**Parental Mental Distress and Adolescent Antisocial Behavior: The Mediating Role of Family Conflict and Cohesion**

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**Abstract**

Antisocial behavior (ASB) may have severe outcomes, both for individuals and society. Therefore, it is an essential focus in research to examine which mechanisms contribute to individuals' exhibition of ASB. The association between parents' mental distress and adolescents’ ASB is well documented. However, we ask if this association partially can be explained by family conflict and cohesion as mediating factors. The sample in our study consisted of 157 adolescents and their primary caregiver from a clinical sample. The mean age for adolescents was 14.74 (range 11-18), while the mean for primary caregiver was 43.93 (range 29-78). Findings revealed a significant mediating effect between parental mental distress and adolescent ASB, through family conflict. Meaning that higher symptoms of depression and anxiety in parents increase conflict within the family, which in turn are associated with the adolescents' exhibition of aggressive and rule-breaking behavior. The indirect effect through family cohesion is not significant. Our study contributes to research by providing insight and confirmation of previous findings on associations between parental mental distress and adolescents ASB within the family constellation.

**Keywords**

Adolescent Antisocial Behavior (ASB), Parental Mental Distress, Family Conflict, Family Cohesion, Mediation.

**Highlights**

* Parental mental distress had a significant direct influence on adolescent ASB, family conflict and cohesion.
* Family conflict had a significant mediating role on the relationship between parental mental distress and adolescent ASB.
* Family cohesion did not have a mediating role on the relationship between parental mental distress and adolescent ASB.

**Introduction**

Parental mental distress is found to be connected to maladjustment and problem behaviors in children and adolescents (Elgar et al., 2007; Joyner & Beaver, 2021). Factors in the family environment and interpersonal relationships between family members are highlighted as certain aspects that may exacerbate this influence, and is therefore important to consider as underlying factors and triggers for adolescent outcomes (Van Loon et al., 2014; Xu et al., 2017).

**Adolescent Antisocial Behavior**

Antisocial behavior (ASB) is characterized as behaviors that violate norms and rules about how persons and property should be treated (Scott, 2015). These behaviors are destructive and insensitive to other people’s rights, it can be criminal and noncriminal, overt and covert, and may include aggression, substance use, bullying, sexual precocity, and vandalism (Dishion & Patterson, 2006). Criminal behavior in childhood and adolescence is referred to as delinquency (Hiatt & Dishion, 2008). Clinical diagnoses, like Oppositional Defiant Disorder (ODD), and Conduct Disorder (CD) are used to describe antisocial behavior in literature (Fonagy, 2021).

Persistent ASB can have major long-term consequences both for the individual and society (LoBraico et al., 2020), such as academic failure, drug abuse, violence, and economic struggle (Moffit, 1993; 2018). Exhibition of ASB is heterogeneous, but one of the most common forms of behavioral problems during childhood and adolescence (Frick & Viding, 2009). Early emerging ASB in childhood have a higher chance of persisting into adulthood, due to more severe individual and environmental risk factors. Maternal psychopathology, harsh and neglectful parenting, and elevated family conflict are some of such factors (Dishion & Patterson, 2006; Moffitt, 2015). However, for youth who participates in ASB in adolescence tend to have more normative backgrounds (e.g., socioeconomic status and family risk), compared to the early starters (Moffitt & Caspi, 2001).

Growing research advocates for distinguishing between different subtypes for adolescent ASB (Burt, 2012; Burt et al., 2009; Kornienko et al., 2019). The main distinction is between aggressive (e.g., verbal, physical aggression, bullying and violence) and non-aggressive behaviors (e.g., theft, vandalism, and relational aggression) (Burt et al., 2016; Kornienko et al., 2019; Little et al., 2003). Some also include *risk-taking behaviors* (Mishra & Lalumière, 2008), defined as engagement in actions that are associated with potentially adverse consequences (Boyer, 2006). Risk-taking behaviors are thought of as more normative in adolescence (Moffitt, 2018; Sundell et al., 2019), they are not necessarily illegal or dangerous, but include actions where the outcome is uncertain (Ciranka & van den Bos, 2021). Lastly, Steinberg (2004) points out that adolescents are susceptible to peer pressure, making them more likely to engage in similar activities and behaviors as their peers (Ciranka & van den Bos, 2021).

**Parental Mental Distress**

Several mechanisms, such as genes (Burt et al., 2003; Moffitt, 2015), individual temperament (Dadds & Salmon, 2003), modeling (Garber, 2005; Van Loon et al., 2014), parenting practices (Romm & Alvis, 2022; Sun et al., 2021), and family climate (Cummings et al., 2000; Patterson, 1982) have been found to elevate risk for adolescents ASB (Fosco & LoBraico, 2019). The connection between parental mental distress, symptoms of depression and anxiety, are well established risk factors for child and adolescent outcomes (e.g., Cummings & Davis, 1994; Goodman et al., 2011; Hails et al., 2018; Haws & Dadds, 2005), indicating that mental distress may reduce parents’ ability to engage in proactive and positive parenting (Elgar et al., 2007; Joyner & Beaver, 2021). Conversely, research has found a transactional influence between parental mental distress and offspring behavioral problems, indicating that higher levels of adolescent ASB are associated with chronic trajectories of mental distress in parents (Elgar et al., 2007; Korhonen et al., 2014; Xu et al., 2017).

Family environments with depressed caregivers are characterized by negative patterns of interpersonal interactions, lax monitoring, and inconsistent discipline and display of affection (Elgar et al., 2007; Korhonen et al., 2014). Cummings and colleagues (2005) found that parental depressive symptoms were linked to poor child adjustment, both internalizing and externalizing problems, peer rejection and lack of prosocial behavior, and that greater parental symptoms were associated with intrusiveness, control through guilt, and less parental warmth. Parents' mental distress increased parental rejection and overprotection, which in turn functioned as a mediator between parental psychopathology and offspring ASB (Vera et al., 2012). Korhonen et al. (2014) investigated whether it is the timing, recurrence or chronicity of maternal depression that puts offspring’s wellbeing at risk. Findings indicate that recurrent depressive symptoms were significantly associated with adolescents’ poorer psychosocial health, including self-reported externalizing behaviors. Anxious parents are often more controlling and overprotective, they tend to parent their offspring’s closely, expecting disclosure of information, and allowing less autonomy (Jones et al., 2021; Vera et al., 2012). Anxiety symptoms in mothers are associated with negative criticism (Hirshfeld et al., 1997), and lower levels of affirmation towards their adolescent, which in turn predict higher levels of externalizing behaviors (Bellina et al., 2020).

Research is somewhat conflicted on the role of mothers and fathers separate influence on offspring adjustment, and less focus have been on the influence and role of paternal mental distress (Cummings et al., 2005; Sweeney & MacBeth, 2016). Notably, both Marmostein and Iacono (2004) and Vera and colleagues (2012) found that mothers had a greater influence on child outcomes, with higher levels of maternal mental distress predicting higher levels of maladjustment in offspring compared to fathers. Conversely, a meta-analysis conducted by Connell and Goodman (2002) did not find differences in mothers’ and fathers’ psychopathology on externalizing behavior. However, they found that parents' gender may predict internalizing behavior, with mothers having a greater influence.

**Family Conflict and Cohesion as Mediators**

Parental mental distress may function as a risk factor for increased conflict levels and lower levels of cohesion within families. Family conflict involves frequent expression of anger, hostility, and resentment (LoBraico et al., 2020). Adolescents' desire for autonomy and liberation from parental control in adolescence may be a source for frustration, friction, and conflict (Buehler, 2006; Saxbe et al., 2014). Conflict between parents and offspring tends to increase during adolescent years, peaking during early adolescence, as they attempt to adjust boundaries, renegotiate parental authority, and increase their own autonomy and independence (Weymouth et al., 2016). High levels of family conflict are associated with emotional and behavioral problems, such as symptoms of mental distress, aggression, delinquency, and school problems (Fosco & Lydon-Staley, 2020; Sun et al., 2021; Xu et al., 2017). A meta-analysis by Weymouth and colleagues (2016) found positive associations between parent-adolescent conflict and youth maladjustment. Similar results were found by Xu et al., (2017), with increased family conflict, as reported by both parent and youth, resulted in higher risk for adolescent maladjustment. Family conflict is also connected to risky behavior, with increased conflict leading to heightened engagement in risky behaviors (Skinner & McHale, 2016). Further, Romm and Alvis (2022) found that love withdrawal was strongly associated with greater substance use, delinquency, physical and relational aggression. Showing that parental rejection may result in anger and frustration, as well as difficulties in emotional coping. Elevated levels of conflict may increase the use of coercive strategies in parent-adolescent interactions (LoBraico et al., 2020). In families where coercive interactions dominate, ASB emerges and then stabilizes over time (Granic & Patterson, 2006).

Family climate may function as a buffer (or protective factor) against adolescents ASB. Family cohesion is characterized by warmth, openness, emotional connection, and flexibility, and offspring in such families are found to have better psychological and behavioral adjustment than conflicted families, that are more distant, hostile, and aggressive (Coe et al., 2018; Richmond & Stocker, 2006; Sun et al., 2021). High and stable levels of cohesion make family members less adversely affected by parental mental distress, adolescent ASB, or other life challenges (Coe et al., 2018). Adolescents who feel connected to their family, are more likely to seek guidance and disclose information to their parents, and spend time with their families, leaving them with less opportunity to affiliate with delinquent and deviant peers (Fosco & LoBracio, 2019; Vieno et al., 2009). During adolescence, family cohesion tend to decrease (Deković et al., 2003; Lin & Yi, 2019). This decrease can be interpreted by adolescent development and liberation processes (Bear, 2002). Lin and Yi (2019) found decreasing levels of family cohesion in Taiwanese youth. The decrease was lower and had less impact on the teenagers who initially reported high levels of cohesion, while low family cohesion in early adolescence resulted in more delinquent behavior later in adolescence. Likewise, Coe et al. (2018) and Richmond and Stocker (2006) found that low family cohesion was a predictor for externalizing behavior in forms of conduct problems, oppositional defiance, and hostility.

Depressed mothers report that their family environments more often are less cohesive and more conflict-filled, compared to non-affected mothers (Slee, 1996). Pérez and colleagues (2018) report that higher levels of maternal depression were associated with lower levels of family cohesion, reported by both mother and adolescent. Fosco and Lydon-Staley (2020) found that adolescents within families with high levels of cohesion, reported feeling more positive, more satisfied with life, and less angry, depressed, and anxious. Reflecting that family cohesion can function as a protective factor against life difficulties.

**The Current Study**

In the current study, we aim to investigate whether family conflict and cohesion mediate the effect of parental mental distress on adolescent antisocial behavior. We hypothesize that higher symptoms of parental mental distress will increase levels of family conflict and decrease levels of family cohesion. Further, we hypothesize that elevated levels of family conflict is related to increased adolescent ASB, while elevated levels of cohesion is associated with lower adolescent ASB. We also expect a covariance between the two mediators, with high levels in one resulting in low levels in the other. In addition, we expect to find an indirect effect from parental mental distress via family conflict and cohesion on adolescent ASB.

**Methods**

**Participants**

The current study utilized data from a randomized controlled trial of Functional Family Therapy in Norway (Bjørnebekk, 2013). Adolescents between the age of 11 and 19 and their families (*N* = 159) participated in a combined randomized control- and process-outcome design which sought to treat moderate to severe antisocial behavior (Bjørnebekk, 2013). The inclusion criteria for participation were adolescents between 11 and 19 years, which displayed, or were at risk for one or several behavioral problems: aggressive (both verbally and physically) and violent behavior, delinquency with severe risk for future offenses, vandalism, severe rule breaking behavior at home, school or in the local community, and substance use. Exclusion criterias were adolescents with Autism Specter Disorder (ASD), imminent risk of suicide or recently had experienced an acute psychotic episode. Additionally, home environments considered not safe for the therapist, cases with ongoing investigation by the local child welfare service, and cases that already participated in interventions or treatments that were incompatible with FFT were excluded.

Two observations were not usable due to whole-row missing data, therefore these families were excluded. Leading to an eligible sample size of 157 adolescents (*M* age = 14.74 *SD* = 1.47, range from 10.80 to 17.88) and their primary caretaker (*M* age = 43.93 *SD* = 6.90, range from 29 to 78). There was a slight higher proportion of males (*n* = 85, 52.1 %) compared to females (*n* = 72, 45.9 %). Conversely, among primary caretakers this trend was opposite, with 89.8 % mothers and 10.2 % fathers (*n* = 141, *n* = 16, respectively). Most adolescents lived with single parents (*n* = 59, 37.6 %), while the remaining lived with both parents, adoptive parents, or in foster care (See Table 1).

**Procedures**

Participants were measured at three points: T1 - before participants were sampled into different groups, T2 - after intervention/treatment, and T3 – follow-up one year after intervention/treatment. The current study utilized data from the first point of measure (T1), making it a cross-sectional design. Hence, the relationships between the study variables will not be affected by intervention/treatment.

Both parents and adolescents completed all questionnaires on portable computers, programmed in Ci3 software (Sawtooth Software, n.d.). The participants completed the questionnaires in their home, or at a municipality office. A research assistant was available for assistance and gave general instructions on how to use the Ci3 system. Families received a minor compensation for participation (Thøgersen et al., 2020).

**Measures**

***Adolescent Antisocial Behavior (ASB)***

Child Behavior Checklist 6-18 (CBCL; Achenbach & Rescorla, 2001) was used to assess adolescent ASB. This is one of the most used parental measures of emotional and behavioral problems among youth ages 6-18 years. This was filled out by primary caretaker, and consisted of 113 items, answered on a 3-point Likert scale: 0 (not true), 1 (true or sometimes true), and 2 (very true or often true) (Achenbach & Rescorla, 2001). Parents respond based on their adolescent’s behavior the last six months. Historically, CBCL has shown acceptable reliability and validity (Achenbach & Rescorla, 2001; Naar-King et al., 2004; Pandolfi et al., 2014), also in Norwegian samples (Lurie, 2006). To measure the outcome variable, ASB, we used the subscale “Externalizing Behavior”, which further consists of two syndrome scales: “Aggressive Behavior” (“Attacks other people physically”) and “Rule-Breaking Behavior” (“Breaks rules at home, at school, or other places”) (Achenbach & Rescorla, 2001). Satisfactory reliability was found for parent-reported ASB: Externalizing Behavior (35 items; 𝛼 = .92), Aggressive Behavior (18 items; 𝛼 = .92), and Rule-Breaking Behavior (17 items, 𝛼= .81).

***Parental Mental Distress***

The Norwegian version of Symptoms Checklist (SCL-8) was used to measure parental mental distress. This is a brief, self-reported questionnaire measuring mental illness and distress (Fink et al., 2004a). SCL-8 is a short version of the Hopkins Symptom Checklist (SCL-90; Derogatis et al., 1974), which is a well-designed assessment for overall mental distress (Siqveland et al., 2016). Parents answer eight items about the presence and intensity related to symptoms of anxiety and depression the last 14 days (e.g., “Sudden fear without any clear reason”), on a 4-point scale: 1 (Not bothered), 2 (Somewhat bothered), 3 (Very bothered) and 4 (Very much bothered). The SCL-8 scale contains only emotional symptoms, and is suggested to be a valid and robust, brief screening tool (Fink et al., 2004a; Fink et al., 2004b). For all the eight items in SCL-8, the reliability coefficient was high (8 items: 𝛼= .91).

**Table 1**

*Sociodemographic Characteristics of the Participants (N = 157)*

|  |  |  |  |
| --- | --- | --- | --- |
| Sample characteristics | *n* | Missing | Mean (SD) |
| Parental Gender  Mother  Father | 157  141  16 |  |  |
| Parental Age | 157 |  | 43.9 (6.90) |
| Educational Level  *Primary and secondary school (≤ 10 years)*  *Upper secondary school (11-14 years)*  *Higher education (≥ 14 years)* | 156  23  67  66 | 0.6% | 2.28 (0.71) |
| Economic Hardship  *Living comfortably*  *Doing alright*  *Just about getting it*  *Finding it quite difficult*  *Finding it very difficult* | 156  12  43  76  15  10 | 0.6% |  |
| Adolescent Gender  Female  Male | 157  72  85 |  |  |
| Adolescent Age | 157 |  | 14.74 (1.47) |
| Family Situation  *Adolescent lives at home with his or her parents*  *Adolescent lives partly at both parents*  *Adolescent lives mainly at one parent’s house, without*  *parent having a new partner*  *Adolescent lives mainly at one parent’s house, whereas*  *parent has a new partner*  *Adolescent is adopted or living in foster care* | 153  40  8  59    36    10 | 2.5% | 2.98 (1.51) |
| Additional Children in the Family | 157 |  | 1.25 (0.99) |

***Family Conflict and Cohesion***

Family conflict and cohesion were measured using parental self-report of the Norwegian version of the Family Environment Scale (FES), which assesses the social environment of families along ten salient dimensions (Moos & Moos, 1976). FES consists of 90-true-false items distributed onto ten subscales, with conflict and cohesion consisting of nine items each. Conflict is conceptualized as the amount of openly expressed anger and aggression, and how conflicted interactions are characteristics of the family (“Family members often criticize each other”). The cohesion subscale is conceptualized as the extent family members are concerned and committed to the family and the degree of support and helpfulness between family members (“Family members really help and support one another”) (Moos & Moos, 1976; Lucia & Breslau, 2006). Results are somewhat conflicted on the acceptable validity and reliability of FES (Moos, 1990; Moos & Moos, 2009; Roosa & Beals, 1990). Our analysis found acceptable reliability for both the conflict and cohesion subscales (𝛼= .76 and 𝛼 = .73, respectively).

**Control variables**

Adolescent age and gender were included as control variables. In addition, for parents, their interpretation of economic hardship, and educational level were controlled for. Economic hardship was measured on a 5-point Likert scale: 1 (living comfortably), 2 (Doing alright), 3 (Just about getting it), 4 (Finding it quite difficult), and 5 (Finding it very difficult). Parental educational level was measured on a 3-point Likert scale: 1 (Primary and secondary school), 2 (Upper secondary school), and 3 (Higher education).

**Ethical Considerations**

To ensure acceptable principles of ethical and professional conduct, the current study received approval from Regional Committees for Medical and Health Research Ethics (REK) to utilize data gathered by the study of Evaluation of Functional Family Therapy in Norway (Bjørnebekk, 2013). All participants, both parents and adolescents gave written informed consent. Consent forms included information about participants' right to withdraw from the study at any given time, and ensured participants confidentiality. Participants consent forms were presented for Norwegian Center for Research Data (NSD) and Norwegian Data Protection Authority [Datatilsynet] (Bjørnebekk, 2013). All data were collected, stored, and processed within a certified secure IT environment called Services for sensitive data (TSD).

**Data Analysis**

According to MacKinnon (2008), a mediation analysis is suitable to examine *how* or *if* one variable is related to another variable through some other variable. For our analysis, we used a simple structural equation model (SEM) with two mediators (MacKinnon, 2008; Rucker et al. 2011). Data were analyzed using Mplus (Version 8.3; Muthén & Muthén, 2017), SPSS (Version 28), and Jamovi (Version 1.6.15). First, a series of preliminary analyses were conducted, including descriptive statistics, exploring skewness and kurtosis, missing values, and correlations between variables in SPSS. Normality check with Shapiro-Wilks was conducted in Jamovi. However, none of the variables met the criteria for Shapiro-Wilk test: parental mental distress (*W* = .92, *p* < .001), adolescent ASB (*W* = .98, *p* < .012), family conflict (*W* = .94, *p* < .001), family cohesion (*W* = .92, *p* < .001), and economic hardship (*W* = .88, *p* < .001). Based on this outcome, results will be reported using the non-parametric test for correlation, Spearman r. Two observations in the dataset had whole-row missing values on all study variables, these were therefore removed before further analyses were conducted. Then, we carried out SEM analysis in Mplus to examine direct and indirect relations among parental mental distress, adolescent ASB, family conflict, and cohesion. The path between parental mental distress, family conflict, and adolescent ASB was controlled for by economic hardship (see Table 1). We employed Robust Maximum Likelihood (MLR) as the estimator based on its ability to handle non-normality data (Muthén & Muthén, 2017). Model fit was evaluated using Comparative Fit Index (CFI), Tucker Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA), with good fit criteria > .95 for CFI and TLI, and <. 05 for RMSEA, as suggested by Hu and Bentler (1999). Standardized beta coefficients, and *p* values (*p* < .05) were used to assess the direct and indirect effects between variables.

**Results**

**Descriptive Statistics**

Means, standard deviations, and correlations between all study variables are presented in Table 2. Due to non-significant correlations with the proposed control variables, adolescent age, gender, and parental educational level, they are not reported in text. However, economic hardship correlated with both parental mental distress (*r* = .17, *p* = .031, 95% CI = [.012, .326]), and family conflict (*r* = .20, *p* = .013, 95% CI = [.037, .352]). Therefore, economic hardship was included as a control variable. Correlations show that parental mental distress were significantly associated with adolescent ASB (*r* = .42, *p* < .001, 95% CI [0.27, 0.55]). Parental mental distress was significant with family conflict (*r* = .46, *p* < .001, 95% CI [0.32, 0.48]), and family cohesion (*r* = .28, *p* < .001, 95% CI [-0.43, -0.12]). Adolescent ASB was significant with family conflict (*r* = .38, *p* < .001, 95% CI [0.23, 0.52]), and cohesion (*r* = -.24, *p* < .001, 95% CI [-0.39, -0.08]). The two mediating variables strongly correlated (*r* = -.45, *p* < .001, 95% CI [-0.57, -0.31]).

**Mediation Analysis**

To investigate the effect of family conflict and cohesion on the relationship between parental mental distress and adolescent ASB, a multiple mediation analysis was performed using Mplus. The outcome variable for the analysis was adolescent ASB, while the predictor variable was parental mental distress. The two mediating variables were family conflict and cohesion. Due to sample size constraint, manifest rather than latent variables were utilized in the model. In this analysis we explicitly allow the two mediators to covary to account for their oriented dependence. Family conflict and cohesion had a significant negative covariance (*β* = -.37, SE = 0.07, *p* < .001, 95% CI = [-0.51, -0.24]). Model fit indices suggest good fit, considering the small sample size (RMSEA = 0.00, *p* = .863, CFI = 1.00, TLI = 1.10).

***Direct Effects***

Parental mental distress was significantly related to adolescent ASB (*β* = .29, SE = 0.08, *p* < .001, 95% CI = [0.14, 0.44]). As shown in figure 1, the path between parental mental distress and family conflict was found to be significant (*β* = .39, SE = 0.07, *p* < .001, 95% CI = [0.24, 0.53]), so was the path from parental mental distress to family cohesion (*β* = -.30, SE = 0.07, *p* < .001, 95% CI = [-0.44, -0.16]). The path between family conflict and adolescent ASB was significant (*β* = .23, SE = 0.08, *p* < .001, 95% CI = [0.13, 0.44]), while to family cohesion was not (*β* = -.05, SE = 0.07, *p* = .459, 95% CI = [-0.19, 0.09]). We controlled for economic hardship, which was significant on parental mental distress (*β* = .18, SE = 0.09, *p* < .05, 95% CI = [0.01, 0.35]), family conflict (*β* = .13, SE = 0.06, *p* < .05, 95% CI = [0.02, 0.24]), but not on adolescent ASB (*β* = -.14, SE = 0.08, *p* = .061, 95% CI = [-0.29, 0.01]).

***Indirect Effects***

The indirect mediation of family conflict on parental mental distress and adolescent ASB was significant and positive (*β* = .11, SE = 0.04, *p* < .05, 95% CI = [0.09, 0.43]). In contrast, the indirect mediation path of family cohesion between parental mental distress and adolescent ASB failed to reach significance (*β* = .02, SE = 0.02, *p* = .461, 95% CI = [-0.06, 0.14]). The total indirect mediation, including both conflict and cohesion, showed a significant total indirect effect (*β* = .12, SE = 0.04, *p* < .001, 95% CI = [0.05, 0.20]).

**Figure 1**

*Mediation Model for SEM Analysis with Control Variable*

*Note*. Parental Mental Distress (PMD), Family Conflict (CON), Family Cohesion (COH), Adolescent Antisocial Behavior (ASB). \**p* < .05, \*\**p* < .001

**Discussion**

The current study aimed to investigate whether family conflict and cohesion have any mediating role on the relationship between parental mental distress, and adolescent ASB measured by parent-reported symptoms of depression and anxiety, and aggression and rule-breaking behavior, respectively. First, we hypothesized that there would be a direct association between parental mental distress and adolescents ASB. Second, we hypothesized that elevated levels of mental distress among parents to be correlated with increased conflict and lower cohesion. Third, we expected elevated levels of conflict to be associated with heightened adolescent ASB, while cohesion would have the opposite effect. Mediation analysis revealed that parental mental distress had a direct effect on adolescent ASB. Further, we found that family conflict had a mediating role in the relation between parental mental distress and adolescent ASB, while cohesion was not a significant mediator.

Analysis supported our first hypothesis and is consistent with previous research. This suggests that parental mental impairments are related to adolescents ASB, and that this relationship is only partially mediated (Vera et al., 2012; Kane & Garber, 2004; Korhonen et al., 2014). Indicating that parental mental distress, with all the possible behaviors or attitudes this measure includes, have a direct effect on offsprings ASB. However, we can not exclude other alternative mechanisms as possible causes and links between parental mental distress and adolescent ASB. Possible mechanisms may include parenting styles and behaviors (Hautmann et al., 2015; Vera et al., 2012), parental hostility and overprotection (Sellers et al., 2014), and coping strategies (Francisco et al., 2015). Environmental factors outside the family, such as peer relationships, and neighborhood, may also influence the relationship between parental mental distress and adolescent outcomes. In regards to a reciprocal perspective, Gross et al. (2009) found that noncompliance in offspring was the most robust predictor for higher and more persistent levels of depressive symptoms among mothers, showing that living with aggressive and rule-breaking adolescents may elevate parental distress.

As to the second hypothesis, we found that elevated levels of parental mental distress is associated with increased levels of family conflict, and a reduction in family cohesion. These results were also consistent with previous findings (Garber, 2005; Pérez et al., 2018; Xu et al., 2017). We assume that the parents' mental impairment negatively affects their ability to choose proactive and effective parenting strategies. As previous research has found that depressed caregivers use inconsistent discipline, initiate negative patterns of interactions, and lack of monitoring (Korhonen et al., 2014). Further, this may explain why family environments with distressed caregivers may function as catalysts for adverse interaction patterns, resulting in chronic conflict-filled communication between family members (Garber, 2005). LoBraico et al. (2020) identified subgroups of family constellations of family risk for long-term adolescent ASB, with results indicating that adolescents in coercive families experienced the most robust risk across ASB outcomes. These families were characterized by high family conflict and low positive family climate, parental involvement, effective discipline, parental knowledge, and adolescent positive engagement.

Unsurprisingly, when there are elevated and chronic patterns of conflict among family members, and within specific dyads, such as between parent and adolescent, family cohesion deteriorates. Interpersonal relationships characterized by hostility and conflict can result in withdrawal by family members (Romm & Alvis, 2022). In line with previous research (Li et al., 2021; Van Loon et al., 2014), we also found that higher levels of depression and anxiety in parents were associated with lower levels of family cohesion. In general, family cohesion levels tend to decrease during adolescence as they seek liberation and autonomy (Bear, 2002; Lin & Yi, 2019). However, it is reasonable to assume that within a clinical sample, with interactions characterized by high conflict and mental impairment among parents, any deterioration in family cohesion will escalate the situation. This view is in agreement with the transactional perspective on psychopathology, where high levels of family conflict and low family cohesion may exacerbate parental mental distress.

Regarding our third hypothesis, overall results indicate that family conflict has a mediating role on the relationship between parental mental distress and adolescent ASB, while cohesion does not. There are several explanations for why and how family conflict has an impact on the path to adolescent ASB. Parents with increased mental distress usually have reduced capacity and ability to engage in positive and favorable parenting (Joyner & Beaver, 2021). As depression and anxiety influence parenting styles characterized by control through guilt and overprotection, hostility, criticism, and inconsistent discipline (Cummings et al., 2005; Korhonen et al., 2014). This may result in a family environment characterized by coercive and hostile attitudes and behaviors. Families that engage in more hostile behaviors, in the form of fighting and aggression, may damage both trust and secure attachments between parent and adolescent (Buehler, 2006; Weymouth et al., 2016). When this pattern of communication becomes normative between family members, offsprings may adopt this pattern of interacting on her or his social arenas. Thus, aggressive and antisocial patterns of interaction become stable in all social relations, encouraging affiliation with antisocial groups and peers (Carroll et al., 2009; Moffitt, 2015).

Adolescence brings normative shifts in family relations, resulting in increased conflict between parent and youth, as most youth attempt to adjust boundaries, renegotiate parental authority, and increase their own autonomy and independence (Weymouth et al., 2016). Additionally, during adolescence, youth tend to be more oppositional (Steinberg, 2011), which may further exacerbate adverse patterns of communication and interaction. Developmental trends like these become more problematic for mental distressed parents, compared to non-distressed. A possible explanation may be that conflicted interests between parent and adolescent, with adolescents being autonomy seeking and parents autonomy limiting, results in more friction and conflict within the family environment and their relationship. As such, family conflict can become the environmental manifestation of parental mental distress, which contributes and escalates adolescent ASB.

As we expected, the two mediating factors negatively covary. This implies that high reading in one mediator is associated with decrease in the other one. In our sample this is noticeable on parental reports of high family conflict reducing the appearance of cohesion. We assume that due to a clinical sample referred to family therapy, that the levels of conflict reflect a more turbulent family situation compared to the general population, with frequent and coercive patterns of interaction. In addition, it is possible that adolescents' problem behavior and engagement in antisocial activities results in more friction and unfortunate communication with their parents. Also, mental distress among parents is associated with reduced levels of family cohesion (Pérez et al., 2018), with mental distress influencing parents’ ability to positively and affectionately engage with their offspring. This may result in adolescents seeking others outside the family for emotional support. Likewise, low family cohesion can be a result of long-term behavioral problems in the offspring, as we can not exclude that negative and disadvantage interactions have been present and chronic in the family for an extensive period.

When controlling for economic hardship, we found that this had an influence on parental mental distress and family conflict, but not on levels of adolescent ASB. These findings suggest that economic hardship mainly impacts parents. Previous research has also found socioeconomic disadvantage to be a strong indicator of depressive symptoms on parenting and family environment (Conger et al., 2010; Sturge-Apple et al., 2014; Vreeland et al., 2019). Therefore, we assume that living in economic disadvantage might place the parents under elevated levels of stress, which further impair their parental practices and mental health. Further, mental impairments in parents may also be a contributing factor to poorer employability, therefore more economic hardship. Resultantly, this stressor may be a reason for increased levels of family conflict within the family system, and have an indirect influence on adolescent ASB.

During adolescence, it is not possible to disregard the influence of peers. Parents have a large modelling role on behaviors, attitudes and values in childhood, however, in adolescence this impact is gradually replaced by peers. This is due to adolescents being susceptible to peer pressure, making them more likely to engage in converging activities and behaviors as their peers (Ciranka & van den Bos, 2021; Steinberg, 2004). Vieno and colleagues (2009) found that adolescent self-disclosure was the main influence on reducing affiliation with deviant peers and engagement in ASB, indicating that interpersonal relationships where youth feel connected to their parents reduces their involvement in antisocial activities. In regards to this, several studies have shown that connectedness between parents and adolescents significantly enhance adolescents´ prosperity to seek guidance when navigating difficult situations, value parental input, and spend time with their families. Hence, leaving them with less opportunity to engage in ASB (Ackard et al., 2006; Crawford & Novak, 2008). Therefore, we assume that high conflict levels and lack of cohesion between parent and adolescent in our sample, contribute to the youth seeking affiliation with deviant peers and not their parents. Furthermore, among mental distressed parents, rejection and love withdrawal are possible factors that exacerbate the distance between parent and adolescent.

We examined data from a clinical sample that included adolescents with a large age discrepancy, ranging between 11-19 years old. During this period, there are differences in developmental tasks for teenagers in early adolescence, compared to those who are in the transition to adulthood (Steinberg, 2004). Typically, in later adolescence, levels of conflict tend to be higher (Weymouth et al., 2016), while cohesion is lower. Meanwhile, the trend is opposite for younger adolescents (Lin & Yi, 2019). When controlling for age among participants in our sample, we did not find any relations to the variables studied. These results might be due to the sample´s clinical nature, and the relatively small sample size. Compared to the general population, a clinical sample usually has higher levels of symptoms, relevant for the specific study.

**Limitations**

This study has several limitations. First, the sample size for this study was not particularly large. The initial goal for sample recruitment was to reach 250 participants (Thøgersen et al., 2020), however, this was not reached. One consequence of small sample size is lack of power to detect statistical significance for the observed associations.

Secondly, we only used parent-reported measures. This is problematic due to well documented discrepancies between parental and adolescents’ reports on family environment and ASB (De Los Reyes, 2011; Robinson et al., 2019; Van Petegem et al., 2020). Additionally, another weakness concerning the use of manifest variables, is the tendency that distressed parents report their children more negatively, compared to non-distressed parents (Korhonen et al., 2014). Lastly, measurement errors tend to be higher when only manifest variables are used.

In addition to using only one informant for all variables, self-report questionnaires introduce a potential reporting bias. Ringoot et al. (2015) documented inflated associations when using parents´ self-reports for their own depressive symptoms, and at the same time reporting on their offspring´s problem behaviors. Conversely, this association was smaller when not using self-reports on depressive symptoms. Therefore, it is a limitation within this study that we only used self-reports on parental mental distress, in addition to the other study variables. Parents and adolescents may interpret and observe each other's behaviors differently, therefore, research should attempt to include the offspring's perspectives. Additionally, it would be interesting to control for parental gender differences. This is especially relevant due to the skewed distribution of mothers and fathers registered as primary caregiver, which can influence results.

Lastly, we wish to highlight that the current study is based on cross-sectional data.. This research design prevents us from drawing any causal conclusions. Further, our findings may be an artifact of our modelling choices. It is possible that if we had conducted new analyses with opposite predictors and outcome variables (adolescent ASB as predictor and parental mental distress as outcome), we would have examined whether adolescent ASB could predict symptoms of depression and anxiety in parents via family conflict and cohesion. In addition, it would be interesting to see whether youth reports on family environment would predict relationships differently. A transactional and reciprocal dynamic like this is proposed by multiple authors (Cummings et al., 2000; Nicholson et al., 2011). Likewise, it is possible that environmental factors, such as family conflict and cohesion, or other mechanisms not accounted for in this study, can influence both parental mental distress and adolescent ASB simultaneously. In fact, living in disadvantaged neighborhoods, economic hardship, and weak or lacking interpersonal relationships may also function as factors that influence parental mental distress and adolescent ASB (Joyner and Beaver, 2021; Vreeland et al., 2019). The current study provides a small ‘snapshot’ of a bigger picture. However, this still contributes to research, as many small ‘snapshots’ jointly inform the full picture.

**Implications and future research**

Findings from the current study have various practical implications. This study contributes to research by providing insight and confirmation of previous findings on the association between mechanisms in the family, parental mental distress and adolescent ASB. These findings highlights the relevance of examining the role of family environment when examining the association between parental mental distress and adolescent ASB. This is important when establishing holistic intervention, targeting environmental factors and parents' psychopathology. Findings also suggest that family interaction patterns, such as conflict and cohesion, have significant and distinct influences on interpersonal relationships, feelings and behaviors among family members. Further research should seek to use multi-informants and look at gender differences when examining relations between interpersonal and environmental constructs, and also include youth reports to ensure a more nuanced understanding of influences between individuals within family systems.

**References**

Achenbach, T. M., & Rescorla, L. A. (2001). Manual for the ASEBA School-Age Forms and Profiles. University of Vermont Research Center for Children, Youth, & Families.

Ackard, D. M., Neumark-Sztainer, D., Story, M., & Perry, C. (2006). Parent-child connectedness and behavioral and emotional health among adolescents. *American Journal of Preventive Medicine*, *30*(1), 59–66. https://doi.org/10.1016/j.amepre.2005.09.013

Baer, J. (2002). Is family cohesion a risk or protective factor during adolescent development? *Journal of Marriage and Family*, *64*(3), 668-675. http://www.jstor.org/stable/3599933

Bellina, M., Grazioli, S., Garzitto, M., Mauri, M., Rosi, E., Molteni, M., Brambilla, P., & Nobile, M. (2020). Relationship between parenting measures and parents and child psychopathological symptoms: a cross- sectional study. *BMC Psychiatry*, *20*(1), 377.https://doi.org/10.1186/s12888-020-02778-8

Bjørnebekk, G. (2013). Evaluating of Functional Family Therapy (FFT) in Norway. ISRCTN. https://doi.org/10.1186/ISRCTN58861782

Boyer, T. W. (2006). The development of risk-taking: A multi-perspective review. *Developmental Review, 26*(3), 291–345. https://doi.org/10.1016/j.dr.2006.05.002

Buehler, C. (2006). Parents and Peers in Relation to Early Adolescent Problem Behavior. *Journal of Marriage and Family, 68*(1), 109–124. https://doi.org/10.1111/j.1741-3737.2006.00237.

Burstein, M., Ginsburg, G. S., & Tein, J. Y. (2010). Parental anxiety and child symptomatology: an examination of additive and interactive effects of parent psychopathology. [corrected]. *Journal of Abnormal Child Psychology*, *38*(7), 897–909. https://doi.org/10.1007/s10802-010-9415-0

Burt S. A. (2012). How do we optimally conceptualize the heterogeneity within antisocial behavior? An argument for aggressive versus non-aggressive behavioral dimensions. *Clinical Psychology Review*, *32*(4), 263–279. https://doi.org/10.1016/j.cpr.2012.02.006

Burt, S. A., Brent Donnellan, M., Slawinski, B. L., & Klump, K. L. (2016). The Phenomenology of Non- Aggressive Antisocial Behavior During Childhood. *Journal of Abnormal Child Psychology*, *44*(4), 651– 661. https://doi.org/10.1007/s10802-015-0076-x

Burt, S. A., Krueger, R. F., McGue, M., & Iacono, W. (2003). Parent-child conflict and the comorbidity among childhood externalizing disorders. *Archives of General Psychiatry*, *60*(5), 505–513. https://doi.org/10.1001/archpsyc.60.5.505

Burt, S. A., Mikolajewski, A. J., & Larson, C. L. (2009). Do aggression and rule-breaking have different interpersonal correlates? A study of antisocial behavior subtypes, negative affect, and hostile perceptions of others. *Aggressive Behavior*, *35*(6), 453–461. https://doi.org/10.1002/ab.20324

Carroll, A., Houghton, S., Durkin, K. & Hattie, J. A. (2009). *Adolescent Reputations and Risk*. Springer.

Ciranka, S., & van den Bos, W. (2021). Adolescent risk-taking in the context of exploration and social influence. *Developmental Review*, *61*, 100979. https://doi.org/10.1016/j.dr.2021.100979

Coe, J. L., Davies, P. T., & Sturge-Apple, M. L. (2018). Family cohesion and enmeshment moderate associations between maternal relationship instability and children’s externalizing problems. *Journal of Family Psychology, 32*(3), 289–298. https://doi.org/10.1037/fam0000346

Conger, R. D., Conger, K. J., & Martin, M. J. (2010). Socioeconomic Status, Family Processes, and Individual Development. *Journal of Marriage and the Family*, *72*(3), 685–704. https://doi.org/10.1111/j.1741- 3737.2010.00725.x

Connell, A. M., & Goodman, S. H. (2002). The association between psychopathology in fathers versus mothers and children's internalizing and externalizing behavior problems: A meta-analysis. *Psychological Bulletin, 128*(5), 746–773. https://doi.org/10.1037/0033-2909.128.5.746

Costello, E., & Angold, A. (2000). Bad behaviour: An historical perspective on disorders of conduct. In J. Hill & B. Maughan (Eds.), *Conduct Disorders in Childhood and Adolescence* (pp. 1-31). Cambridge University Press. doi:10.1017/CBO9780511543852.002

Crawford, L. A., & Novak, K. B. (2008). Parent–Child Relations and Peer Associations as Mediators of the Family Structure–Substance Use Relationship*. Journal of Family Issues, 29*(2), 155–184. https://doi.org/10.1177/0192513X07304461

Cummings, E. M., & Davies, P. T. (1994). Maternal depression and child development. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *35*(1), 73–112. https://doi.org/10.1111/j.1469- 7610.1994.tb01133.x

Cummings, E. M., Davies, P. T., & Campbell, S. B. (2000). *Developmental psychopathology and family process: Theory, research, and clinical implications.* Guilford Press.

Cummings, E. M., Keller, P. S., & Davies, P. T. (2005). Towards a family process model of maternal and paternal depressive symptoms: exploring multiple relations with child and family functioning. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *46*(5), 479–489. https://doi.org/10.1111/j.1469- 7610.2004.00368.x

Dadds, M. R., & Salmon, K. (2003). Punishment insensitivity and parenting: temperament and learning as interacting risks for antisocial behavior. *Clinical Child and Family Psychology Review*, *6*(2), 69–86. https://doi.org/10.1023/a:1023762009877

Deković, M., Janssens, J. M., & Van As, N. M. (2003). Family predictors of antisocial behavior in adolescence. *Family Process*, *42*(2), 223–235. https://doi.org/10.1111/j.1545-5300.2003.42203

De Los Reyes, A. (2011). Introduction to the special section: More than measurement error: Discovering meaning behind informant discrepancies in clinical assessments of children and adolescents. *Journal of Clinical Child and Adolescent Psychology: 40*(1), 1–9. https://doi.org/10.1080/15374416.2011.533405

Derogatis, L. R., Lipman, R. S., Rickels, K., Uhlenhuth, E. H., & Covi, L. (1974). The Hopkins Symptom Checklist (HSCL): a self-report symptom inventory. *Behavioral Science*, *19*(1), 1–15. https://doi.org/10.1002/bs.3830190102

Elgar, F. J., Mills, R. S., McGrath, P. J., Waschbusch, D. A., & Brownridge, D. A. (2007). Maternal and paternal depressive symptoms and child maladjustment: the mediating role of parental behavior. *Journal of Abnormal Child Psychology*, *35*(6), 943–955. https://doi.org/10.1007/s10802-007-9145-0

Fink, P., Ørbøl, E., Hansen, M. S., Søndergaard, L., & De Jonge, P. (2004a). Detecting mental disorders in general hospitals by the SCL-8 scale. *Journal of Psychosomatic Research*, *56*(3), 371–375. https://doi.org/10.1016/S0022-3999(03)00071-0

Fink, P., Ørnbøl, E., Huyse, F. J., De Jonge, P., Lobo, A., Herzog, T., Slaets, J., Arolt, V., Cardoso, G., Rigatelli, M., & Hansen, M. S. (2004b). A brief diagnostic screening instrument for mental disturbances in general medical wards. *Journal of Psychosomatic Research*, *57*(1), 17–24. https://doi.org/10.1016/S0022-3999(03)00374-X

Fosco, G. M., & LoBraico, E. J. (2019). A family systems framework for adolescent antisocial behavior: The state of the science and suggestions for the future. In B. H. Fiese, M. Celano, K.Deater- Deckard, E. N. Jouriles, & M. A. Whisman (Eds.), *APA handbook of contemporary family psychology: Applications and broad impact of family psychology* (pp. 53–68). American Psychological Association. https://doi.org/10.1037/0000100-004

Dishion, T. J., & Patterson, G. R. (2006). The development and ecology of antisocial behavior in children and adolescents. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology: Risk, disorder, and adaptation* (pp. 503–541). John Wiley & Sons, Inc.

Fosco, G. M., & Lydon Staley, D. M. (2020). Implications of family cohesion and conflict for adolescent mood and wellbeing: Examining within and between family processes on a daily timescale. *Family Process*, *59*(4), 1672-1689. https://doi.org/10.1111/famp.12515

Francisco, R., Loios, S., & Pedro, M. (2016). Family Functioning and Adolescent Psychological Maladjustment: The Mediating Role of Coping Strategies. *Child Psychiatry and Human Development, 47*(5), 759–770. https://doi.org/10.1007/s10578-015-0609-0

Frick, P. J., & Viding, E. (2009). Antisocial behavior from a developmental psychopathology perspective. *Development and Psychopathology*, *21*(4), 1111–1131. https://doi.org/10.1017/S0954579409990071

Garber, J. (2005). Depression and the Family. In J. L. Hudson & R. M. Rapee (eds.), *Psychopathology and the Family* (pp. 225-280). Elsevier.

Goodman, S. H. & Tully, E. (2006). Depression in Women Who Are Mothers. In C. L. M. Keys & S. H. Goodman (eds.), *Women and Depression* (pp. 241-280). Cambridge University Press.

Granic, I., & Patterson, G. R. (2006). Toward a comprehensive model of antisocial development: A dynamic systems approach. *Psychological Review, 113*(1), 101–131. https://doi.org/10.1037/0033295X.113.1.101

Gross, H. E., Shaw, D. S., Burwell, R. A., & Nagin, D. S. (2009). Transactional processes in child disruptive behavior and maternal depression: a longitudinal study from early childhood to adolescence. *Development and Psychopathology*, *21*(1), 139–156. https://doi.org/10.1017/S0954579409000091

Hails, K. A., Reuben, J. D., Shaw, D. S., Dishion, T. J., & Wilson, M. N. (2018). Transactional Associations Among Maternal Depression, Parent-Child Coercion, and Child Conduct Problems During Early Childhood. *Journal of Clinical Child and Adolescent Psychology*, *47*(sup1), S291–S305. https://doi.org/10.1080/15374416.2017.1280803

Hautmann, C., Eichelberger, I., Hanisch, C., Plück, J., Walter, D., & Döpfner, M. (2015). Association between parental emotional symptoms and child antisocial behaviour: What is specific and is it mediated by parenting?. *International Journal of Behavioral Development*, *39*(1), 43-52.

Hirshfeld, D. R., Biederman, J., Brody, L., Faraone, S. V., & Rosenbaum, J. F. (1997). Expressed emotion toward children with behavioral inhibition: associations with maternal anxiety disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, *36*(7), 910–917. https://doi.org/10.1097/00004583- 199707000-00012

Hu, L.-t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1–55. https://doi.org/10.1080/10705519909540118

Jones, L. B., Hall, B. A., & Kiel, E. J. (2021). Systematic review of the link between maternal anxiety and overprotection. *Journal of Affective Disorders*, *295*, 541-551. https://doi.org/10.1016/j.jad.2021.08.065

Joyner, B., & Beaver, K. M. (2021). Maternal Depression and Child and Adolescent Problem Behaviors: A Propensity Score Matching Approach. *The Psychiatric Quarterly*, *92*(2), 655–674. https://doi.org/10.1007/s11126-020-09842-2

Kane, P., & Garber, J. (2004). The relations among depression in fathers, children's psychopathology, and father-child conflict: a meta-analysis. *Clinical Psychology Review*, *24*(3), 339–360. https://doi.org/10.1016/j.cpr.2004.03.004

Korhonen, M., Luoma, I., Salmelin, R., & Tamminen, T. (2014). Maternal depressive symptoms: associations with adolescents' internalizing and externalizing problems and social competence. *Nordic Journal of Psychiatry*, *68*(5), 323–332. https://doi.org/10.3109/08039488.2013.838804

Kornienko, O., Davila, M., & Santos, C. E. (2019). Friendship network dynamics of aggressive and rule- breaking antisocial behaviors in adolescence. *Journal of Youth and Adolescence, 48*(10), 2065–2078. https://doi.org/10.1007/s10964-019-01109-9

Li, M., Li, L., Wu, F., Cao, Y., Zhang, H., Li, X., Zou, J., Guo, Z., & Kong, L. (2021). Perceived family adaptability and cohesion and depressive symptoms: A comparison of adolescents and parents during COVID-19 pandemic. *Journal of Affective Disorders*, *287*, 255–260. https://doi.org/10.1016/j.jad.2021.03.048

Lin, W. H., & Yi, C. C. (2019). The effect of family cohesion and life satisfaction during adolescence on later adolescent outcomes: A prospective study. *Youth & Society*, *51*(5), 680-706. https://doi.org/10.1177/0044118X17704865

Little, T., Henrich, C., Jones, S. & Hawley, P. (2003). Disentangling the “whys” from the “whats” of aggressive behaviour. *International Journal of Behavioral Development, 27*(2), 122-133. https://doi.org/10.1080/01650250244000128

LoBraico, E. J., Bray, B. C., Feinberg, M. E., & Fosco, G. M. (2020). Constellations of family risk for long-term adolescent antisocial behavior. *Journal of Family Psychology*, *34*(5), 587–597. https://doi.org/10.1037/fam0000640

Lucia, V. C., & Breslau, N. (2006). Family cohesion and children's behavior problems: a longitudinal investigation. *Psychiatry Research*, *141*(2), 141–149. https://doi.org/10.1016/j.psychres.2005.06.009

Lurie, J. (2006). Teachers’ perceptions of emotional and behavioral problems in 6–12 year old Norwegian school children. NTNU Samfunnsforskning AS, BVU Midt-Norge.

MacKinnon, D. P. (2008). *Introduction to Statistical Mediation Analysis.* Routledge*.*

Marmorstein, N. R., & Iacono, W. G. (2004). Major depression and conduct disorder in youth: associations with parental psychopathology and parent-child conflict. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *45*(2), 377–386. https://doi.org/10.1111/j.1469-7610.2004.00228.x

Mishra, S., & Lalumière, M. L. (2008). Risk-taking, antisocial behavior, and life histories. In J. D. Duntley & T. K. Shackelford (Eds.), *Evolutionary forensic psychology: Darwinian foundations of crime and law* (pp. 139–159). Oxford University Press.

Moffitt, T. E. (2015). Life-Course-Persistent versus Adolescence-Limited Antisocial Behavior. In D. Cicchetti & D. J. Cohen (Eds.), Developmental Psychopathology: Volume Three: Risk, Disorder, and Adaptation (2th ed.), pp. 570-598, John Whiley & Sons, Inc. https://doiorg.ezproxy.uio.no/10.1002/9780470939406.ch15

Moffitt, T. E. (2018). Male antisocial behaviour in adolescence and beyond. *Nature Human Behaviour, 2,* 177- 186. https://doi.org/10.1038/s41562-018-0309-4

Moffitt, T. E. & Capsi, A. (2001). Childhood predictors differentiate life-course persistent and adolescence- limited antisocial pathways among males and females. *Developmental Psychopathology, 13*(2), 355-375. 10.1017/s0954579401002097

Moos R. H. (1990). Conceptual and empirical approaches to developing family-based assessment procedures: resolving the case of the Family Environment Scale. *Family Process*, *29*(2), 199–211. https://doi.org/10.1111/j.1545-5300.1990.00199.x

Moos, R. H., & Moos, B. S. (1976). A typology of family social environments. *Family process*, *15*(4), 357–371. https://doi.org/10.1111/j.1545-5300.1976.00357.x

Moos, R., & Moos, B. (2009). *Family Environment Scale manual and sampler set: Development, applications and research* (4th ed.). Mind Garden.

Muthèn, L. K. & Muthèn, B. O. (1998-2017). *Mplus User’s Guide* (8th ed.). Muthèn & Muthèn. Retrieved from: http://www.statmodel.com/download/usersguide/MplusUserGuideVer\_8.pdf.

Naar-King, S., Ellis, D. A., & Frey, M. A. (2004). *Assessing children's well-being: A handbook of measures.* Lawrence Erlbaum Associates Publishers.

Nicholson, J. S., Deboeck, P. R., Farris, J. R., Boker, S. M., & Borkowski, J. G. (2011). Maternal depressive symptomatology and child behavior: Transactional relationship with simultaneous bidirectional coupling. *Developmental Psychology, 47*(5), 1312-1323. doi:10.1037/a0023912

Pandolfi, V., Magyar, C. I., & Norris, M. (2014). Validity Study of the CBCL 6-18 for the Assessment of Emotional Problems in Youth With ASD. *Journal of Mental Health Research in Intellectual Disabilities*, *7*(4), 306–322. https://doi.org/10.1080/19315864.2014.930547

Patterson, G. R. (1982). *Coercive Family Process.* Castalia Publishing Company.

Granic, I., & Patterson, G. R. (2006). Toward a comprehensive model of antisocial development: A dynamic systems approach. *Psychological Review, 113*(1), 101–131. https://doi.org/10.1037/0033295X.113.1.101

Pérez, J. C., Coo, S., & Irarrázaval, M. (2018). Is maternal depression related to mother and adolescent reports of family functioning?. *Journal of Adolescence*, *63*, 129–141. https://doi.org/10.1016/j.adolescence.2017.12.013

Richmond, M. K., & Stocker, C. M. (2006). Associations between family cohesion and adolescent siblings' externalizing behavior. *Journal of Family Psychology*, *20*(4), 663–669. https://doi.org/10.1037/0893- 3200.20.4.663

Ringoot, A. P., Tiemeier, H., Jaddoe, V. W., So, P., Hofman, A., Verhulst, F. C., & Jansen, P. W. (2015). Parental depression and child well-being: young children's self-reports helped addressing biases in parent reports. *Journal of Clinical Epidemiology*, *68*(8), 928–938. https://doi.org/10.1016/j.jclinepi.2015.03.009

Robinson, M., Doherty, D. A., Cannon, J., Hickey, M., Rosenthal, S. L., Marino, J. L., & Skinner, S. R. (2019). Comparing adolescent and parent reports of externalizing problems: A longitudinal population-based study. *The British Journal of Developmental Psychology*, *37*(2), 247–268. https://doi.org/10.1111/bjdp.12270

Romm, K. F., & Alvis, L. M. (2022). Maternal and Paternal Psychological Control Dimensions: Relations with Adolescent Outcomes. *Journal of Child and Family Studies*, 31, 962-977. https://doi.org/10.1007/s10826-021-02174-0

Roosa, M. W., & Beals, J. (1990). Measurement issues in family assessment: the case of the Family Environment Scale. *Family process*, *29*(2), 191–198. https://doi.org/10.1111/j.1545-5300.1990.00191.x

Rucker, D. D., Preacher, K. J., Tormala, Z. L., & Petty, R. E. (2011). Mediation Analysis in Social Psychology: Current Practices and New Recommendations. *Social and Personality Psychology Compass, 5*(6), 359- 371. https://doi.org/10.1111/j.1751-9004.2011.00355.x

Saxbe, D. E., Ramos, M. R., Timmons, A. C., Rodriguez, A. R., & Margolin, G. (2014). A path modeling approach to understanding family conflict: Reciprocal patterns of parent coercion and adolescent avoidance. *Journal of Family Psychology*, *28*(3), 415.

Scott, S. (2015). Oppositional and conduct disorders. In A. Thapar, D. S. Pine, J. F. Leckman, S. Scott, M. J. Snowling, & E. Taylor (Eds.). *Rutter’s Child and Adolescent Psychiatry* (6th ed.) (pp. 913-930). John Wiley & Sons, Ltd.

Sellers, R., Harold, G. T., Elam, K., Rhoades, K. A., Potter, R., Mars, B., Craddock, N., Thapar, A., & Collishaw, S. (2014). Maternal depression and co-occurring antisocial behaviour: testing maternal hostility and warmth as mediators of risk for offspring psychopathology. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *55*(2), 112–120. https://doi.org/10.1111/jcpp.12111

Siqveland, J., Moum, T., & Leiknes, K. A. (2016). *Måleegenskaper ved den norske versjonen av Symptom Checklist 90 Revidert (SCL-90-R) [Psychometric assessment of the Norwegian version of the Symptom Checklist 90 Revised (SCL-90-R)]* (Rapport-2016). Folkehelseinstituttet. https://www.fhi.no/publ/2016/maleegenskaper-ved-den- norske-versjonen-av-symptom-checklist-90- revidert-sc/

Skinner, O. D., & McHale, S. M. (2016). Parent-Adolescent Conflict in African American Families. *Journal of Youth and Adolescence*, *45*(10), 2080–2093. https://doi.org/10.1007/s10964-016-0514-2

Slee P. T. (1996). Family climate and behavior in families with conduct disordered children. *Child Psychiatry and Human Development*, *26*(4), 255–266. https://doi.org/10.1007/BF02353242

Steinberg L. (2004). Risk taking in adolescence: what changes, and why?. *Annals of the New York Academy of Sciences*, *1021*, 51–58. https://doi.org/10.1196/annals.1308.005

Steinberg, L. (2011). *Adolescence* (9th ed.). McGraw Hill.

Sturge-Apple, M. L., Davies, P. T., Cicchetti, D., & Fittoria, M. G. (2014). A typology of interpartner conflict and maternal parenting practices in high-risk families: examining spillover and compensatory models and implications for child adjustment. *Development and Psychopathology, 26*(4, Pt. 1), 983–998. https://doi.org/10.1017/S0954579414000509.

Sun, L., Ju, J., Kang, L., & Bian, Y. (2021). “More control, more conflicts?” Clarifying the longitudinal relations between parental psychological Control and parent-adolescent Conflict by disentangling between-family effects from within-family effects. *Journal of Adolescence*, *93*, 212-221. https://doi.org/10.1016/j.adolescence.2021.11.004

Sundell, K., Eklund, J., & Ferrer-Wreder, L. (2019). Stability and Change in Patterns of Adolescent Antisocial Behavior. *Journal for Person-Oriented Research*, *5*(1), 1–16. https://doi.org/10.17505/jpor.2019.01

Sweeney, S., & MacBeth, A. (2016). The effects of paternal depression on child and adolescent outcomes: A systematic review. *Journal of Affective Disorders*, *205*, 44–59. https://doi.org/10.1016/j.jad.2016.05.073

Thøgersen, D. M., Andersen, M. E., & Bjørnebekk, G. (2020). A multi-informant study of the validity of the Inventory of Callous-Unemotional Traits in a sample of Norwegian adolescents with behavior problems. *Journal of Psychopathology and Behavioral Assessment*, *42*(3), 592-604. https://doi.org/10.1007/s10862-020-09788-6

Van Loon, L., Van de Ven, M. O., Van Doesum, K., Witteman, C. L., & Hosman, C. M. (2014). The relation between parental mental illness and adolescent mental health: The role of family factors. *Journal of Child and Family Studies*, *23*(7), 1201-1214. https://doi.org/10.1007/s10826-013-9781-7

Van Petegem, S., Antonietti, J. P., Eira Nunes, C., Kins, E., & Soenens, B. (2020). The Relationship between Maternal Overprotection, Adolescent Internalizing and Externalizing Problems, and Psychological Need Frustration: A Multi-Informant Study Using Response Surface Analysis. *Journal of Youth and Adolescence*, *49*(1), 162–177. https://doi.org/10.1007/s10964-019-01126-8

Vera, J., Granero, R., & Ezpeleta, L. (2012). Father's and mother's perceptions of parenting styles as mediators of the effects of parental psychopathology on antisocial behavior in outpatient children and adolescents. *Child Psychiatry and Human Development*, *43*(3), 376–392. https://doi.org/10.1007/s10578-011-0272-z

Vieno, A., Nation, M., Pastore, M., & Santinello, M. (2009). Parenting and antisocial behavior: a model of the relationship between adolescent self-disclosure, parental closeness, parental control, and adolescent antisocial behavior. *Developmental Psychology*, *45*(6), 1509–1519. https://doi.org/10.1037/a0016929

Vreeland, A., Gruhn, M. A., Watson, K. H., Bettis, A. H., Compas, B. E., Forehand, R., & Sullivan, A. D. (2019). Parenting in context: Associations of parental depression and socioeconomic factors with parenting behaviors. *Journal of Child and Family Studies, 28*(4), 1124–1133. https://doi.org/10.1007/s10826-019-01338-3

Weymouth, B. B., Buehler, C., Zhou, N., & Henson, R. A. (2016). A meta‐analysis of parent–adolescent conflict: Disagreement, hostility, and youth maladjustment. *Journal of Family Theory & Review, 8*(1), 95–112. https://doi.org/10.1111/jftr.12126

Xu, Y., Boyd, R. C., Butler, L., Moore, T. M., & Benton, T. D. (2017). Associations of parent-adolescent discrepancies in family cohesion and conflict with adolescent impairment. *Journal of Child and Family Studies*, *26*(12), 3360-3369. https://doi.org/10.1007/s10826-017-0825-2