

Summary

Predicting Anger: Early Maladaptive Schemas as Mediators between Attachment and Anger Dimensions

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Despite anger being an evolutionary adaptive emotional response, it's still destructive both psychologically and socially when it cannot be regulated and expressed functionally. Along with the other emotions, the nature and mechanism of anger have been the focus of a countless number of research, many of which favors cognitive approaches (Beck, 1972/1999; Ellis, 1994; Power & Dalgleish, 1997). As a recent cognitive approach, Schema Theory (Young, 1990/1999; Young, Klosko, & Weishaar, 2003) has provided a new explanation for the mechanism of disruptive emotions. The theory proposed that emotional and behavioral patterns are shaped by the early maladaptive schemas (EMS) that develop as a result of toxic early experiences, especially by the parents who were fallen short in satisfying basic needs of their children. Accordingly, Young (Young, 1990, 1999; Young et al., 2003) presented 18 different EMS grouped in 5 major schema domains and these domains presented in Turkish culture with some minor differences (Soygüt, Karaosmanoğlu, & Çakır, 2009). These are; Disconnection and Rejection, Impaired Autonomy, Impaired Limits, Other Directedness, and Unrelenting Standards (Soygüt et al., 2009). As a recent cognitive theory of emotion, correlations between the EMS and various emotions were empirically established (e.g., Harris & Curtin, 2002; Lee, Ruijten, & Lobbestael, 2011; Roelofs, Onckels, & Muris, 2013). Although the relationship between the EMS and anger was less attended as compared to anxiety or depression, certain studies with different samples including non-clinical adults (Tremblay & Dozois, 2009) adolescents (Saritaş, 2007; Saritaş & Gençöz, 2011), eating disorder patients (Waller, et al., 2003), and adult males who were violent toward their partners (Sigre-Leirós, Carvalho, & Nobre, 2013, 2014) provided consistent support for the correlation between EMS and anger.

The schema theory is a cognitive theory that is focused not only in here and now as many other cognitive theories but also in the past for explaining the mechanism

of schema formation. For this purpose, the theory attaches a great importance in the early relations of human lives, and specifically attachment relationships (Young & Klosko, 1994; Young et al., 2003). Internal working models that is proposed to be constructed by the early attachment relationships (Bowlby, 1973) has many common points with the term EMS that both models provide a cognitive framework for social relationships later in life (Blissett et al., 2006; Mason, Platts, & Tyson, 2005). Also, researchers stated that EMS could help to operationalize the internal working models underlying insecure attachment (Bosmans, Braet, & Vlierberghe 2010; Simard, Moss, & Pascuzzo, 2011). Empirical studies with various clinical and non-clinical samples provided evidence that attachment and EMS were consistently and significantly correlated (Blissett et al., 2006; Cecero et al., 2004; Çeri, 2009; Mason et al., 2005; McLean, Bailey, & Lumley 2014; Rayner, 2008; Simard et al., 2011; Yaka, 2011). In other words, insecure attachment was found significantly correlated with higher levels of EMS.

Considering the experience and expression of anger as a basic emotion, independent from the schema theory, attachment theory itself has a critical contribution in explaining the development of adaptive and maladaptive emotional expressions. In that sense, attachment theory (Bowlby, 1973) drew attention to the mechanism for development of the emotion regulation strategies depending on the early attachment quality of the child. Consistently, various empirical studies supported the relationship between attachment and the level and expression of anger (e.g., Barret & Holmes, 2001; İmamoğlu, 2003; Mikulincer, 1998; Oktay, 2010; Taniş, 2014; Zimmermann, Maier, Winter, & Grossmann, 2001).

Recent literature underlies EMS as a cognitive link between attachment and certain emotional disturbances (Bosmans et al., 2010). Few studies, both cross-sectional and longitudinal, provided empirical evidence that certain EMS indeed mediate the relationship between attachment

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and psychopathology (Bosman et al., 2010; Roelofs et al., 2013; Simard et al., 2011). Although EMS and attachment together in relation with violence was tested (McKee, Roring, Winterowd, & Porras, 2012), these studies were conducted exclusively with males and mediational model for EMS being a mediator between attachment and anger were not tested. The current study aims to test this mediational model considering gender differences. To test this model, gender differences were paid special attention since feeling and expression of anger were shown to be drastically effected by socio-cultural norms presenting different rules of normalcy for males and females (Aktaş & Güvenç, 2006; Bussey & Bandura, 1999; Gilligan, 1982; Plant, Hyde, Keltner & Devine, 2000; Soysal, Can, & Kılıç, 2009). While males are expected to and tend to experience anger more than females, they also express their anger more directly outward and execute less control over anger. Expression of anger in females are less expected and considered to be more pathological. Thus, the current study focuses on gender differences as well. Consequently, the aim of the present study is to test the mediating role of EMS in relationship between attachment to both parents and experience and expression of anger by constructing different models for males and females.

Method

Participants

The participants were 444 volunteered single university students, with ages ranging from 17 to 28, from various universities in Ankara. Among participants 68% ($n = 303$) were females and 32% ($n = 141$) were males.

Measurements

Demographic information sheet. Questions were presented regarding participants' age, sex, income, marital status, number of siblings and whether parents were alive or not.

Inventory of Parent and Peer Attachment (IPPA). The original scale was developed by Raja, McGee, and Stanton (1992). Inventory has been constructed to evaluate how well the parental figures serve as sources of psychological security. The reliability and validity of the inventory was established for Turkish culture by Günaydın, Selçuk, Sümer, and Uysal (2005).

State – Trait Anger Expression Inventory (STAXI). The inventory was developed by Spielberger (1988) to measure the experience (state and trait), expression (in and out), and control of anger with 34 items. The Turkish standardization of the inventory was established (Özer, 1994).

Young Schema Questionnaire – Short Form 3 (YSQ – SF3). The YSQ – SF, which was developed by

Young et al. in 2003, is a 90 item questionnaire consisting 18 early maladaptive schemas grouped in 5 higher schema domain. Turkish standardization of the questionnaire has been established by Soygüt and her colleagues and 5 schema domains were found to be appropriate for Turkish university students (disconnection/ rejection, impaired autonomy, impaired limits, others directedness and unrelenting standards).

Results

Prior to the test of mediation model, Pearson correlation analyses was performed for the study variables separately for males and females. The mediational role of the EMS was examined with Preacher and Hayes' (2008) bootstrapping method using a 95% confidence interval (CI) and 1000 bootstrap samples. In the current study, attachment to mothers and fathers were the predictor variables; trait anger, anger expression (in - out), and anger control were the predicted variables, and 5 schema domains (disconnection/ rejection, impaired autonomy, impaired limits, others directedness, and unrelenting standards) were the mediating variables. Due to the gender differences in anger experience and expression, two separate tests of mediation were conducted for males and females.

For females, the first four models tested the mediation of EMS between attachment to mother and anger related variables. Accordingly, the first model tested the mediational role of EMS between attachment to mothers and trait anger was found to be significant [Adjusted ($Adj.$) $R^2 = .29$, $F(6, 296) = 22.2$, $p < .001$] and the 31% of the variance was explained with this model. The second model tested the mediational role of EMS between attachment to mothers and anger-in was found to be significant ($Adj. R^2 = .22$, $F(6, 296) = 15.4$, $p < .001$) and 23% of the variance was explained with this model. The third model tested the mediational role of EMS between attachment to mothers and anger-out was found to be significant ($Adj. R^2 = .19$, $F(6, 296) = 13.2$, $p < .001$) and 21% of the variance was explained with this model. The fourth model tested the mediational role of EMS between attachment to mothers and anger control was found to be significant ($Adj. R^2 = .14$, $F(6, 296) = 9.4$, $p < .001$) and 16% of the variance was explained with this model.

For males, the rest of the models tested the mediational role of EMS between attachment to father and anger related variables. Accordingly, the fifth model tested the mediational role of EMS between attachment to fathers and trait anger was found to be significant ($Adj. R^2 = .28$, $F(6, 296) = 20.7$, $p < .001$) and the 29% of the variance was explained with this model. The sixth model

tested the mediational role of EMS between attachment to fathers and anger-in was found to be significant (Adj. $R^2 = .22$, $F(6, 296) = 15.5$, $p < .001$) and 23% of the variance was explained with this model. The seventh model tested the mediational role of EMS between attachment to fathers and anger-out was found to be significant (Adj. $R^2 = .20$, $F(6, 296) = 13.7$, $p < .001$) and 21% of the variance was explained with this model. The eighth model tested the mediational role of EMS between attachment to fathers and anger control was found to be significant (Adj. $R^2 = .12$, $F(6, 296) = 8.12$, $p < .001$) and 14% of the variance was explained with this model.

For male participants, there was only two significant mediational model. Accordingly, for males, the relationship between attachment to mothers and anger-in was mediated by disconnection and rejection schema only. The mediational model was found significant (Adj. $R^2 = .28$, $F(6, 134) = 10.3$, $p < .001$) with 31% of the variance explained. Similarly, the relationship between attachment to father and anger-in was mediated by disconnection and rejection schema only. The mediational model was found significant (Adj. $R^2 = .27$, $F(6, 134) = 9.9$, $p < .001$) with % 30 of the variance explained.

Discussion

The aim of the current study was to understand the mechanism of various aspects of anger within the recent cognitive perspective: The Schema Theory (Young, 1990). For this purpose, a mediational model was proposed hypothesizing early maladaptive schemas as a mediator between attachment to both parents and aspects of anger (experience and expression). Considering the cultural influence on gender for experiencing and expressing anger, gender differences were especially paid attention in this study.

The model testing the mediating role of early maladaptive schemas between the attachment and anger has revealed some major gender differences. For females, various mediational paths were consistently found significant; however, for males the results were limited, that is, only two paths was found to be significant. Also, for females, there were certain patterns observed revealing that different mediational mechanisms might be involved depending on the attachment figures (father or mother) and dimensions of anger.

For females, certain results deserve a closer attention. First, "Impaired Limits" as an early maladaptive schema was consistently mediated the relationship between the attachment to both parents and certain aspects of anger. Impaired Limits were suggested to be related to the inability to set realistic limits or to promote self-control (Young et al., 2003). Also, it was stated that

individuals displaying this schema were inclined to think that they are more privileged than others, display low levels of frustration tolerance, and act impulsively (Rafaeli, Bernstein, & Young, 2011). Consistent with these descriptions, the result of the current study revealed that attachment insecurity is related with high levels of impaired limit schema which in turn related with higher levels of trait anger, anger directed outwards and lower levels of anger control. It is understandable that when an individual feels more privileged than others, have lower levels of frustration tolerance and higher levels of impulsivity, this individual is more prone to experience higher levels of anger, lower levels of control over their anger, and they are more prone to direct their anger explicitly to its source.

Second; "Other Directedness" as an early maladaptive schema was found to have a suppressing effect on anger. This schema was supposed to be developed by the early experiences where the children had not given a chance to express themselves. Individuals with higher levels of other-directedness schema heavily depend on others, seek constant support and approval of others, and they were inclined to suppress their own emotion and needs with the fear of rejection (Young et al., 2003). Consistently, in the current study, lower levels of attachment security to both parents were related with higher levels of other-directedness schema which in turn was related with lower levels of trait anger, anger directed outwards, and higher levels of anger control. Individuals with the fear of rejection and dependency issues might feel the need to exert control over possibly destructive emotions. Therefore, they might suppress their anger which might be a way to explain the related results of this study. Therefore, such a "positive" effect on anger should not be interpreted as a healthy response but should be investigated cautiously. In this case, it becomes an important point to understand the dynamics of anger for the people displaying higher levels of other-directedness schema. Also, cultural effects should be taken into account considering that this result is significant only for females where the culture reinforce more submissiveness, dependency and exert more control over "masculine" emotions like anger and aggression.

Third, "Disconnection/Rejection" schema that was proposed to be related with the early rejection by the parents was found to be exclusively related with anger directed inwards (This result was exclusively significant for males as well and will be discussed shortly). This aspect of anger is characteristically different than other aspects since it is more closely related with feelings of guilt and depression (Clay, Anderson & Dixon, 1993; Riley, Treiber & Woods, 1989). Bowlby (1973, 1988) pointed out the critical role of the parents' presence in

child's feeling of security and happiness. He also dramatically showed that with the loss of the parent, the child did not only feel insecure but experience severe sadness and mourning for the loss of the parent. The loss of the parent does not necessarily mean the physical loss. However, in attachment perspective psychological loss of the parents, in other words, the rejection of the child is even more destructive than the physical loss since the child feels that he or she is not worthwhile to be loved. Similarly, "disconnection/rejection" schema does hold the belief that ones' emotional needs will not be met by anyone thus rejection is inescapable. Thus, in this case, attachment insecurity that leads to the belief of worthless self could be closely linked to depression or anger towards ones' self. The relationship between disconnection/rejection schema and anger directed inwards was exclusive since this schema was only related with this aspect of anger but not the others and vice versa. Such a consistent result could be interpreted as anger directed inwards was characteristically different and had more severe implications in mental health than other aspects of anger and attachment insecurity and disconnection/rejection schema might be critical and unique to understand this mechanism regardless of the gender and attachment figure.

At last for females, fathers' role as an attachment figure was found to be differentially effective on anger. There were certain studies revealing that through the developmental periods although the mother was the primary figure, the father might also have some critical roles in different aspects of a child's life (Grossmann et al., 2002; Rubin et al., 2004; Sümer & Anafarta Şendağ, 2009). Consistently, in the current study for females, unlike attachment to mother, unrelenting standards as an early maladaptive schema was found to be a mediator between attachment to father and trait anger, anger directed out, and directed in. In other words, young females with lower levels of attachment security with their father were found to have higher levels of "Unrelenting Standards" schema which in turn related with higher levels of trait anger, anger directed out, and directed in. "Unrelenting Standards" as an early maladaptive schema was stated to be about having a high internalized standards for self, perfectionism, and rigid rules. This schema was proposed to be developed by strict, rigid and demanding parenting that overemphasized the morality and high performance (Young et al., 2003). Accordingly, the result of the current study pointed out that attachment insecurity only with the father might be critical in the development of unrelenting standards in females which might lead to anger issues. It was found that fathers in Turkey were more authoritarian whereas mothers were more authoritative/democratic in raising their children (Demir & Şendil,

2008). Considering such parenting style differences and father being more rigid, demanding and pressing than the mother, it was understandable that insecure attachment to father but not the mother was closely related with the unrelenting standards in females.

For males the results were considerably different. Various aspects of anger in males for the current study could not be explained by the attachment insecurity and the early maladaptive schemas. Attachment theory and related schema theory are closely interested in the mechanism of dysfunctional emotions. As it has been mentioned before, anger in males are being accepted as normal/functional and reinforced positively in various cultures (Aktaş & Güvenç, 2006; Gilligan, 1982; Maccoby & Martin, 1983). It is understandable that any emotion considered normal might not be triggered by attachment insecurity and maladaptive schemas. Consistently in certain studies, anger in males was proposed to be explained by the personality style rather than the parenting style (Deffenbacher et al., 1996; Johnson, 2010). Still, there were two significant models for males in this study and they were about the anger directed inwards. Accordingly, it was found that the disconnection/rejection schema mediated the relationship between both mother and father attachments and anger directed inwards which was also significant for females. This consistent result revealed that regardless of the gender, there was a critical importance of early experience and further expectation of rejection on anger specifically directed to oneself.

In understanding the mechanism of anger, the current study provides an important support for the attachment and the schema theory, both of which have major contributions to emotional health. The current study revealed that attachment insecurity could have an important effect on different aspects of anger and this effect is mediated by the maladaptive schemas that were proposed to be shaped by the early experiences with the parents. Secondly, this study showed that there were discriminant effects of maladaptive schemas on different aspects of anger. Third, it was found that attachment figures might have differential roles both in construction of schemas and experiencing anger. Fourth, unique path between disconnection/ rejection schema and anger directed inwards were discovered. At last, specific gender differences between the models were revealed reminding the crucial role of the culture in defining what is normal or abnormal. The results of the study were not only supporting the scientific knowledge about the emotion development and emotional health but also provide a base to use in clinical application especially in anger management.