



The Relation Between Parents' Emotional Availability and Reactive-Proactive Aggression in Adolescents: The Intermediary Role of Difficulties in Emotion Regulation

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Abstract

In this research paper, we have studied the intermediary role of difficulties in emotion regulation in the relation between parents' emotional availability and reactive-proactive aggression in adolescents. The study has been carried out with 776 high school students (423 girls, 353 boys). Their age ranges from 14 to 19, and the age average is 16.38 (Ss=1.13). The data, in this study, have been collected by using "Reactive – Proactive Aggression Scale", "Parents' Emotional Availability Scale" and "Difficulties in Emotion Regulation Scale". The collected data was analysed through correlation analysis while regression analysis was used for the mediator effect and bootstrap analysis for the significance of indirect effect test. The findings of the study suggest that the reactive-proactive aggression has a positively meaningful relation with difficulties in emotion regulation, but it has a negatively meaningful relation with parents' emotional availability. According to the results of correlation and regression-based bootstrapping method, it has been determined that the difficulties in emotion regulation have a partial mediating role in the relation between parents' emotional availability and reactive-proactive aggression. We believe that the data collected during this study can be valuable sources for further studies and used for reducing the incidence of aggressive behaviours of adolescents particularly at schools.

Keywords

Reactive-proactive aggression
The relation between parents' emotional availability
Difficulties in emotion regulation

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Introduction

According to the World Health Organization (2002; as cited in Miles et al., 2015), aggressive behaviours and acts of violence are the most important reasons of deaths among 15-44 aged people. Similarly, violent and anti-social behaviours are significant mental disorders, mostly referred to in psychiatry clinics (Dean, Duke, George, & Scott, 2007). Aggression is one of the most significant behavioural problems encountered by psychological counsellors in schools. So, acts of violence which are gradually becoming widespread in schools should be considered more seriously (Uz Baş, Öz, & Topçu Kabasakal, 2012; Yurtal & Cenkseven, 2007). As in the past, aggressive behaviours are becoming more popular in many societies, therefore it is now being regarded as a social problem in many communities (Anderson & Huesmann, 2003).

The prevalence of aggressive behaviours makes it an individual and social problem that must be considered with utmost care. When studies about aggression are reviewed, (Miller ve Lynam, 2006; Raine et al., 2006; Hubbard, McAuliffe, Morrow, & Romano, 2010) it is understood that the aggression is a serious subject and requires a comprehensive study. So, it is necessary that the subject of aggression should be categorized.

In the literature, categorization of aggression is quite different. In a relevant study, aggression is classified into two sub-types: reactive and proactive (Robertson, Daffern, & Bucks, 2012). Whereas reactive aggression means self-protection when a threat or proactive action is encountered; proactive aggression means deliberate, planned, and intentional behaviour oriented for harming somebody (Pulkkinen, 1996). Similarly, Marsee and Frick (2007) emphasize that both reactive and proactive aggression have a different structure in terms of cognitive and emotional features, and so they should be analysed distinctively.

Reactive aggression model, which proposes a frustration-aggression hypothesis stemming from anger and hostility, seems to be the most consistent model (Fite, Rathert, Stoppelbein, & Greening, 2012). According to this model, frustrations are unpleasant situations and cause the emergence of negative emotions and aggressive actions (Crick & Dodge, 1996). These negative emotions stimulate the feeling of harming the source that causes the frustration, or they may lead to aggressive behaviours with the intent of defending himself. As a result, the cases of violent actions increase (Polman, Orobio de Castro, Koops, van Boxtel, & Merk, 2007).

In terms of social-cognitive relations, reactive aggression is positively related with the social ability of problem solving in the event of violent actions that result from hostile behaviours and prejudice (De Castro, Merk, Koops, Veerman, & Bosch, 2005). Since it has an angry and responsive nature, reactive aggression is associated with attributing a hostile intention to the unclear behaviours of individuals in social environments (Crick & Dodge, 1996; Dodge & Coie, 1987; De Castro, Slot, Bosch, Koops, & Veerman, 2003). In this model, due to certain schemes that result from past experiences in social circumstances, individuals tend to attribute hostility to the people that they interact with. The prejudice of attributing a hostile intention causes anger, tension and demoralization and therefore leads to the emergence of strong negative responses in individuals (Crick & Dodge, 1996; Hubbard, Dodge, Cillessen, Coie, & Schwartz, 2001; Schwartz et al., 1998; Smithmyer, Hubbard, & Simons, 2000). Prejudice and attributing hostility to the impulses in social circumstances lead to reactive aggressive actions (Erdley, Rivera, Shepherd, & Holleb, 2010).

Proactive aggression is characterized by a stimulus of reaching a desired outcome such as earning money or gaining status, creating a good impression, controlling victims, and increasing self-esteem (Berkowitz, 1993). Unlike reactive aggression, proactive aggression cannot be characterized with a defensive response towards a threat. Instead, it is defined to be an organized, calm and deliberate behaviour (Hubbard et al., 2001). The most consistent model for the proactive aggression appears to be the one which associates it with the social learning theory. In this model, individuals learn aggression while using it to reach an object or a desired target (Bandura, 1973; Card & Little, 2007). In the framework of social learning theory, aggressive behaviour depends on learning experiences and how these experiences are directed by the external reinforcers (Geen, 2001). Expectations of positive outcomes after the aggressive actions and the opportunity to have the desired thing as a result of these actions lead to the emergence of aggressive actions (Card & Little, 2007).

As to reactive and proactive aggression, Dodge (1991) emphasizes that negative attitudes of parents towards each other and their children have a negative influence on the children's ability to make friends in their social environment (as cited in Vitaro, Brendgen, & Tremblay, 2002). Those who have a high tendency for reactive aggression learn to have a counter response to the threats and dangers in their family. On the other hand, proactive aggressive children reinforce the aggressive behaviour after observing their parents' behaviours. In addition, discovering that such actions could work in problem solving, they repeat acting in an aggressive manner.

In many studies carried out in the literature, it is claimed that family life is the most significant factor in the social and emotional development of children and adolescents (Darling & Steinberg, 1993; Skripkauskaitė et al., 2015). It is further suggested that the child caring methods of parents might affect their children's aggressive behaviours in the outdoor – school in particular. Moreover, in the adolescence period, they may also lead to certain anti-social behaviours (Eron, Huesmann, & Zelli, 1991; Darling & Steinberg, 1993; Conger et al., 2012; Werner, 2004; Er, 2014). The new thing in the emotional development of parents-children relations is the concept of parents emotional availability which is based on the studies carried out in 1991. This term signifies a new dimension of identifying the quality of parents-children relations.

Based on the framework of attachment theory, the concept of parents emotional availability mainly focuses on parents' reactions, sensitiveness and affective-commitment (Biringen, 2000). Sroufe (2005) claims that the children, who are treated in a repudiative and insensitive manner by their parents or carers, tend to act in an insecure and incoherent manner. Therefore, those children who have such an insecure attachment show aggressive behaviours towards other people in their social environment. Marici (2015) suggests that emotions play the central role in the development of family ties between parent and child. He further claims that, within a family, a child who is reared in an indifferent, insensitive and strict manner could fail in his/her emotional and behavioural actions. Therefore, when grown up, these children may adopt hostile and prejudiced attitudes and act in an aggressive manner while confronting a problem. As a result, when they begin to interact with other people in the social environment, these children have difficulty in regulating their emotions if faced with any provocation. Moreover, when combined with social-cognitive prejudices, they may also show reactive aggressive behaviours (Mcauliffe, Hubbard, Rubin, Morrow, & Dearing, 2007).

The things that affect a family's emotional climate are the way of attachment, parent's child caring methods, parents' ability to reflect their emotions towards each other and their children, and the quality of these relations. The family climate plays a crucial role in the children's acquisition of emotion regulation abilities within the family (Morris, Silk, Steinberg, Myers, & Robinson, 2007). The concept of emotion regulation is defined to be internal and external processes that are responsible for monitoring,

evaluating and altering temporal but intensive emotions that one feels in accordance with his/her goals (Thompson, 1994; Gross & Thompson, 2007). Similarly, Gratz and Roemer (2004) define an effective emotion regulation to be a complex structure that is based on the acceptance of emotions, and this structure should include the ability to understand the description and meaning of emotions and maintain goal-oriented emotions in case of any negative emotional experience. They also emphasize that adaptation-oriented emotion regulation abilities should include the ability to reduce the intensity and duration of the experienced emotion rather than to totally change it.

The interactions between parents and child have a significant impact on the child's emotion regulation abilities (Stifter & Spinrad, 2002; Sarıtaş & Gençöz, 2011). Within a family, the child learns emotion regulation abilities through observation, and parenting styles and behaviours drastically affect the child's emotion regulation abilities in the socialization process (Morris et al., 2007). The concept of emotion regulation is a vital part of children's social development (Halberstadt, Denham, & Dunsmore, 2001; Thompson, 1994). Any deficiency in emotion regulation abilities causes a poor social development in upcoming years, and thereby leads to aggressive actions (Eisenberg, Cumberland, & Spinrad, 1998; Morris et al., 2007). A negative emotion in the face of an action triggers negative outcomes that might emerge at the end of such actions (Spector, Fox, & Domagalski, 2005). An internal negative emotion that emerges during negative events converts to an external aggressive attitude towards other people in social environments (Martinko, Gundlach, & Douglas, 2002).

An effective emotion regulation ability includes the recognition and approval of the meanings of emotions, controlling them in the event of a negative emotional experience, and maintaining target-oriented behaviours in certain contexts (Gratz & Roemer, 2004). Studies on the role of emotion regulation in aggression illustrate that aggressive children and adolescents use emotion regulation strategies less than nonaggressive ones (De Castro et al., 2005; Silk, Steinberg, & Morris, 2003). Crick (1995; as cited in Kawabata, Alink, Tseng, Van Ijzendoorn, & Crick, 2011) examines the link between reactive aggression and emotion regulation abilities. He concludes that the group that cannot effectively use emotion regulation strategies have a higher tendency for reactive aggression.

Aggression could be seen in every term of human life, but, in developmental periods, the severity of expressing aggressive actions may differ (Anderson & Huesmann, 2003). The most dangerous period for aggressive actions is the adolescence. Adolescents enact aggressive behaviours relatively more than those at early ages, and similarly, they tend to use dangerous tools in the event of aggressive actions more often than those at early ages (Verlinden, Hersen, & Thomas, 2000). The adolescence is a period in which certain physical, emotional and cognitive features develop, and in this period, relations between the adolescent and parents are characterized (Babore, Picconi, Candelori, & Trumello, 2014). Within the process of cognitive-emotional development, emotion regulation strategies are corporally used in the adolescence period. So, it is an appropriate period for examining certain links in adolescence psychology (Pena & Pacheco, 2012). This situation could stem from hormonal changes, cognitive and social developments during adolescence, and also from various stressors in the adolescent's life (Forbes & Dahl, 2010; Somerville, Jones, & Casey, 2010). Children and adolescents have varying emotion regulation abilities (Guyer, Caouette, Lee, & Ruiz, 2014). During adolescence period, the social pressure generated particularly by peers can be the main stress factor for adolescents (Oudekerk, Allen, Hessel, & Molloy, 2015). Moreover, certain behaviours of parents that restrict the freedom of adolescents can cause an impulsive anger which influences the psycho-physiological regulation of emotions. This, in turn, could have a negative impact on emotion regulation abilities (Cook, Chaplin, & Stroud, 2015).

In many studies and theories, it is claimed that emotions have a central role in determining violent and aggressive tendencies of human being. A negative emotion in case of a certain situation sets ground for negative results that will arise from this particular situation (Spector et al., 2005). An internal negative emotion that one feels during a negative situation could turn into an external aggressive manner towards other people within the social environment (Martinko et al., 2002). The family is the first social environment in which our emotions get shaped. Within the family, we learn how to react to different emotions about ourselves and other people, and to express our feelings about these emotions. Parents' emotional approaches and attitudes constitute the framework for the children's emotional life (Goleman, 2011). Therefore, parenting attitudes and behaviours have a profound influence on the child's emotion regulation abilities during socialising processes (Morris et al., 2007). Bad parenting could lead adolescents to act aggressively in the event of a problem that they encounter in social environments (Garnefski, Legerstee, Kraaij, Van den Kommer, & Teerds, 2002). In these contexts, we can argue that parenting attitudes have a significant impact on adolescents' aggressive behaviours, and that they also have a positive or negative influence on adolescents' emotion regulation abilities. As a result, we think that emotion regulation has a mediating effect on the relation between adolescents' aggressive behaviours and parents' emotional attitudes.

In the literature, there are some studies about the relation between family life and emotional processes and aggression. In these studies, it is claimed that emotional climate of a family have an impact on the child's emotion regulation abilities. Therefore, so as to analyse the aggression on a cause and effect basis, it is important to research whether difficulties in emotion regulation are mediating variables in the relation between reactive-proactive aggression and parents' emotional availability. Moreover, since aggression is a big and serious problem in the contemporary societies, studies about aggression tend to analyse it with certain sub-dimensions. So, the difference between reactive and proactive aggression can enable us to better understand and examine the studies carried out within the research area, and it will also help us develop appropriate prevention strategies. According to the studies, aggressive actions are observed more often in particularly 15-17 age period, and in the following years, the number of these problematic actions diminishes (Ögel, Tarı, & Yılmazçetin Eke, 2006; Verlinden et al., 2000). So, considering their age, studies on high school students are regarded to be vital in understanding aggressive and anti-social behaviours. Since such studies could present valuable data for aggressive behaviour researchers, they might help them provide a suitable prevention strategy.

In this context, this study aims to examine the relation between reactive-proactive aggression and parents' emotional availability in adolescents, and to determine whether difficulties in emotion regulation are mediating variables in this relation. Within the framework of these main research subjects, there are some hypotheses put forward in this study.

- H1. There are negatively meaningful relations between parents' emotional availability and reactive-proactive aggression and difficulties in emotion regulation.
- H2. There are positively meaningful relations between difficulties in emotion regulation and reactive-proactive aggression.
- H3. Difficulties in emotion regulation have a mediating role between mother's emotional availability and reactive aggression.
- H4. Difficulties in emotion regulation have a mediating role between father's emotional availability and reactive aggression.

H5. Difficulties in emotion regulation have a mediating role between mother's emotional availability and proactive aggression.

H6. Difficulties in emotion regulation have a mediating role between father's emotional availability and proactive aggression.

Method

Model of Research

This study is a descriptive study about determining the mediating role of difficulties in emotion regulation in the relation between parents' emotional availability and reactive-proactive aggression in high school students. While the dependent variables in this study are reactive-proactive aggression, the independent variables are parents' emotional availability and emotion regulation abilities.

Study Group

The study group of this study is 776 students - 423 (%54.5) girls, 353 (%45.5) boys - who studies at 8 different high schools in central districts (Çukurova, Seyhan, Yüreğir and Sarıçam) in Adana in 2015-2016 academic year. The students are between 14-19 ages, so their average age is 16.38 (Ss=1.13). The study group has been constituted with 'convenience sampling' method, which is one of the purposeful sampling methods. In this study, the data were collected from 8 different schools, located in 4 different districts of Adana province, which have upper, middle and lower-class in socio-economic context. In order to create variety, different kinds of high school students are included in the study group (Anatolian high school, vocational high school, and science high school). 40.9% of the mothers of these students are primary school graduates. Only 7.2% of the mothers are high school or university graduates, and 0.5% of them hold MA or PhD degrees. On the other hand, 30.2% of the fathers of these students are primary school graduates. Only 18.9% of the fathers are high school or university graduates, and 1.7% of them hold MA or PhD degrees.

Data Collection Tools

Reactive - Proactive Aggression Scale

The Reactive-Proactive Aggression Scale was designed by Raine et al. (2006). Its Turkish adaptation was carried out by Cenkseven Önder, Avcı, and Çolakkadıoğlu (2016). While 11 items of the scale are about reactive aggression, 12 items are related to proactive aggression. The questionnaire is a 3 point likert scale, so it is graded as 0-1-2. In addition to the appropriate understanding of the reactive-proactive aggression concept, the scale provides certain items related with both verbal and physical aggression. Therefore, it includes the situational and causal dimensions of aggression. If somebody gets high points from the scale, it means that he/she has a high tendency for aggression. The points for reactive aggression, proactive aggression and total aggression are different in the scale. The Turkish adaptation of the scale was applied to 763 secondary and high school students (Cenkseven Önder et al., 2016). The reliability co-efficient for total, proactive and reactive aggression points are .88, .84, and .84 respectively. As a result of confirmatory factor analysis, it is determined that, as in its original, the Turkish adaptation of the Reactive-Proactive Aggression Scale has a two-factor structure ($\chi^2=599.64$, $df=229$, $AIC=693.62$, $GFI=.97$, $AGFI=.97$, $NFI=.98$, $NNFI=.99$, $IFI=.99$, $RMSEA=.046$). In this study, the reliability co-efficient of the scale is .82 for reactive aggression, and .78 for proactive aggression.

Parents Emotional Availability Scale

The Parents Emotional Availability Scale was patterned by Lum and Phares (2005). In a total of 15 items, the participants evaluate their mothers and fathers separately. The questionnaire is a 6 point likert scale, so it is graded as 1-2-3-4-5-6. If somebody gets high points from the mother and father sides of the scale, this shows that his/her parents' level of emotional availability is high. The scale was adapted to Turkish by Gökçe (2013). The Cronbach's alpha coefficient of internal consistency for Turkish form is

.95 (mother), and .97 (father). When the total test correlation of the scale is considered, the mother form is between .65 and .83; and the father form is between .76 and .86. As a result of factor analysis, the variance explained by the "Mother's Emotional Availability" factor that belongs to the mother form of the scale is 59.94%. On the other hand, the variance explained by the "Father's Emotional Availability" factor that belongs to the father form of the scale is 68.66%. The factor loads range from .63 to .84 for mother's emotional availability and from .76 to .88 for father's emotional availability. The reliability coefficient of the scale is .93 for mother's emotional availability, and .92 for father's emotional availability.

Difficulties in Emotion Regulation Scale

The Difficulties in Emotion Regulation Scale (DERS) was designed by Gratz and Roemer (2004). The scale consists of 6 sub-scales which are lack of emotional awareness, lack of emotional clarity, nonacceptance of emotional responses, difficulty engaging in Goal-directed behaviour, impulse control difficulties and limited access to emotion regulation strategies (Rugancı & Gençöz, 2010). The questionnaire is a 5 point likert scale, so it is graded as 1-2-3-4-5. If somebody gets high points from the scale, it shows a difficulty in emotion regulation. The Turkish adaptation of the scale was designed by Rugancı (2008). In the scale, the Cronbach's alpha coefficient of internal consistency is found to be .94. However, the coefficient of internal consistency for sub-scales of DERS ranges from .90 to .75. The test retest reliability of the scale is calculated to be .83, and the coefficient of Guttman split half reliability is found to be .95 (Rugancı & Gençöz, 2010). In terms of the validity of similar tests, Difficulties in Emotion Regulation Scale is related to Brief Symptom Inventory at a .58 level, and .39 and .54 levels with its sub-scales (Rugancı & Gençöz, 2010). In this study, the reliability co-efficient of the scale is determined to be .88 for the whole scale.

Procedure

After a legal permission was obtained from the authorities in the Ministry of National Education, the data were collected from 8 different high schools located in central districts of Adana. After getting an appointment, the schools were visited during office hours, and the data were collected via carrying out the scales within the class environment. Only voluntary students took the data collection scales. Participants completed filling in the scales in approximately 20 minutes. During the data collection process, the main focus was to examine the mediating role of difficulties in emotion regulation in the relation between participant students' parents' emotional availability and reactive-proactive aggression. First, descriptive statistics related to all variables were calculated. Then, the relations between the variables are determined via Pearson correlation analysis. Mediating analyses were carried out in accordance with Preacher and Hayes (2004, 2008) suggestions. In order to analyse the meaningfulness of indirect effects, Preacher and Hayes' (2008) bootstrapping procedure test were used. In this study, through conducting 1000 bootstraps, bootstrap co-efficient and confidence intervals were determined. All statistical analyses were carried out by using IBM SPSS Statistics 23.00.

Results

Descriptive Statistics and Correlations

In order to examine the relations among reactive-proactive aggression, parents' emotional availability, difficulties in emotional regulation, and its sub-sections, Pearson correlation coefficients were calculated, and the results were presented in Table 1, below.

Table 1. The Correlation Values and Descriptive Statistics for Reactive - Proactive Aggression, Parents Emotional Availability and Difficulties in Emotion Regulation Scales

	Correlations					Descriptive Statistics		
	1	2	3	4	5	X (Ss)	Skewness	Kurtosis
1. Reactive Aggression	-					8.55 (4.19)	.46	-.18
2. Proactive Aggression	.52**	-				1.99 (2.67)	.89	.18
3. Mother's Emo.Ava.	-.18**	-.15**	-			73.07 (16.78)	.87	1.22
4. Father's Emo.Ava.	-.20**	-.17**	.52**	-		65.13 (20.41)	-.78	.39
5. Emotion Reg.Dif.	.33**	.20**	-.13**	-.13**	-	103.32 (19.14)	.25	-.51

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

As seen in Table 1, there are some meaningful relations between parents' emotional availability and reactive aggression (-.18, -.20 respectively) and proactive aggression (-.15, -.17 respectively). There are also positively meaningful relations between difficulties in emotional regulation scale reactive aggression .33 and there are positively meaningful relations between proactive aggression .20. There is also a meaningful relations between emotional regulation difficulty and emotional availability to mother and father at -13 level.

Mediator Models

Relations between emotional availability to mother and father, reactive-proactive aggression, and emotional regulation difficulties, which are considered as mediating variables, were examined using regression analysis. Bootstrapping were also used in evaluating the indirect effects.

The Mediator Effect of Difficulties in Emotion Regulation on the Relation between Reactive Aggression and Mother's Emotional Availability

The findings related to the mediating effect of difficulties in emotion regulation on the relation between mother's emotional availability and reactive aggression are presented in Figure 1. As expected, mother's emotional availability predicts difficulties in emotion regulation in a meaningfully negative way ($\beta = -.13$, $t = -3.53$, $p < .001$). Similarly, difficulties in emotion regulation predict reactive aggression in a meaningfully positive way ($\beta = .31$, $t = 9.69$, $p < .001$). Mother's emotional availability predicts reactive aggression in a meaningfully negative way ($\beta = -.18$, $t = -5.10$, $p < .001$). As seen in Figure 1, according to the results of regression analyses carried out to determine mediating role of difficulties in emotion regulation in the relation between mother's emotional availability and reactive aggression, the beta value is found to drop from -.18 to -.14 ($p < .001$) after difficulties in emotion regulation get into the equation. This drop demonstrates that difficulties in emotion regulation partially mediate in the relation between mother's emotional availability and reactive aggression (bootstrap co-efficient = .04, $Sh = .01$, %95, $GA = 1.96$, 6.34). Preacher and Hayes (2004, 2008) suggest that, in order to claim that the indirect effect is meaningful, the range of 95% BCa point estimate of confidence interval should not include zero.

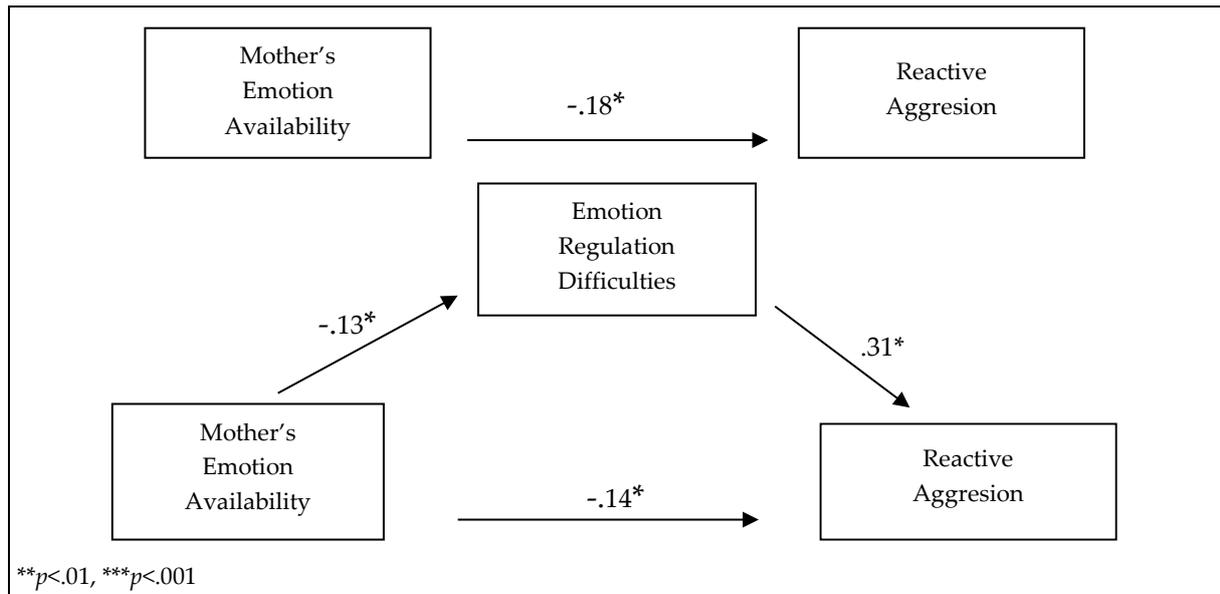


Figure 1. The Mediator Effect of Difficulties in Emotion Regulation on the Relation between Reactive Aggression and Mother's Emotional Availability

The Mediator Effect of Difficulties in Emotion Regulation on the Relation between Reactive Aggression and Father's Emotional Availability

The findings related to the mediating effect of difficulties in emotion regulation on the relation between father's emotional availability and reactive aggression are presented in Figure 2. Father's emotional availability predicts reactive aggression in a meaningfully negative way ($\beta = -.13$, $t = -2.97$, $p < .001$). Difficulties in emotion regulation predict reactive aggression in a meaningfully positive way ($\beta = .31$, $t = 9.69$, $p < .001$). Father's emotional availability predicts reactive aggression in a meaningfully negative way ($\beta = -.16$, $t = -5.80$, $p < .001$). The beta value is found to drop from $-.20$ to $-.16$ ($p < .001$) after difficulties in emotion regulation get into the equation. Bootstrapping results point out difficulties in emotion regulation have a partial mediating role in the relation between father's emotional availability and reactive aggression (bootstrap co-efficient = $-.03$, $Sh = .01$ %95, G.A. = 1.61, 5.80).

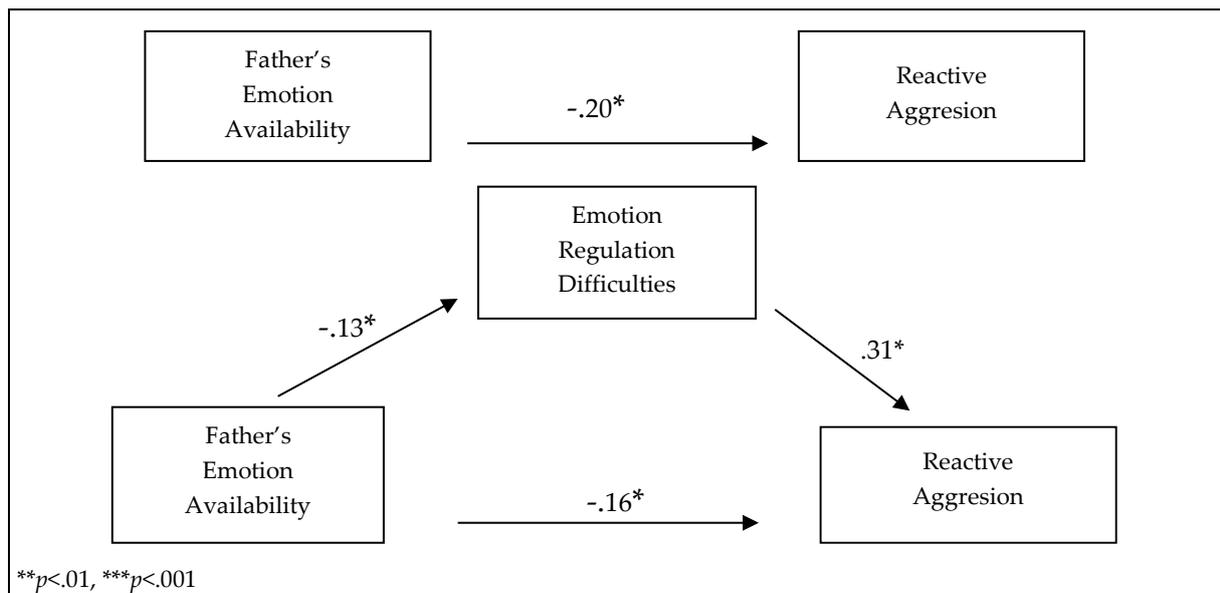


Figure 2. The Mediator Effect of Difficulties in Emotion Regulation on the Relation between Reactive Aggression and Father's Emotional Availability

The Mediator Effect of Difficulties in Emotion Regulation on the Relation between Proactive Aggression and Mother's Emotional Availability

As seen in Figure 3, mother's emotional availability predicts difficulties in emotion regulation in a meaningfully negative way ($\beta = -.13$, $t = -3.53$, $p < .001$). Difficulties in emotion regulation predict proactive aggression in a meaningfully positive way ($\beta = .20$, $t = 5.81$, $p < .001$). Mother's emotional availability predicts proactive aggression in a meaningfully negative way ($\beta = -.12$, $t = -2.57$, $p < .001$). The beta value is found to drop from $-.15$ to $-.12$ ($p < .001$) after difficulties in emotion regulation get into the equation. The results of bootstrapping (bootstrap co-efficient = $-.05$, $Sh = .01$ %95 G.A. = $-.84$, 2.37) show that difficulties in emotion regulation have a partial mediating effect in the relation between mother's emotional availability and proactive aggression.

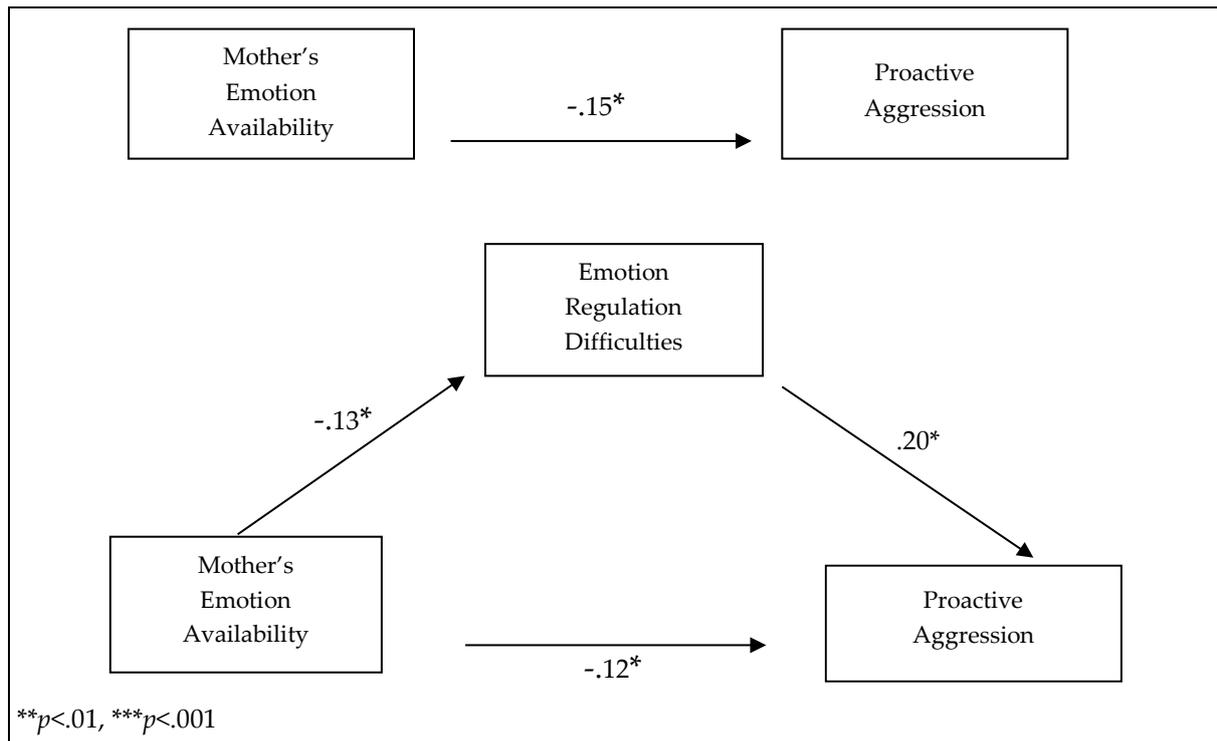


Figure 3. The Mediator Effect of Difficulties in Emotion Regulation on the Relation between Proactive Aggression and Mother's Emotional Availability

The Mediator Effect of Difficulties in Emotion Regulation on the Relation between Proactive Aggression and Father's Emotional Availability

The results related to the mediating effect of difficulties in emotion regulation on the relation between father's emotional availability and proactive aggression are presented in Figure 4. Father's emotional availability predicts difficulties in emotion regulation in a meaningfully negative way ($\beta = -.13$, $t = -2.97$, $p < .001$). Difficulties in emotion regulation predict proactive aggression in a meaningfully positive way ($\beta = .20$, $t = 5.81$, $p < .001$). Father's emotional availability predicts reactive aggression in a meaningfully negative way ($\beta = -.14$, $t = -4.65$, $p < .001$). The beta value is found to drop from $-.15$ to $-.12$ ($p < .001$) after difficulties in emotion regulation get into the equation. According to Bootstrapping results, difficulties in emotion regulation partially mediate the relation between father's emotional availability and proactive aggression (bootstrap co-efficient = $-.05$, $Sh = .01$ %95 G.A. = $-.78$, 1.78).

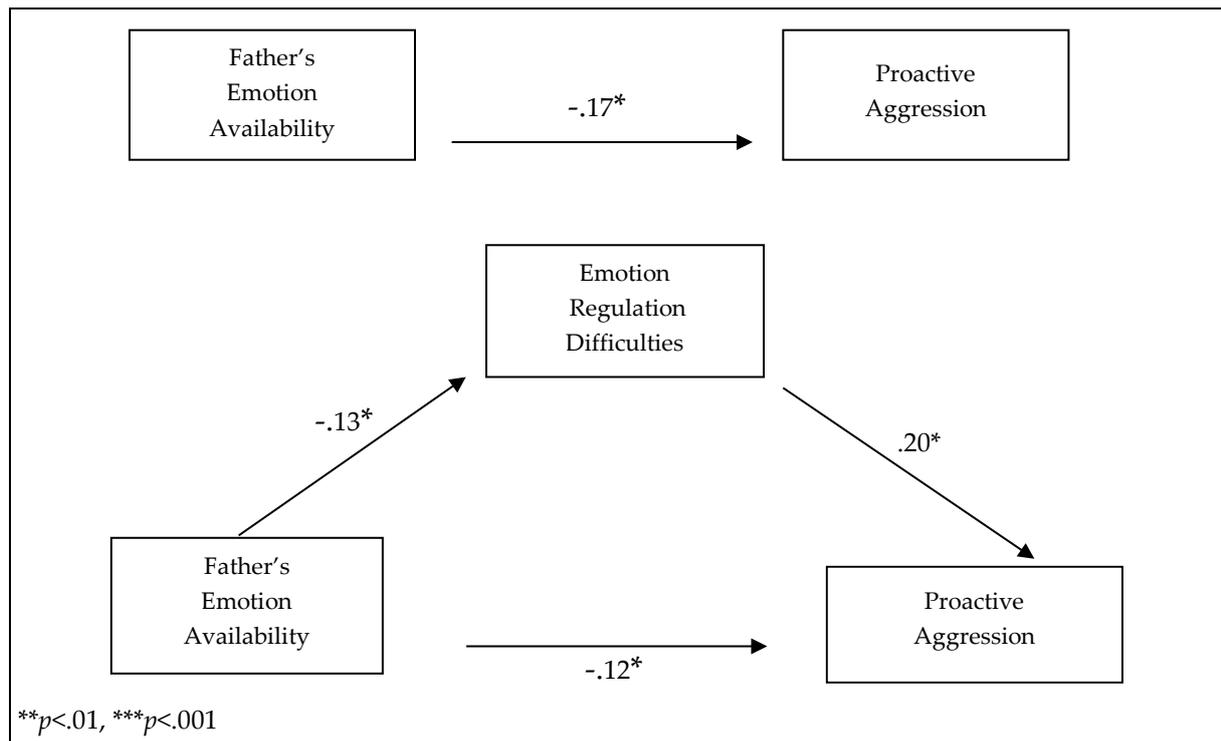


Figure 4. The Mediator Effect of Difficulties in Emotion Regulation on the Relation between Proactive Aggression and Father's Emotional Availability

Discussion and Conclusion

In short, the findings in our study, illustrate that difficulties in emotion regulation have a partial mediating role in the relation between parents' emotional availability and reactive-proactive aggression in adolescents. Before mediating variable analysis, the relations between variables were examined, and meaningful relations were observed between reactive-proactive aggression, and parents' emotional availability and difficulties in emotion regulation.

First, the negative relation between parents' emotional availability and reactive-proactive aggression is found out. This confirms the results of previous studies (Er, 2014; Marici, 2015; DeBaryshe & Fryxell, 2004; Garnefski et al., 2002). The relation between the child and parents, and the quality of this relation determine the attitude and behaviours of children towards themselves and others within social relations (Werner, 2004). Similarly, Henry, Sager, and Plunkett (1996) argue that adolescents who have a good relationship with their family have a better understanding of the emotions of other people that they have an interaction in social circumstances. Moreover, they also emphasize that these individuals tend to approach other people with a similar appreciation. Naturally, in the event of a behavioural problem, adolescents tend to use emotional and cognitive strategies that they have learned within the family in order to cope with these problems (Garnefski et al., 2002). The adolescence is a period in which certain physical, emotional and cognitive features develop, and in this period, relations between the adolescent and parents are characterized (Babore et al., 2014). Morris et al. (2007) claim that, due to their academic goals, emotional relations and other developmental tasks, adolescents use coping and emotion regulation strategies more often during developmental processes. Therefore, in the adolescence period, those who cannot form healthy relations with their family, or those who have an emotionally distant relation with their family tend to have an adaptation problem with their social environments. Therefore, an individual who is distant from the emotional climate of his family and tends to defend himself with aggressive actions in case of a problem, shows the aggressive problem-solving strategy that he has developed during the problems faced with at adolescence period.

Another finding of this study is the positive relation between reactive-proactive aggression and difficulties in emotion regulation. In some studies, the relation between reactive-proactive aggression and difficulties in emotion regulation has been examined. For example, Skripkauskaite et al. (2015) claim that there is a meaningful relation between reactive-proactive aggression and difficulties in emotion regulation. Similarly, Jackson (2015) demonstrates the meaningful relation between reactive-proactive aggression and difficulties in emotion regulation. An effective emotion regulation is defined to be a complex structure that is based on the acceptance of emotions, and this structure should include the ability to understand the description and meaning of emotions and maintain goal-oriented emotions in case of any negative emotional experience (Gratz & Roemer, 2004). In their respective studies, Cohn, Jakupcak, Seibert, Zeichner, and Hildebrandt (2010) reveal that there is a meaningful relation between low-level emotional clarity, emotional openness, emotional awareness, emotional control and aggression. Eisenberg et al. (1998), and Morris et al. (2007) emphasize that lack of emotion regulation abilities may cause deficiency in social and cognitive development of adolescents and lead to aggressive behaviours. The findings in this study confirm the results of previous studies.

Another objective of this study is to determine whether the difficulties in emotion regulation have an intermediary role in the relation between parents' emotional availability and reactive-proactive aggression in high school students. The analysis of the total score obtained from all scales demonstrates that difficulties in emotion regulation have a partial mediating role in the relation between parents' emotional availability and reactive-proactive aggression in high school students. Consequently, we argue that the children who are grown up in a distant, cold, indifferent and strict family atmosphere have difficulties in emotion regulation, which, in turn, lead to reactive-proactive aggressive action in social relations.

For example, Shields and Cicchetti (2001) emphasize that lack of emotion regulation ability has an intermediary role in the relation between reactive aggression and the attitudes of parents who treat their children in an ill-manner. Moreover, Chang, Schwartz, Dodge, and McBride-Chang (2003) reveal an intermediary role of emotional irregularity for aggressive behaviours of the children who are exposed to violence by their mothers. In another study, Su, Mrug, and Windle (2010) have studied the role of exposure to violence and parental care in the relation between reactive-proactive aggression tendency and empathy abilities. They argue that exposure to violence and ill parental care has an intermediary role in the relation between reactive-proactive aggression tendency and empathy abilities.

In accordance with the data collected in many similar studies, we could say that there are a lot of intermediary variables between reactive-proactive aggression and emotional processes. In a similar context, Baron and Kenny (1986) argue that, particularly in psychology and other social sciences studies, different variables might have different roles in the relation between two different variables.

In conclusion, in this research paper, we have studied the intermediary role of difficulties in emotion regulation in the relation between parents' emotional availability and reactive-proactive aggression in adolescents. It has been found out that the emotion regulation difficulty is a partial mediating variable in the relation between parents' emotional availability and reactive-proactive aggression. In accordance with the findings of this study, certain suggestions can be made in terms of research and application. Firstly, reactive aggression could lead to proactive aggression if the act is reinforced with a potentially positive outcome. Therefore, in order to manage reactive aggression, the children should learn the ability of impulse and response control at very early ages. For, this might help prevent potential acts of proactive aggression in the adolescence period.

This study has certain limitations. First, it is carried out with adolescents who are students in central districts of Adana. In order to make a strong generalization, similar studies should be done with adolescents from different regions. Secondly, the study includes only high school students. So as to validate the findings, the study should be repeated with different age groups (i.e. university, secondary school students) in the future. In addition, this study is about the role of difficulties in emotion regulation in the relation between parents' emotional availability and reactive-proactive aggression. A similar study can be conducted with different variables (personality traits, attachment styles, social-emotional competence, school atmosphere, self-assessment etc.).

References

- Anderson, C. A., & Huesmann, L. R. (2003). Human aggression: A social-cognitive view. In M. A. Hogg, & J. Cooper (Eds.), *Handbook of social psychology* (pp. 296-323). London: Sage Publications.
- Babore, A., Picconi, L., Candelori, C., & Trumello, C. (2014). The emotional relationship with parents: A validation study of the LEAP among Italian adolescents. *European Journal of Developmental Psychology*, 11(6), 728-739.
- Bandura, A. (1973). *Aggression: A social learning analysis*. Prentice Hall PTR.
- Baron, R. M., & Kenny, D. A. (1986). The moderator and mediator variable distinction in social psychological research: Conceptual, strategic, and statistic considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Berkowitz, Z. (1993). Aggression: Its causes, consequences, and control. *Aggressive Behavior*, 20(6), 464-466.
- Biringen, Z. (2000). Emotional availability: Conceptualization and research findings. *American Journal of Orthopsychiatry*, 70, 104-114.
- Card, N. A., & Little, T. (2007). Differential relations of instrumental and reactive aggression with maladjustment: Does adaptivity depend on function? In P. Hawley, T. Little, & P. Rodkin (Eds.), *Aggression and adaptation: The bright side to bad behavior* (pp. 107-134). Mahwah, NJ: Erlbaum.
- Cenkseven Önder, F., Avcı, R., & Çolakkadioğlu, O. (2016). Validity and reliability of the reactive-proactive aggression questionnaire in Turkish adolescents. *Academic Journals*, 11(20), 1931-1943.
- Chang, L., Schwartz, D., Dodge, K. A., & McBride-Chang, C. (2003). Harsh parenting in relation to child emotion regulation and aggression. *Journal Family Psychology*, 17(4), 598-606.
- Cohn, A. M., Jakupcak, M., Seibert, L. A., Zeichner, A., & Hildebrandt, T. B. (2010). The role of emotion dysregulation in the association between men's restrictive emotionality and use of physical aggression. *Psychology of Men and Masculinity*, 11(1), 53-64.
- Conger, R. D., Conger, K. J., Elder G. H., Lorenz, F. O., Simons, R. L., & Whitbeck L. B. (2012). A family process model of economic hardship and adjustment of early adolescent boys. *Child Development*, 63, 526-541.
- Cook, E. C., Chaplin, T. M., & Stroud, L. R. (2015). The relationship between autonomy and relatedness and adolescents' adrenocortical and cardiovascular stress response. *J Youth Adolesc.*, 44, 1999-2011.
- Crick, N. R., & Dodge, K. A. (1996). Social information-processing mechanisms in reactive and proactive aggression. *Child Development*, 67(3), 993-1002.
- Darling, N., & Steinberg, L. (1993). Parenting style as context. An integrative model. *Psychological Bulletin*, 113(3), 487-496.
- De Castro, B. O., Merk, W. V., Koops, W., Veerman, J. W., & Bosch, J. D. (2005). Emotions in social information processing and their relations with reactive and proactive aggression in referred aggressive boys. *Journal Clinical Child Adolescent Psychology*, 34(1), 105-16.
- De Castro, B.O., Slot, N.W., Bosch, J.D., Koops, W. & Veerman, J.W. (2003). Negative affect exacerbates hostile attributions of intent in highly aggressive boys. *Journal of Clinical Child and Adolescent Psychology*, 32, 57-66.
- Dean, A. J., Duke, S. G., George, M., & Scott, J. (2007). Behavioral management leads to reduction in aggression in a child and adolescent psychiatric inpatient unit. *Journal of The American Academy of Child & Adolescent Psychiatry*, 46(6), 711-20.
- DeBaryshe, B., & Fryxell, D. (2004). A developmental perspective on anger: Family and peer contexts. *Psychology in the School*, 35, 205-216.
- Dodge, K. A., & Coie, J. D. (1987). Social-information-processing factors in reactive and proactive aggression in children's peer groups. *Journal Personal Social Psychology*, 53(6), 1146-58.

- Eisenberg, N., Cumberland, A., & Spinrad, T. L. (1998). Parental socialization of emotion. *Psychology Inquiry*, 9(4), 241-273.
- Er, G. (2014). *Ergenlikte reaktif-proaktif saldırganlık, empati ve çocuk yetiştirme stilleri* (Unpublished master's thesis.) Mersin University, Institute of Social Sciences, Mersin.
- Erdley, C. A., Rivera, M. S., Shepherd, E. J., & Holleb, L. (2010). Social cognitive models and skills. In D. W. Nangle, D. J. Hansen, C. A., Erdley, & P. J. Norton (Eds.), *Practitioner's guide to empirically based measures of social skills*. Springer Publications.
- Eron, L. D., Huesmann, L. R., & Zelli, A. (1991). The role of parental variables in the learning of aggression. In D. Pepler, & K. Rubin (Eds.), *The development of and treatment of childhood aggression* (pp. 169-188). Hillsdale, N.J: Erlbaum,.
- Fite, P. J., Rathert, J. L., Stoppelbein, L., & Greening, L. (2012). Social problems as a mediator of the link between reactive aggression and withdrawn/depressed symptoms. *Journal of Child and Family Studies*, 21(2), 184-189.
- Forbes, E. E., & Dahl, R. E. (2010). Pubertal development and behavior: hormonal activation of social and motivational tendencies. *Brain Cogn.*, 72, 66-72.
- Garnefski, N., Legerstee, J., Kraaij, V., Van den Kommer, T., & Teerds, J. (2002). Cognitive coping strategies and symptoms of depression and anxiety: A comparison between adolescents and adults. *Journal of Adolescence*, 25, 603-611.
- Geen, R. G. (2001). *Human aggression* (2nd ed.). Taylor & Francis.
- Goleman, D. (2011). *Duygusal zeka* (B. S. Yüksel, Trans.) (11th ed.). İstanbul: Varlık Publishing.
- Gökçe, G. (2013). *Ebeveynin duygusal erişilebilirliği ve genel psikolojik sağlık: Duygu düzenleme, kişilerarası ilişki tarzı ve sosyal desteğin rolü* (Unpublished master's thesis). Ankara University, Institute of Social Sciences, Department of Psychology, Ankara.
- Gratz, K. L., & Roemer, L. (2004). Multidimensional assesment of emotion regulation and dysregulation: Development, factor structure and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment*, 26(1), 41-54.
- Gross, J. J., & Thompson, R. A. (2007). Emotion regulation: Conceptual Foundations. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 3-24). New York: Guilford Press.
- Guyer, A. E., Caouette, J. D., Lee, C. C., & Ruiz, S. K. (2014). Will they like me? Adolescents' emotional responses to peer evaluation. *Int J Behav Dev*, 38, 155-163.
- Halberstadt, A. G., Denham, S. A., & Dunsmore, J. C. (2001). Affective social competence. *Social Development*, 10(1), 79-119.
- Henry, C. S., Sager, D. W., & Plunkett, S. W. (1996). Adolescents' perceptions of family system characteristics, parent adolescent dyadic behaviours, adolescent qualities and adolescent empathy. *Family Relations*, 45, 283-292.
- Hubbard, J. A., Dodge, K. A., Cillessen, A. H., Coie, J. D., & Schwartz, D. (2001). The dyadic nature of social information processing in boys' reactive and proactive aggression. *Journal Personal Social Psychology*, 80(2), 268-80.
- Hubbard, J. A., McAuliffe, M. D., Morrow, M. T., & Romano, L. J. (2010). Reactive and proactive aggression in childhood and adolescence: precursors, outcomes, processes, experiences, and measurement. *Department of Psychology, University of Delaware, Newark*, 78(1),95-118.
- Jackson, S.R. (2015). *Examining emotion regulation, perspective taking, and types of aggression in the context of adolescent dating relationship* (Unpublished master's thesis). B.A. University of South Alabama, USA.
- Kawabata, Y., Alink, L. R. A., Tseng, W., Van Ijzendoorn, M. H., & Crick, N. R. (2011). Maternal and paternal parenting styles associated with relational aggression in children and adolescents: A conceptual analysis and meta-analytic review. *Developmental Review*, 31(4), 240-78.

- Lum, J. J., & Phares, V. (2005). Assessing the emotional availability of parents. *Psychopathology and Behavioral Assessment*, 27(11), 211-226.
- Marici, M. (2015). Psycho-Behavioral consequences of parenting variables in adolescents. *Procedia - Social and Behavioral Sciences*, 187, 295-300.
- Marsee, M. A., & Frick, P. J. (2007). Exploring the cognitive and emotional correlates to proactive and reactive aggression in a sample of detained girls. *J Abnormal Child Psychology*, 35(6), 969-81.
- Martinko, M. J., Gundlach, M. J., & Douglas, S. C. (2002). Toward an integrative theory of counterproductive workplace behavior: A causal reasoning perspective. *International Journal of Selection and Assessment*, 10, 36-50.
- McAuliffe, M. D., Hubbard, J. A., Rubin, R. M., Morrow, M. T., & Dearing, K. F. (2007). Reactive and proactive aggression: Stability of constructs and relations to correlates. *The Journal of Genetic Psychology*, 167(4), 365-382.
- Miles, S. R., Tharp, A. T., Stanford, M., Sharp, C., Menefee, D., & Kent, D. A. (2015). Emotion dysregulation mediates the relationship between traumatic exposure and aggression in healthy young women. *Personality and Individual Differences*, 76(2015), 222-227.
- Miller, J. D., & Lynam, D. R. (2006). Reactive and proactive aggression: Similarities and differences. *Personality and Individual Differences*, 41, 1469-1480.
- Morris, A. S., Silk, J. S., Steinberg, L., Myers, S. S., & Robinson, L. R. (2007). The role of the family context in the development of emotion regulation. *Social Development*, 16(2), 361-388.
- Oudekerk, B. A., Allen, J. P., Hessel, E. T., & Molloy, L. E. (2015). The cascading development of autonomy and relatedness from adolescence to adulthood. *Child Dev.*, 86, 472-485.
- Ögel, K., Tarı, I., & Yılmazçetin Eke, C. (2006). *Okullarda suç ve şiddeti önleme*. İstanbul: Yeniden, 17.
- Pena, L. R., & Pacheco, N. E. (2012). Physical-Verbal aggression and depression in adolescents: The role of cognitive emotion regulation strategies. *University Psychology*, 11(4), 1245-1254.
- Polman, H., Orobio de Castro, B., Koops, W., van Boxtel, H. W., & Merk, W. W. (2007). A meta-analysis of the distinction between reactive and proactive aggression in children and adolescents. *Journal of Abnormal Child Psychology*, 35, 4, 522-535.
- Preacher, K. J., & Hayes, A. F. (2004). Spss and sas procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods*, 36(4), 717-731.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879-891.
- Pulkkinen, L. (1996). Proactive and reactive aggression in early adolescence as precursors to anti- and prosocial behavior in young adults. *Aggressive Behaviour*, 22(4), 241-57.
- Raine, A., Dodge, K., Loeber, R., Gatzke-Kopp, L., Lynam, D., Reynolds, C., ... Liu, J. (2006). The reactive-proactive aggression questionnaire: Differential correlates of reactive and proactive aggression in adolescent boys. *Aggressive Behaviour*, 32(2), 159-171.
- Robertson, T., Daffern, M., & Bucks, R. S. (2012). Emotion regulation and aggression. *Aggression and Violent Behavior*, 17, 72-82.
- Rugancı, R. N. (2008). The relationship among attachment style, affect regulation, psychological distress and mental construction of the relational world (Unpublished doctoral dissertation). Middle East Technical University, Ankara.
- Rugancı, R. N., & Gençöz, T. (2010). Psychometric properties of a turkish version of the difficulties in emotion regulation scale. *Journal of Clinical Psychology*, 66(4), 442-455.
- Santaş, D., & Gençöz, T. (2011). Ergenlerin duygu düzenleme güçlüklerinin, annelerinin duygu düzenleme güçlükleri ve çocuk yetiştirme davranışları ile ilişkisi. *Çocuk ve Gençlik Ruh Sağlığı Dergisi*, 18(2), 2011.

- Schwartz, D., Dodge, K. A., Coie, J. D., Hubbard, J. A., Cillessen, A. H., Lemerise, E. A., & Bateman, H. (1998). Social-cognitive and behavioral correlates of aggression and victimization in boys' play groups. *Journal Abnormal Child Psychology*, 26(6), 431-440.
- Shields, A., & Cicchetti, D. (2001). Parental maltreatment and emotion dysregulation as risk factors for bullying and victimization in middle childhood. *Journal of Clinical Child Psychology*, 30, 349-363.
- Silk, J. S., Steinberg, L., & Morris, A. S. (2003). Adolescents' emotion regulation in daily life: Links to depressive symptoms and problem behavior. *Child Development*, 74, 1869-1880.
- Skripkauskaitė, S., Hawk, S. T., Branje, S. J. T., Koot, H. M., van Lier, P. A. C., & Meeus, W. (2015). Reactive and proactive aggression: Differential links with emotion regulation difficulties, maternal criticism in adolescence. *Aggressive Behavior*, 41(3), 214-226.
- Smithmyer, C., Hubbard, J., & Simons, R. (2000). Proactive and reactive aggression in delinquent adolescents: Relations to aggression outcome expectations. *Journal of Clinical Child Psychology*, 29, 86-93.
- Somerville, L. H., Jones, R. M., & Casey, B. J. (2010). A time of change: behavioral and neural correlates of adolescent sensitivity to appetitive and aversive environmental cues. *Brain Cognitive*, 72, 124-133.
- Spector, P. E., Fox, S., & Domagalski, T. (2005). Emotions, violence, and counterproductive work behavior. *Perspectives On Workplace Violence*, 3, 29-47.
- Sroufe, L. A. (2005). Attachment and development: A prospective, longitudinal study from birth to adulthood. *Attachment and Human Development*, 7(4), 349-367.
- Stifter, C. A., & Spinrad, T. L. (2002). The effect of excessive crying on the development of emotion regulation. *Infancy*, 3(2), 133-52.
- Su, W., Mrug, S. ve Windle, M. (2010). Social cognitive and emotional mediators link violence exposure and parental nurturance to adolescent aggression. *Journal Clinic Child Adolescent Psychology*, 39(6).
- Thompson, R. A. (1994). Emotion regulation: A theme in search of definition. *Monographs of the Society for Research in Child Development*, 59(2-3), 25-52.
- Uz Baş, A., Öz, S. F., & Topçu Kabasakal, Z. (2012). İlköğretim ve ortaöğretim okullarında reaktif ve proaktif saldırganlık: Okul psikolojik danışmanlarının görüş ve yaklaşımları. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi*, 12, 23, 354-370.
- Verlinden, S., Hersen, M., & Thomas, J. (2000). Risk factors in school shootings. *Clinical Psychology Review*, 20(1), 3-56.
- Vitaro, F., Brendgen, M., & Tremblay, R. E. (2002). Reactively and proactively aggressive children: Antecedent and subsequent characteristics. *Journal Abnormal Child Psychology*, 43(4), 495-505.
- Werner, P. (2004). Reasoned action and planned behaviour. In S. J. Peterson, & T. S. Bredow (Eds.), *Middle range theories, application to nursing research* (pp. 125-147). Retrieved from <http://books.google.com/books>.
- Yurtal, F., & Cenkseven, F. (2007). İlköğretim okullarında zorbalığın yaygınlığı ve doğası. *Türk Psikolojik Danışma ve Rehberlik Dergisi*, 3(28), 1-13.