

Summary

The Associations Among Negative Life Events, Mother-Adolescent Relationship and Adolescents' Adjustment: A Follow Up Study

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In recent years, research increasingly focused on the role of family processes in the relationship between negative life events and adolescents' adjustment (Benner and Kim, 2010; Conger, Conger and Martin, 2010; Conger and Donnellan, 2007; Neppel, Senia and Donnellan, 2016; Ponnet, 2014; Smith, Nelson and Adelson, 2019; Solantaus, Leinonen and Punamaki, 2004; White, Liu, Nair and Tein, 2015). The family stress model proposed that economic hardship influence children and adolescents' developmental outcomes indirectly through a series of mediating family processes (Conger and Elder, 1994). Based on the family stress model, studies have shown that parents experienced economic hardship including low income, high debts relative to assets, and negative financial events were related to economic pressure, which, in turn, was associated with problems in parenting such as lack of warmth (Conger et al., 1992; Conger et al., 1993); uninvolved parenting (Conger et al., 1992; Conger et al., 1993; Solantaus et al., 2004); hostility (Benner and Kim, 2010; Conger, Ge, Elder, Lorenz and Simons, 1994; Neppel et al., 2016); coercive (Benner and Kim, 2010; Neppel et al., 2016), restrictive and punitive parenting (Solantaus et al., 2004), and also conflicts between parents and adolescent (Conger et al., 1994; Dmitrieva, Chen, Greenberger and Gil-Rivas, 2004; Wadsworth and Compas, 2002). In turn, these disruptions in effective parenting adversely impacted adolescents' psychological well-being (Ho, Lempers and Clark-Lempers, 1995; McLoyd, Jayaratne, Ceballo and Borquez, 1994), internalizing and externalizing problems (Benner and Kim 2010; Conger et al., 1994; Landers-Potts et al., 2015; Neppel et al., 2016; Ponnet, 2014; Solantaus et al., 2004) and academic achievement (Benner and Kim, 2010). In a group of study recently conducted in Turkey within the scope of a research project (Güre, Uçanok and Ergül, 2014) based on family stress model, which our study is a part of, revealed similar results. These studies addressed the associations among

negative life events, parent-adolescent relations and adolescent adjustment cross-sectionally (Ergül and Güre, 2012; Gümüştan, 2013; Korfal, 2016; Şahin, 2014) and longitudinally (Çakmak, 2015; Acar-Bayraktar, 2016). Besides, Uçanok and Güre (2014) showed the mediational role of communication and conflict with parents in the relationship between economic hardship and adolescents' psychologic well-being.

Another family-related negative life events stressful for adolescents is marital conflict. The focus of recent studies on marital conflict and child development shifted to the search for the family mechanisms that may account for this association (e.g., Benson, Buehler and Gerard, 2008; Bradford, Vaughn and Barber, 2008; Cui and Conger, 2008; Harold and Conger, 1997; Schoppe-Sullivan, Schermerhorn and Cummings, 2007). Parenting has been documented as a major familial variable that may account for associations between marital conflict and child adjustment. Studies showed that marital conflict indirectly predicted increases in adolescents' internalizing (depression, anxiety and hostility) and externalizing (antisocial behavior, delinquent behavior and substance use) problems and psychological well-being (self-esteem, mastery and positive affect) through positive (support, warmth and positive child management) and negative (hostility and hardness) parenting (Cui and Conger, 2008; Doyle and Markiewicz, 2005; Harold and Conger, 1997; Schoppe-Sullivan et al., 2007; Smith et al., 2019). However, research in Turkey have generally focused only on the direct relations between marital conflict and parenting (Şirvanlı-Özen, 2004) or marital conflict and adolescents' adjustment (Kızıldağ and Şendil, 2006; Şirvanlı-Özen, 2004; Şirvanlı, 1999; Ulu and Fışiloğlu, 2002).

We examined mediating role of the mother-adolescent relationship between negative life events and adolescent's adjustment on the basis of adolescents' reports. Because longitudinal research is critical to strengthen-

ing inferences about hypothesized causal processes, this study used a two-wave prospective longitudinal research design. We assessed negative life events (economic strain and marital conflict) in Time 1 and mother-adolescent relationship (mother behavior and the quality of mother-adolescent relationship) and adolescent's adjustment (self-esteem, life satisfaction, internalizing and externalizing problems) in Time 2. Wissink, Deković and Meijer (2006a) pointed out the quality of the parent-child relationship is a broader and important concept than the parenting behavior. Thus, we included both parenting behavior and the quality of the parent-child relationship as markers of parenting in the present study. Prior studies have also revealed that gender affected the strength of the associations among the aforementioned variables differently (Benson et al., 2008; Buehler, Benson and Gerard 2006; Grant et al., 2003; Harold, Fincham, Osborne and Conger, 1997; Krishnakumar and Buehler, 2000). From this point, proposed models in our study were tested separately for girls and boys. Previous research generally focused only on internalizing and externalizing problems as an indicator of adolescent adjustment. However, the emphasis has been shifted from adolescent problem behaviors to healthy adolescent development such as positive and adaptive qualities in recent studies (e.g., Conger et al., 1992; Cui and Conger, 2008; Doyle and Markiewicz, 2005; Grych and Fincham 1990; Uçanok and Güre, 2014). Therefore, we extend the earlier work by including self-esteem and life satisfaction in addition to internalizing and externalizing problems as part of adolescents' adjustment. Despite some recent changes (e.g., fathers' spending more time with their children and greater involvement in childrearing practices, etc.) in parenting practices (Ataca, 2013; Baydar, Akçınar and İmer, 2012; Sümer, 2012), significance of the parenting role of mothers in child rearing and development of their children continues. Considering this point, we examined the role of mother behavior and the quality of mother-adolescent relationship between negative life events and adolescents' adjustment. Mother behavior refers to concrete and goal-directed parenting practices that directed from mother to child, whereas the quality of mother-adolescent relationship is a more bidirectional relationship between mother and child.

Method

Participants

The data was gathered twice (Time 1 and Time 2) with an interval of one year. The sample of the study consisted of 832 adolescents (442 girls and 390 boys) in primary and secondary education. The mean age of the sample was 13.89 ($SD = 1.73$) for girls and 14.11 ($SD = 1.74$) for boys.

Measures

Economic Strain Scale. The scale was developed to measure how often adolescents experienced economic strain (Wadsworth ve Compas, 2002). It was adapted to Turkish by Uçanok and Güre (2007). Cronbach alpha reliability coefficient of Turkish version was .95 for girls and .76 for boys.

Children's Perception of Interparental Conflict Scale. The scale was developed by Grych et al., (1992) to assess children's views on several aspects of marital conflict. The Turkish version of the scale was adapted by Öz (1999). Confirmatory factor analysis supported three-factor structure with 35 items. The Cronbach alpha coefficient of reliability was .84 for conflict properties, .78 for threat and .74 for self-blame.

The Parenting Behavior Questionnaire. The questionnaire was developed by Wissink, Deković and Meijer (2006a, 2006b) to evaluate three dimensions of parenting behavior. The Turkish version of the questionnaire was adapted by Güre, Uçanok and Ergül (2014). Unlike the original scale, the Turkish version included items for mothers and fathers separately. Exploratory factor analysis supported three-factor structure for mother form. Cronbach alpha reliability coefficient of Turkish version was .88 for support, .88 for restrictive control and .81 for authoritative control.

The Quality of Parent-Adolescent Relationship Questionnaire. The questionnaire was developed to evaluate three dimensions of quality of parent-adolescent relationship (Wissink et al., 2006a; Furman, 1996). It was adapted to Turkish by Güre and her colleagues (2014). Unlike the original scale, the Turkish version included items for mothers and fathers separately. Exploratory factor analysis supported three-factor structure for mother form. Cronbach alpha reliability coefficient of the questionnaire was .84 for disclosure, .91 for negative quality of parent-adolescent relationship and .85 positive quality of parent-adolescent relationship.

Multidimensional Students' Life Satisfaction Scale. MSLSS was developed by Huebner (1994) to evaluate children's satisfaction with important specific domains in their lives. The scale was adapted to Turkish by Irmak and Kuruüzüm (2009). Confirmatory factor analysis supported five-factor structure. Cronbach alpha reliability coefficient of the adapted scale was .83 for family, .82 for friends, .77 for self, .78 for school and .76 for living environment. In this study, self subscale of MSLSS was excluded from analyses since reliability coefficient was low.

Self-Perception Profile for Adolescents. Self-Perception Profile for Adolescents was developed by Harter (1988) to assess different aspects of adolescent's self-perception. It was adapted to Turkish by Şahin and

Güvenç (1996). Cronbach alpha reliability coefficients of subscales ranged between .78 and .90 and reliability coefficient of the whole scale was .88. For this study, adolescents completed 5 items that composed the self-worth.

Youth Self-Report. Youth Self Report (YSR 11-18) was developed by Achenbach and Rescorla (2001) to measure behavioral problems and competencies of adolescents aged between 11 and 18. The Turkish version of the questionnaire was adapted by Erol and Şimşek (2010). Confirmatory factor analysis supported eight-factor structure. The Cronbach alpha coefficient of reliability was .89 for internalizing and .89 for externalizing behavioral problems. Sixty-three problem behavior items of the questionnaire were used in this study which constituted the internalizing dimension (anxiety/depression, withdrawal/depression and somatic complaints) and externalizing dimension (delinquent behavior, aggressive behavior).

Procedure

The present study is based on a comprehensive project, longitudinally investigating relationship between negative life events, parent-adolescent relationship and adolescent's adjustment, which was supported by Ankara University Scientific Research Project Coordination Unit (Project Number: BAP 11B5358001) (Güre et al., 2014). Prior to data collection, necessary permissions were obtained from the Ethical Commission of Ankara University. The adolescents voluntarily attended to the research and signed the informed consent forms before filling out the booklet. The average time needed to complete the questionnaires changed between 60-90 minutes.

Results

The correlations, means and standard deviations are displayed in Table 2. The results of repeated measure MANOVAS with controlling the age revealed that boys' mean scores of self-blame for marital conflict ($F_{1,829} = 57.38, p < .001, \eta^2 = .06$); perceived mother's restrictive control ($F_{1,829} = 22.14, p < .001, \eta^2 = .03$) and delinquent behavior ($F_{1,829} = 69.18, p < .001, \eta^2 = .08$) was significantly higher than those of girls. On the other hand girls' mean scores of perceived mother support ($F_{1,829} = 7.02, p < .01, \eta^2 = .01$); disclosure ($F_{1,829} = 48.46, p < .001, \eta^2 = .06$) and positive quality of mother-adolescent relationship ($F_{1,829} = 11.04, p < .001, \eta^2 = .01$) were higher than those of boys. Findings also indicated that girls had higher level of life satisfaction related to family ($F_{1,829} = 10.78, p < .001, \eta^2 = .01$), friends ($F_{1,829} = 54.59, p < .001, \eta^2 = .06$) and school ($F_{1,829} = 16.25, p < .001,$

$\eta^2 = .02$) than boys. Girls also reported higher level of anxiety/depression ($F_{1,829} = 73.15, p < .001, \eta^2 = .08$); withdrawal/depression ($F_{1,829} = 25.30, p < .001, \eta^2 = .03$) and somatic complaints ($F_{1,829} = 47.63, p < .001, \eta^2 = .05$) than boys.

In order to examine our hypotheses, the structural equation modeling (SEM) with method proposed by Holmbeck (1997) was used. The analyses were conducted separately for boys and girls. Self-esteem, life satisfaction, internalizing and externalizing problems at Time 1 were included as controls in the models, apart from externalizing problems in the last two models in girls, because of suppression effect (Conger, 1974; Maassen ve Bakker, 2001).

Perceived Economic Hardship, Mother Behavior, Self-Esteem and Life Satisfaction

The model provided a good fit to the data for both girls ($\chi^2(102, N = 442) = 198.14, p < .001, \chi^2/df = 1.94, CFI = .97, RMSEA = .05$) and boys ($\chi^2(102, N = 390) = 163.66, p < .001, \chi^2/df = 1.60, CFI = .98, RMSEA = .04$). The association between economic hardship and adolescent self-esteem was fully mediated for girls (the path from economic hardship to self-esteem, $\beta = -.05, p > .05; \chi^2(1) = 1.23, p > .05$) and partially mediated for boys (the path from economic hardship to self-esteem, $\beta = -.14, p < .05; \chi^2(1) = 6.61, p < .05$) by mother behavior. The association between economic hardship and adolescent life satisfaction was fully mediated by mother behavior for both girls and boys (the path from economic hardship to life satisfaction, $\beta_{Girls} = -.03, p > .05; \chi^2(1) = .38, p > .05; \beta_{Boys} = .06, p > .05; \chi^2(1) = 1.44, p > .05$).

Perceived Economic Hardship, The Quality of Mother-Adolescent Relationship, Self-Esteem and Life Satisfaction

The model provided a good fit to the data for both girls ($\chi^2(102, N = 442) = 226.25, p < .001, \chi^2/df = 2.22, CFI = .96, RMSEA = .05$) and boys ($\chi^2(87, N = 390) = 154.92, p < .001, \chi^2/df = 1.78, CFI = .97, RMSEA = .04$). For girls, the associations between economic hardship and both adolescent self-esteem and life satisfaction were fully mediated by the quality of mother-adolescent relationship (the path from economic hardship to self-esteem, $\beta = -.06, p > .05; \chi^2(1) = 1.50, p > .05$ and the path from economic hardship to life satisfaction, $\beta = -.03, p > .05; \chi^2(1) = .06, p > .05$). For boys, we could not test mediating effect because of non-significant path between economic hardship and the quality of mother-adolescent relationship.

Perceived Economic Hardship, Mother Behavior, Internalizing and Externalizing Behaviors

The model provided acceptable fit to the data for girls ($\chi^2(102, N = 442) = 238.11, p < .001, \chi^2/df = 2.33, CFI = .96, RMSEA = .06$) and a good fit to the data for boys ($\chi^2(89, N = 390) = 145.82, p < .001, \chi^2/df = 1.64, CFI = .98, RMSEA = .04$). For both girls and boys, the association of economic hardship with adolescent internalizing and externalizing behavior was fully mediated by mother behavior (the path from economic hardship to internalizing behavior, $\beta_{Girls} = .06, p > .05, \chi^2(1) = 1.95, p > .05$; $\beta_{Boys} = .02, p > .05, \chi^2(1) = .30, p > .05$ and the path from economic hardship to externalizing behavior, $\beta_{Girls} = -.07, p > .05, \chi^2(1) = 3.19, p > .05$; $\beta_{Boys} = -.03, p > .05, \chi^2(1) = .45, p > .05$).

Perceived Economic Hardship, The Quality of Mother-Adolescent Relationship, Internalizing and Externalizing Behaviors

The model provided acceptable fit to the data for girls ($\chi^2(102, N = 442) = 316.33, p < .001, \chi^2/df = 3.10, CFI = .94, RMSEA = .07$) and a good fit to the data for boys ($\chi^2(88, N = 390) = 144.11, p < .001, \chi^2/df = 1.64, CFI = .98, RMSEA = .04$; Browne & Cudeck, 1993). For girls, the associations between economic hardship and internalizing and externalizing behavior were fully mediated by the quality of mother-adolescent relationship (the path from economic hardship to internalizing behavior, $\beta = .06, p > .05, \chi^2(1) = 2.06, p > .05$ and the path from economic hardship to externalizing behavior, $\beta = -.06, p > .05, \chi^2(1) = 2.62, p > .05$). For boys, we could not test mediating effect because of non-significant paths between economic hardship and the quality of mother-adolescent relationship as well as the quality of mother-adolescent relationship and internalizing and externalizing problems.

Marital Conflict, Mother Behavior, Self-Esteem and Life Satisfaction

The model provided acceptable fit to the data for girls ($\chi^2(118, N = 442) = 271.81, p < .001, \chi^2/df = 2.30, CFI = .94, RMSEA = .05$) and a good fit to the data for boys ($\chi^2(118, N = 390) = 209.33, p < .001, \chi^2/df = 1.77, CFI = .96, RMSEA = .04$). For both girls and boys, the association between marital conflict and adolescent self-esteem was fully mediated by mother behavior (the path from marital conflict to self-esteem, $\beta_{Girls} = -.09, p > .05, \chi^2(1) = 2.14, p > .05$ and $\beta_{Boys} = -.07, p > .05, \chi^2(1) = 1.11, p > .05$), whereas the association between marital conflict and adolescent life satisfaction was partially mediated by mother behavior (the path from marital conflict to life satisfaction, $\beta_{Girls} = -.24, p < .05, \chi^2(1) = 17.42, p < .05$; $\beta_{Boys} = -.14, p < .05, \chi^2(1) = 4.12, p < .05$).

Marital Conflict, The Quality of Mother-Adolescent Relationship, Self-Esteem and Life Satisfaction

The model provided acceptable fit to the data for girls ($\chi^2(118, N = 442) = 299.57, p < .001, \chi^2/df = 2.54, CFI = .93, RMSEA = .06$) and a good fit to the data for boys ($\chi^2(102, N = 390) = 187.53, p < .001, \chi^2/df = 1.84, CFI = .96, RMSEA = .05$). For both girls and boys, the association between marital conflict and adolescent self-esteem was fully mediated by the quality of mother-adolescent relationship (the path from marital conflict to self-esteem, $\beta_{Girls} = -.09, p > .05, \chi^2(1) = 1.77, p > .05$; $\beta_{Boys} = -.11, p > .05, \chi^2(1) = 2.76, p > .05$), whereas the association between marital conflict and adolescent life satisfaction was partially mediated by the quality of mother-adolescent relationship (the path from marital conflict to life satisfaction, $\beta_{Girls} = -.22, p < .05, \chi^2(1) = 14.77, p < .05$; $\beta_{Boys} = -.17, p < .05, \chi^2(1) = 6.28, p < .05$).

Marital Conflict, Mother Behavior, Internalizing and Externalizing Behavior

The model provided acceptable fit to the data for girls ($\chi^2(118, N = 442) = 291.11, p < .001, \chi^2/df = 2.47, CFI = .94, RMSEA = .06$) and a good fit to the data for boys ($\chi^2(119, N = 390) = 210.75, p < .001, \chi^2/df = 1.77, CFI = .97, RMSEA = .04$). For girls, the association between marital conflict and internalizing and externalizing behavior was fully mediated by mother behavior (the path from marital conflict to internalizing, $\beta = .10, p > .05, \chi^2(1) = 2.76, p > .05$ and the path from marital conflict to externalizing, $\beta = .10, p > .05$). For boys, we could not test mediating effect because of non-significant paths between mother behavior and internalizing and externalizing behaviors.

Marital Conflict, The Quality of Mother-Adolescent Relationship, Internalizing and Externalizing Behavior

The model provided acceptable fit to the data for girls ($\chi^2(118, N = 442) = 364.91, p < .001, \chi^2/df = 3.09, CFI = .92, RMSEA = .07$) and a good fit to the data for boys ($\chi^2(102, N = 390) = 164.05, p < .001, \chi^2/df = 1.61, CFI = .98, RMSEA = .04$). For girls, the association between marital conflict and internalizing and externalizing behavior was fully mediated by the quality of mother-adolescent relationship (the path from marital conflict to internalizing, $\beta = .10, p > .05, \chi^2(1) = 2.66, p > .05$ and the path from marital conflict to externalizing, $\beta = .11, p > .05$). For boys, we could not test mediating effect because of non-significant paths between the quality of mother-adolescent relationship and internalizing and externalizing behaviors.

Discussion

The findings showed that for girls perceived economic hardship was significantly related to a negative mother behavior and quality of mother-adolescent relationship. Mother behavior and the quality of mother-adolescent relationship, in turn, associated with adolescent poor emotional well-being and behavior problems. Results were similar for boys, apart from non-significant relations between perceived economic hardship and the quality of mother-adolescent relationship, as well as the relations between the quality of mother-adolescent relationship and behavior problems. Mother behavior refers to concrete and goal-directed parenting practices that directed from mother to child, whereas the quality of mother-adolescent relationship is a broader concept and a more bidirectional relationship. It seems that boys did not relate economic problems to their mothers and reflect on their mutual relations.

Structural equation modeling revealed that for girls the effects of perceived economic hardship on adolescent emotional well-being and behavior problems were mediated through both mother behavior and the quality of mother-adolescent relationship. For boys, only mother behavior mediated the influence of perceived economic hardship on adolescent adjustment. The finding of indirect effect of economic hardship on adolescent adjustment through mother behavior and the quality of mother-adolescent relationship were consistent with previous studies based on family stress model (Conger et al., 2010).

In terms of marital conflict, we found that for girls, perceived marital conflict were related to a negative mother behavior and quality of mother-adolescent relationship, which in turn was associated with adolescent poor emotional well-being and behavior problems. Results were similar for boys, except for non-significant relations of both mother behavior and the quality of mother-adolescent relationship with adolescent behavior problems. The results of the mediating effects showed that for girls both mother behavior and the quality of mother-adolescent relationship mediated the relations between marital conflict and adolescent poor emotional well-being and behavior problems. For boys, however, mediational role of mother behavior and the quality of mother-adolescent relationship was only found in the relations between marital conflict and adolescent poor self-esteem and life satisfaction. These results are especially important in regard to show that adolescents can be affected by conflict, even if they are not directly exposed. As Erel and Burman (1995) pointed out, parents can prevent their children from observing conflict between them but cannot protect their children from adverse effects of marital conflict on the parent-child relationship.

As mentioned above, the relationship between the quality of mother-adolescent relationship and behavior problems were not significant in any of models of the economic hardship and marital conflict in boys. This result is thought to be related to changing family relationships in adolescence. It is emphasized that family relations during adolescence are rearranged and the distance in the mother-son relations increases (Deković, 1999). As noted earlier, we also found that boys' relationships with their mothers are weaker and more distant than those of girls. The distant and weak relationship of the boys to their mothers may be a factor that diminishes the importance of the mother-adolescent relationship in terms of the variables of interest. Besides, behavioral problems of boys may be more influenced by their fathers than mothers, because the Turkish culture is more characterized by gender-based roles and socialization (Fişek, 2005).

On the other hand, the similar results obtained in both boys and girls in terms of mother behavior's impact on psychosocial adjustment may be related to the ongoing significance of the parenting role of mothers despite some recent changes (e.g., gender equality, supporting autonomy rather than obedience, greater involvement of the father in childrearing practices, etc.) in parenting practices (Ataca, 2013; Baydar et al., 2012; Kağıtçıbaşı, 2012; Onur, 2012).

In sum, the findings supported the hypothesis that economic hardship and marital conflict effect adolescent maladjustment through their impact on mother behavior and the quality of mother-adolescent's relationship. Adolescence is a period in which adolescents become more independent from family in regard to attitude, behavior and emotion while closeness and attachment to peers increase. Despite this fact, it seems that the importance of mothers in terms of adolescents' psychosocial adjustment continue in this period. Our research showed that associations of both perceived economic hardship and the marital conflict with adolescent adjustment varied depending on the nature of the mother-adolescent relationship. The findings of the study suggest that intervention programs focusing on improving mother-adolescent relationships will contribute to the increase in adolescents' psychological well-being while decreasing their behavioral problems.