors of attachment security at 36 months. *Development and Psychopathology*, *16*, 231-252.

Caplan, H. L., Cogill, S. R., Alexandra, H., Robson, K. M., Katz, R., & Kumar, R. (1989). Maternal depression and the emotional development of the child. *The British Journal of Psychiatry*, *154*, 818-822.

Casady, A., Diener, M., Isabella, R., & Wright, C. (2001, April). *Attachment Security among Families in Poverty: Maternal, Child, and Contextual Characteristics.* Paper presented at the Biennial Meeting of the Society for Research in Child Development. Minneapolis, MN.

Chazan-Cohen, R., Ayoub, C., Pan, B. A., Roggman, L., Raikes, H., McKelvey, L., ... & Hart, A. (2007). It takes time: Impacts of Early Head Start that lead to reductions in maternal depression two years later. *Infant Mental Health Journal*, *28*, 151-170.

Chen, B. B., & Santo, J. B. (2016). The relationships between shyness and unsociability and peer difficulties: The moderating role of insecure attachment. *International Journal of Behavioral Development*, *40*, 346-358.

Cicchetti, D., Rogosch, F. A., & Toth, S. L. (1998). Maternal depressive disorder and contextual risk: Contributions to the development of attachment insecurity and behavior problems in toddlerhood. *Development and Psychopathology*, *10*, 283-300.

Cogill, S. R., Caplan, H. L., Alexandra, H., Robson, K. M., & Kumar, R. (1986). Impact of maternal postnatal depression on cognitive development of young children. *British Medical Journal, 292*, 1165-1167.

Collins, N. L., Cooper, M. L., Albino, A., & Allard, L. (2002). Psychosocial vulnerability from adolescence to adulthood: A prospective study of attachment style differences in relationship functioning and partner choice. *Journal of Personality, 70*, 965-1008.

Conger, R. D., & Donnellan, M. B. (2007). An interactionist perspective on the socioeconomic context of human development. *Annual Review of Psychology, 58*, 175-199.

Conger, R. D., Conger, K. J., Elder Jr, G. H., Lorenz, F. O., Simons, R. L., & Whitbeck, L. B. (1992). A family process model of economic hardship and adjustment of early adolescent boys. *Child Development, 63*, 526-541.

Conger, R. D., Ge, X., Elder Jr, G. H., Lorenz, F. O., & Simons, R. L. (1994). Economic stress, coercive family process, and developmental problems of adolescents. *Child Development, 65*, 541-561.

Cooper, G., Hoffman, K., & Powell, B. (2009). Circle of Security Parenting: A relationship-based parenting program. *Facilitator DVD Manual, 5*.

Cooper, P. J., Fearn, V., Willetts, L., Seabrook, H., & Parkinson, M. (2006). Affective disorder in the parents of a clinic sample of children with anxiety disorders. *Journal of Affective Disorders, 93*, 205-212.

Coyl, D. D., Roggman, L. A., & Newland, L. A. (2002). Stress, maternal depression, and negative mother–infant interactions in relation to infant attachment. *Infant Mental Health Journal: Official Publication of The World Association for Infant Mental Health, 23*, 145-163.

Cummings, E. M., & Davies, P. T. (1994). Maternal depression and child development. *Journal of Child Psychology and Psychiatry, 35*, 73-122.

Cyr, C., Euser, E. M., Bakermans-Kranenburg, M. J., & Van Ijzendoorn, M. H. (2010). Attachment security and disorganization in maltreating and high-risk families: A series of meta-analyses. *Development and Psychopathology, 22*, 87-108.

Çorapçı, F. & Arıkan, G. (2017). Klinik Psikolojide Önleyici Müdahale. *Turkiye Klinikleri Journal of Psychology-Special Topics, 2,* 80-88.

De Wolff, M. S., & Van Ijzendoorn, M. H. (1997). Sensitivity and attachment: A meta-analysis on parental antecedents of infant attachment. *Child Development, 68*, 571-591.

DeLongis, A., Folkman, S., & Lazarus, R. S. (1988). The impact of daily stress on health and mood: psychological and social resources as mediators. *Journal of Personality and Social Psychology, 54*, 486-495.

Derogatis, L. R. (1992). *The brief symptom inventory (BSI): administration, scoring & procedures manual-II*. Clinical Psychometric Research.

Derogatis, L., & Lazarus, L. (1994). SCL 90-R Brief Symptom Inventory and Matching Clinical Rating Scales: In M. E Maruish (Editor). *The Use of Psychological Testing for Treatment Planning and Outcome Assessment*. Mahwah, NJ, US: Hillside.

Diener, M. L., Nievar, M. A., & Wright, C. (2003). Attachment security among mothers and their young children living in poverty: Associations with maternal, child, and contextual characteristics. *Merrill-Palmer Quarterly, 49*, 154-182.

Downey, G., & Coyne, J. C. (1990). Children of depressed parents: an integrative review. *Psychological Bulletin, 108*, 50-76.

Duncan, G. J., & Brooks-Gunn, J. (2000). Family poverty, welfare reform, and child development. *Child Development, 71*, 188-196.

Easterbrooks, M., & Biringen, Z. (2000). Guest editors' introduction to the special issue: Mapping the terrain of emotional availability and attachment. *Attachment & Human Development, 2*, 123-129.

Egeland, B., & Farber, E. A. (1984). Infant-mother attachment: Factors related to its development and changes over time. *Child Development, 55,* 753-771.

Ekmekci, H., Yavuz-Muren, H. M., Emmen, R. A., Mesman, J., van IJzendoorn, M. H., Yagmurlu, B., & Malda, M. (2015). Professionals' and mothers' beliefs about maternal sensitivity across cultures: Toward effective interventions in multicultural societies. *Journal of Child and Family Studies, 24,* 1295-1306.

Elgar, F. J., McGrath, P. J., Waschbusch, D. A., Stewart, S. H., & Curtis, L. J. (2004). Mutual influences on maternal depression and child adjustment problems. *Clinical Psychology Review, 24,* 441-459.

Emmen, R. A., Malda, M., Mesman, J., Ekmekci, H., & van IJzendoorn, M. H. (2012). Sensitive parenting as a cross-cultural ideal: Sensitivity beliefs of Dutch, Moroccan, and Turkish mothers in the Netherlands. *Attachment & Human Development, 14,* 601-619.

Farrell, A. K., Simpson, J. A., Carlson, E. A., Englund, M. M., & Sung, S. (2017). The impact of stress at different life stages on physical health and the buffering effects of maternal sensitivity. *Health Psychology, 36,* 35-44.

Fearon, R. M., Van IJzendoorn, M. H., Fonagy, P., Bakermans-Kranenburg, M. J., Schuengel, C., & Bokhorst, C. L. (2006). In search of shared and nonshared environmental factors in security of attachment: A behavior-genetic study of the

association between sensitivity and attachment security. *Developmental Psychology*, *42*, 1026-1040.

Fendrich, M., Warner, V., & Weissman, M. M. (1990). Family risk factors, parental depression, and psychopathology in offspring. *Developmental Psychology*, *26*, 40-50.

Finch, J. E., Johnson, A. D., & Phillips, D. A. (2015). Is sensitive caregiving in child care associated with children's effortful control skills? An exploration of linear and threshold effects. *Early Childhood Research Quarterly*, *31*, 125-134.

Fonagy, P., Steele, M., Steele, H., Moran, G. S., & Higgitt, A. C. (1991). The capacity for understanding mental states: The reflective self in parent and child and its significance for security of attachment. *Infant Mental Health Journal*, *12*, 201-218.

Gedaly, L. R., & Leerkes, E. M. (2016). The role of sociodemographic risk and maternal behavior in the prediction of infant attachment disorganization. *Attachment & Human Development*, *18*, 554-569.

Gelfand, D. M., & Teti, D. M. (1990). The effects of maternal depression on children. *Clinical Psychology Review*, *10*, 329-353.

George, C., & Solomon, J. (2008). The caregiving system: A behavioral systems approach to parenting. In J. Cassidy, & P. R. Shaver (Eds.*), Handbook of attachment: Theory, Research and Clinical Applications* (2nd ed., pp. 833- 857). NewYork: Guilford.

Gerdes, A. C., Hoza, B., Arnold, L. E., Pelham, W. E., Swanson, J. M., Wigal, T., & Jensen, P. S. (2007). Maternal depressive symptomatology and parenting behavior: Exploration of possible mediators. *Journal of Abnormal Child Psychology, 35*, 705-714.

Glasheen, C., Richardson, G. A., & Fabio, A. (2010). A systematic review of the effects of postnatal maternal anxiety on children. *Archives of Women's Mental Health, 13*, 61-74.

Green, J., & Goldwyn, R. (2002). Annotation: attachment disorganisation and psychopathology: new findings in attachment research and their potential implications for developmental psychopathology in childhood. *Journal of Child Psychology and Psychiatry, 43*, 835-846.

Goldsmith, H. H., & Alansky, J. A. (1987). Maternal and infant temperamental predictors of attachment: A meta-analytic review. *Journal of consulting and Clinical Psychology, 55*, 805-816.

Grossmann, K., Grossmann, K. E., Spangler, G., Suess, G., & Unzner, L. (1985). Maternal sensitivity and newborns' orientation responses as related to quality of attachment in northern Germany. *Monographs of the Society for Research in Child Development, 50*, 233-256.

Gündüz, G., Yagmurlu, B., & Harma, M. (2015). Self-regulation mediates the link between family context and socioemotional competence in Turkish preschoolers. *Early Education and Development, 26*, 729-748.

Howes, C., & Hamilton, C. E. (1992). Children's relationships with child care teachers: Stability and concordance with parental attachments. *Child Development, 63*, 867-878.

Huang, Z. J., Lewin, A., Mitchell, S. J., & Zhang, J. (2012). Variations in the relationship between maternal depression, maternal sensitivity, and child attachment by race/ethnicity and nativity: Findings from a nationally representative cohort study. *Maternal and Child Health Journal, 16*, 40-50.

Huebner, R. A., & Thomas, K. R. (1995). The relationship between attachment, psychopathology, and childhood disability. *Rehabilitation Psychology, 40*, 111-124.

Isabella, R. A. (1993). Origins of attachment: Maternal interactive behavior across the first year. *Child Development, 64*, 605-621.

Jin, M. K., Jacobvitz, D., Hazen, N., & Jung, S. H. (2012). Maternal sensitivity and infant attachment security in Korea: Cross-cultural validation of the Strange Situation. *Attachment & Human Development, 14*, 33-44.

Kaitz, M., Maytal, H. R., Devor, N., Bergman, L., & Mankuta, D. (2010). Maternal anxiety, mother–infant interactions, and infants' response to challenge. *Infant Behavior and Development, 33,* 136-148.

Karabekiroğlu, K., Rodopman Arman, A., & Berkem, M. (2008). Erken Çocukluk Dönemi Psikiyatrik Sorunları ile Ebeveyn Depresyonu Arasındaki İlişki: Cinsiyetin Rolü. *Çocuk ve Ruh Sağlığı Dergisi, 15*, 75-86.

Kavlak, O., & Şirin, A. (2009). The Turkish version of maternal attachment inventory. Journal of Human Sciences, *6*, 188-202.

Kiernan, K. E., & Huerta, M. C. (2008). Economic deprivation, maternal depression, parenting and children's cognitive and emotional development in early childhood. *The British Journal of Sociology, 59,* 783-806.

Kingston, D., Tough, S., & Whitfield, H. (2012). Prenatal and postpartum maternal psychological distress and infant development: a systematic review. *Child Psychiatry & Human Development, 43*, 683-714.

Klein Velderman, M., Bakermans-Kranenburg, M. J., Juffer, F., & Van Ijzendoorn, M. H. (2006). Effects of attachment-based interventions on maternal sensitivity and infant attachment: differential susceptibility of highly reactive infants. *Journal of Family Psychology, 20*, 266-274.

Kocayörük, E. (2010). A Turkish Adaptation of the Inventory of Parent and Peer Attachment: The Reliability and Validity Study. *Eurasian Journal of Educational Research, 40,* 719-737.

Koren-Karie, N., Oppenheim, D., Dolev, S., Sher, E., & Etzion-Carasso, A. (2002). Mothers' insightfulness regarding their infants' internal experience: Relations with maternal sensitivity and infant attachment. *Developmental Psychology, 38,* 534-542.

Kurstjens, S., & Wolke, D. (2001). Effects of maternal depression on cognitive development of children over the first 7 years of life. *The Journal of Child Psychology and Psychiatry and Allied Disciplines*, *42,* 623-636.

Landry, S. H., Smith, K. E., and Swank, P. R. (2006). Responsive parenting: Establishing early foundations for social communication and problem solving. *Developmental Psychology*, *42*, 627–642.

Landry, S. H., Smith, K. E., Swank, P. R., Assel, M. A., & Vel- let, S. (2001). Does early responsive parenting have a special importance for children's development or is consistency across early childhood necessary? *Developmental Psychology, 37,* 387–403.

Laranjo, J., Bernier, A., & Meins, E. (2008). Associations between maternal mind-mindedness and infant attachment security: Investigating the mediating role of maternal sensitivity. *Infant Behavior and Development, 31,* 688-695.

Leerkes, E. M., Blankson, A. N., & O'Brien, M. (2009). Differential effects of maternal sensitivity to infant distress and no distress on social-emotional functioning. *Child Development, 80,* 762-775.

Letourneau, N. L., Duffett-Leger, L., Levac, L., Watson, B., & Young-Morris, C. (2013). Socioeconomic status and child development: A meta-analysis. *Journal of Emotional and Behavioral Disorders, 21,* 211-224.

Lovejoy, M. C., Graczyk, P. A., O'Hare, E., & Neuman, G. (2000). Maternal depression and parenting behavior: A meta-analytic review. *Clinical Psychology Review, 20,* 561-592.

Lundy, B. L. (2003). Father-and mother-infant face to face interactions: Differences in mind-related comments and infant attachment?. *Infant Behavior and Development, 26,* 200-212.

Luoma, I., Tamminen, T., Kaukonen, P., Laippala, P., Puura, K., Salmelin, R., & Almqvist, F. (2001). Longitudinal study of maternal depressive symptoms and child well-being. *Journal of the American Academy of Child & Adolescent Psychiatry, 40,* 1367-1374.

Lyons-Ruth, K., Connell, D. B., Zoll, D., & Stahl, J. (1987). Infants at social risk: Relations among infant maltreatment, maternal behavior, and infant attachment behavior. *Developmental Psychology, 23*, 223-232.

Lyons-Ruth, K., Bronfman, E., & Parsons, E. (1999). Chapter IV. Maternal frightened, frightening, or atypical behavior and disorganized infant attachment patterns. *Monographs of the Society for Research in Child Development, 64*, 67-96.

Lyons-Ruth, K., Connell, D. B., Grunebaum, H. U., & Botein, S. (1990). Infants at social risk: Maternal depression and family support services as mediators of infant development and security of attachment. *Child Development, 61*, 85-98.

Lyons-Ruth, K., Zoll, D., Connell, D., & Grunebaum, H. U. (1986). The depressed mother and her one-year-old infant: Environment, interaction, attachment, and infant development. In E. Z. Tronick & T. Field (Eds.), *Maternal depression and infant disturbance* (pp. 61-82) San Francisco: Jossey-Bass.

Main, M., & Hesse, E. (1990). Parents' unresolved traumatic experiences are related to infant disorganized attachment status: Is frightened and/or frightening parental behavior the linking mechanism? In M. T. Greenberg, D. Cicchetti, & E. M. Cummings (Eds.), *The John D. and Catherine T. MacArthur Foundation series on mental health and development. Attachment in the preschool years: Theory, research, and intervention* (pp. 161-182). Chicago, IL, US: University of Chicago Press.

Main, M., & Solomon, J. (1990). Procedures for identifying infants as disorganized/disoriented during the Ainsworth Strange Situation. *Attachment in the preschool years: Theory, Research, and Intervention, 1*, 121-160.

Martins, C., & Gaffan, E. A. (2000). Effects of early maternal depression on patterns of infant–mother attachment: A meta-analytic investigation. *The Journal of Child Psychology and Psychiatry and Allied Disciplines*, *41*, 737-746.

McLeod, J. D., & Shanahan, M. J. (1993). Poverty, parenting, and children's mental health. *American Sociological Review*, *58*, 351-366.

McLoyd, V. C. (1990). The impact of economic hardship on Black families and children: Psychological distress, parenting, and socioemotional development. *Child Development, 61*, 311-346.

Meins, E. (1999). Sensitivity, security, and internal working models: Bridging the transmission gap. *Attachment & Human Development, 1*, 325-342.

Meins, E., Fernyhough, C., Fradley, E., & Tuckey, M. (2001). Rethinking maternal sensitivity: Mothers' comments on infants' mental processes predict security of attachment at 12 months. *The Journal of Child Psychology and Psychiatry and Allied Disciplines, 42*, 637-648.

Mesman, J., van IJzendoorn, M. H., & Bakermans-Kranenburg, M. J. (2012). Unequal in opportunity, equal in process: Parental sensitivity promotes positive child

development in ethnic minority families. *Child Development Perspectives*, *6*, 239-250.

Metin Orta, I. (2015). Early parenting support: Application of an intervention program to enhance maternal sensitivity in Turkey. *Middle East Technical University Master of Arts in Psychology, Ankara*.

Milgrom, J., Westley, D. T., & Gemmill, A. W. (2004). The mediating role of maternal responsiveness in some longer-term effects of postnatal depression on infant development. *Infant Behavior and Development, 27*, 443-454.

Mills-Koonce, W. R., Gariépy, J. L., Propper, C., Sutton, K., Calkins, S., Moore, G., & Cox, M. (2007). Infant and parent factors associated with early maternal sensitivity: A caregiver-attachment systems approach. *Infant Behavior and Development, 30,* 114-126.

Moehler, E., Brunner, R., Wiebel, A., Reck, C., & Resch, F. (2006). Maternal depressive symptoms in the postnatal period are associated with long-term impairment of mother–child bonding. *Archives of Women's Mental Health, 9*, 273-278.

Moss, E., & Gosselin, C. (1997). Attachment and joint problem-solving experiences during the preschool period. *Social Development, 6*, 1-17.

Moss, E., Dubois-Comtois, K., Cyr, C., Tarabulsy, G. M., St-Laurent, D., & Bernier, A. (2011). Efficacy of a home-visiting intervention aimed at improving maternal

sensitivity, child attachment, and behavioral outcomes for maltreated children: A randomized control trial. *Development and Psychopathology*, *23*, 195-210.

Mount, K. S., Crockenberg, S. C., Jó, P. S. B., & Wagar, J. L. (2010). Maternal and child correlates of anxiety in 2½-year-old children. *Infant Behavior and Development, 33*, 567-578.

Newland, R. P., Crnic, K. A., Cox, M. J., & Mills-Koonce, W. R. (2013). The family model stress and maternal psychological symptoms: Mediated pathways from economic hardship to parenting. *Journal of Family Psychology*, *27*, 96-105.

Nicol-Harper, R., Harvey, A. G., & Stein, A. (2007). Interactions between mothers and infants: Impact of maternal anxiety. *Infant Behavior and Development*, *30*, 161-167.

Ozyurt, G., Dinsever-Elikucuk, C., (2017). Relation of language features with maternal depression, family functioning, and digital technology usage in children with developmental language delay-comparison with healthy controls. *Dusunen Adam The Journal of Psychiatry and Neurological Sciences, 30,* 299-308.

Pederson & Moran (1995). A categorical description of infant-mother relationships in the home and its relation to the Q-sort measures of infant-mother interaction. *Monographs of the Society for Research in Child Development*, *60*, 111-132.

Pederson, D. R., & Moran, G. (1996). Expressions of the attachment relationship outside of the strange situation. *Child Development, 67*, 915-927.

Pederson, D. R., Moran, G., Sitko, C., Campbell, K., Ghesquire, K., & Acton, H. (1990). Maternal sensitivity and the security of infant-mother attachment: AQ-sort study. *Child Development, 61,* 1974-1983.

Pederson, D. R., Bailey, H. N., Tarabulsy, G. M., Bento, S., & Moran, G. (2014). Understanding sensitivity: Lessons learned from the legacy of Mary Ainsworth. *Attachment & Human Development, 16,* 261-270.

Pinto, A., Veríssimo, M., Gatinho, A., Santos, A. J., & Vaughn, B. E. (2015). Direct and indirect relations between parent–child attachments, peer acceptance, and self-esteem for preschool children. *Attachment & Human development, 17,* 586-598.

Posada, G., Carbonell, O. A., Alzate, G., & Plata, S. J. (2004). Through Colombian lenses: ethnographic and conventional analyses of maternal care and their associations with secure base behavior. *Developmental Psychology, 40,* 508-518.

Posada, G., & Jacobs, A. (2001). Child–mother attachment relationships and culture. *American Psychologist, 56,* 821-822.

Posada, G., Jacobs, A., Carbonell, O. A., Alzate, G., Bustamante, M. R., & Arenas, A. (1999). Maternal care and attachment security in ordinary and emergency contexts. *Developmental Psychology, 35,* 1379-1388.

Posada, G., Jacobs, A., Richmond, M. K., Carbonell, O. A., Alzate, G., Bustamante, M. R., & Quiceno, J. (2002). Maternal caregiving and infant security in two cultures. *Developmental Psychology, 38,* 67-78.

Radke-Yarrow, M. (2006). Attachment patterns in children of depressed mothers. In C. M Parkes, J. Stevenson-Hinde, & P. Marris. (Eds.), *Attachment across the life cycle* (pp. 115–126). New York, NY: Tavistock⁄Routledge.

Radke-Yarrow, M., Cummings, E. M., Kuczynski, L., & Chapman, M. (1985). Patterns of attachment in two-and three-year-olds in normal families and families with parental depression. *Child Development, 56,* 884-893.

Raikes, H. A., & Thompson, R. A. (2005). Links between risk and attachment security: Models of influence. *Journal of Applied Developmental Psychology, 26,* 440-455.

Rothbaum, F., Weisz, J., Pott, M., Miyake, K., & Morelli, G. (2000). Attachment and culture: Security in the United States and Japan. *American Psychologist, 55,* 1093-1104.

Sever, L. (1989). Change in women's perceptions of parental child rearing attitudes in Turkey: A three generation comparison. *Early Child Development and Care, 50,* 131-138.

Schechter, D. S., Coates, S. W., Kaminer, T., Coots, T., Zeanah Jr, C. H., Davies, M., Schonfeld, I. S., Marshall, R. D., Liebowitz M. R., Trabka, K. A., McCaw, J. E.,

Myers, M. M. (2008). Distorted maternal mental representations and atypical behavior in a clinical sample of violence-exposed mothers and their toddlers. *Journal of Trauma & Dissociation*, *9*, 123-147.

Selçuk, E., Günaydın, G., Sümer, N., & Uysal, A. (2005). Yetişkin bağlanma boyutları için yeni bir ölçüm: Yakın ilişkilerde yaşantılar envanteri-II'nin Türk örnekleminde psikometrik açıdan değerlendirilmesi. *Türk Psikoloji Yazıları*, *8*, 1-11.

Selcuk, E., Günaydin, G., Sumer, N., Harma, M., Salman, S., Hazan, C., Dogruyol, B., & Ozturk, A. (2010). Self-reported romantic attachment style predicts everyday maternal caregiving behavior at home. *Journal of Research in Personality*, *44*, 544-549.

Shaw, D. S., & Vondra, J. I. (1995). Infant attachment security and maternal predictors of early behavior problems: A longitudinal study of low-income families. *Journal of Abnormal Child Psychology*, *23*, 335-357.

Shin, H., Park Y. J., Ryu, H., & Seomun, G.A. (2008). Maternal sensitivity: *A concept analysis. Journal of Advanced Nursing. 64*, 304-314.

Slominski, L., Sameroff, A., Rosenblum, K., & Kasser, T. (2011). Longitudinal pathways between maternal mental health in infancy and offspring romantic relationships in adulthood: A 30-year prospective study. *Social Development, 20*, 762-782.

Smith, P. B., & Pederson, D. R. (1988). Maternal sensitivity and patterns of infant-mother attachment. *Child Development, 59*, 1097-1101.

Sohr-Preston, S. L., & Scaramella, L. V. (2006). Implications of timing of maternal depressive symptoms for early cognitive and language development. *Clinical Child and Family Psychology Review, 9*, 65-83.

Spieker, S. J., & Booth, C. L. (1988). Maternal antecedents of attachment security. In J. Belsky & T. Nezworski (Eds.), *Clinical implications of attachment* (pp. 95–135). Hillsdale, NJ: Lawrence Erlbaum Associates.

Sroufe, L. A., & Waters, E. (1977). Attachment as an organizational construct. *Child Development, 48*, 1184-1199.

Stacks, A. M., Muzik, M., Wong, K., Beeghly, M., Huth-Bocks, A., Irwin, J. L., & Rosenblum, K. L. (2014). Maternal reflective functioning among mothers with childhood maltreatment histories: Links to sensitive parenting and infant attachment security. *Attachment & Human Development, 16*, 515-533.

Stams, G. J. J., Juffer, F., & Van IJzendoorn, M. H. (2002). Maternal sensitivity, infant attachment, and temperament in early childhood predict adjustment in middle childhood: The case of adopted children and their biologically unrelated parents. *Developmental Psychology, 38*, 806-821.

Steel, Z., Marnane, C., Iranpour, C., Chey, T., Jackson, J. W., Patel, V., & Silove, D. (2014). The global prevalence of common mental disorders: a systematic review and meta-analysis 1980–2013. *International Journal of Epidemiology, 43*, 476-493.

Stein, A., Craske, M. G., Lehtonen, A., Harvey, A., Savage-McGlynn, E., Davies, B., Goodwin, J., Cortina-Borja, M., Craske M. G., Harvey, A., Murray, L., & Counsell, N. (2012). Maternal cognitions and mother–infant interaction in postnatal depression and generalized anxiety disorder. *Journal of Abnormal Psychology*, *121*, 795-809.

Stewart, R. C. (2007). Maternal depression and infant growth–a review of recent evidence. *Maternal & Child Nutrition, 3*, 94-107.

Sümer, N., Sayıl, M., Kazak-Berument, S., Doğruyol, B., Günaydın, G., Selçuk, E., Harma, M., Öztürk, A., Salman, S. & Selçuk, E. (2008). *The role of the attachment, caregiving, and familydynamics on child development*. Completed project supported by The Scientific and Technological Research Council of Turkey, TUBITAK, Grant no:105K102.

Sümer, N. (2012). Ana babalık ve bağlanma. In M. Sayıl & B. Yagmurlu (Eds.), *Ana Babalık: Kuram ve Araştırma*, (pp 169-190). Istanbul: Koc Üniversitesi Yayınları.

Sümer, N. (2006). Yetiskin baglanma ölçeklerinin kategoriler ve boyutlar düzeyinde karsilastirilmasi. *Türk Psikoloji Dergisi*, *21*, 1-22.

Sümer, N., & Güngör, D. (1999). Yetişkin bağlanma stilleri ölçeklerinin Türk örneklemi üzerinde psikometrik değerlendirmesi ve kültürlerarası bir karşılaştırma. *Türk Psikoloji Dergisi, 14,* 71-106.

Sümer, N., & Güngör, D. (2000, June). *The relationship between anxiety and avoidance dimensions of adult attachment and affective aspects of the self.* Paper presented at the 2nd International Conference on Personal Relationships, Brisbane, Australia.

Sümer, N., & Şendağ, M. A. (2009). Orta Çocukluk Döneminde Ebeveynlere Bağlanma, Benlik Algısı ve Kaygı. *Turk Psikoloji Dergisi, 24,* 86-101.

Sümer, N., Sayıl, M., & Berument, S. K. (2016). Anne duyarlılığı ve çocuklarda bağlanma (1. Baskı). *İstanbul: Koç Üniversitesi Yayınları*.

Şahin, N. H., Batıgün, A. D., & Uğurtaş, S. (2002). Kısa Semptom Envanteri (KSE): Ergenler için kullanımının geçerlik, güvenilirlik ve faktör yapısı. *Türk Psikiyatri Dergisi, 13,* 125-135.

Tabachnick, B. G., & Fidell, L. S. (1996). *SPSS for Windows workbook to accompany large sample examples of using multivariate statistics*. Harper Collins College Publishers.

Takahashi, K. (1986). Examining the strange-situation procedure with Japanese mothers and 12-month-old infants. *Developmental Psychology, 22*, 265-270.

Tamis-LeMonda, C. S., Briggs, R. D., McClowry, S. G., & Snow, D. L. (2009). Maternal control and sensitivity, child gender, and maternal education in relation to children's behavioral outcomes in African American families. *Journal of Applied Developmental psychology, 30*, 321-331.

Tamis-LeMonda, C. S., & Baumwell, L. (2011). Parental sensitivity in early development: Definition, methods, measurement, and generalizability. In *Maternal sensitivity: A scientific foundation for practice*. Nova Science Publishers.

Tarabulsy, G. M., Avgoustis, E., Phillips, J., Pederson, D. R., & Moran, G. (1997). Similarities and differences in mothers' and observers' descriptions of attachment behaviours. *International Journal of Behavioral Development*, *21*, 599-619.

Tarabulsy, G. M., Provost, M. A., Larose, S., Moss, E., Lemelin, J. P., Moran, G., Forbes, L., & Pederson, D. R. (2008). Similarities and differences in mothers' and observers' ratings of infant security on the Attachment Q-Sort. *Infant Behavior and Development*, *31*, 10-22.

Templeton, G. F. (2011). A two-step approach for transforming continuous variables to normal: implications and recommendations for IS research. *Communications of the Association for Information Systems, 28*, 41-58.

Teti, D. M., Gelfand, D. M., Messinger, D. S., & Isabella, R. (1995). Maternal depression and the quality of early attachment: an examination of infants, preschoolers, and their mothers. *Developmental Psychology, 31*, 364-376.

Thompson, R. A. *Early Attachment its Consequences for Later Development*. Davetli Konferans, Ankara: 14. Ulusal Psikoloji Kongresi, Eylül 2006.

Toth, S. L., Rogosch, F. A., Sturge-Apple, M., & Cicchetti, D. (2009). Maternal depression, children's attachment security, and representational development: An organizational perspective. *Child Development, 80,* 192-208.

Valenzuela, M. (1997). Maternal sensitivity in a developing society: the context of urban poverty and infant chronic undernutrition. *Developmental Psychology, 33,* 845-855.

Van Dam, M., & Van Ijzendoorn, M. H. (1988). Measuring attachment security: Concurrent and predictive validity of the parental attachment Q-set. *The Journal of Genetic Psychology, 149,* 447-457.

Van den Boom, D. C. (1994). The influence of temperament and mothering on attachment and exploration: An experimental manipulation of sensitive responsiveness among lower-class mothers with irritable infants. *Child Development, 65,* 1457-1477.

Van IJzendoorn, M. H., & Sagi, A. (2008). Cross-cultural patterns of attachment: Universal and contextual dimensions. In J. Cassidy, & P. R. Shaver (Eds.), Handbook of attachment: Theory, research and clinical applications (2nd ed., pp. 880-905). NewYork: Guilford.

Van IJzendoorn, M. H., & Bakermans-Kranenburg, M. J. (2010). Invariance of adult attachment across gender, age, culture, and socioeconomic status?, *Journal of Social and Personal Relationships, 27*, 200-208.

Van Ijzendoorn, M. H., Schuengel, C., & Bakermans-Kranenburg, M. J. (1999). Disorganized attachment in early childhood: Meta-analysis of precursors, concomitants, and sequelae. *Development and Psychopathology, 11*, 225-250.

Van Ijzendoorn, M. H., Vereijken, C. M., Bakermans-Kranenburg, M. J., & Marianne Riksen-Walraven, J. (2004). Assessing attachment security with the attachment Q sort: Meta-analytic evidence for the validity of the observer AQS. *Child Development, 75*, 1188-1213.

Vaughn, B. E., & Waters, E. (1990). Attachment behavior at home and in the laboratory: Q-sort observations and strange situation classifications of one-year-olds. *Child Development, 61*, 1965-1973.

Vondra, J. I., Shaw, D. S., Swearingen, L., Cohen, M., & Owens, E. B. (2001). Attachment stability and emotional and behavioral regulation from infancy to preschool age. *Development and Psychopathology, 13*, 13-33.

Wachs, T. D. (2006). Contributions of temperament to buffering and sensitization processes in children's development. *Annals of the New York Academy of Sciences, 1094*, 28-39.

Waters, E. (1995). The Attachment Q-Set (Version 3.0). Growing Points of attachment theory and research. *Monographs of the Society for Research in Child Development*, 234-246.

Weinfield, N. S., Sroufe, L. A., & Egeland, B. (2000). Attachment from infancy to early adulthood in a high-risk sample: Continuity, discontinuity, and their correlates. *Child Development, 71*, 695-702.

Yerlioğlu, A. Y. (2010). The relation of attachment security with maternal responsiveness and child's socioemotional competence: using the attachment qset with a turkish preschool sample. *Boğaziçi University Master of Arts in Psychology. İstanbul*.

Zeegers, M. A., Colonessi, C., Stams, G. J. J., & Meins, E. (2017). Mind matters: A meta-analysis on parental mentalization and sensitivity as predictors of infant-parent attachment. *Psychological Bulletin, 143*, 1245-1272.

Ziv IV, Y., Aviezer, O., Gini, M., Sagi, A., & Karie, N. K. (2000). Emotional availability in the mother–infant dyad as related to the quality of infant–mother attachment relationship. *Attachment & Human Development, 2*, 149-169.