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

**Frida Tomter Skancke & Thea Fahle Mausethagen**

**Abstract**

The association between parents' mental distress and adolescents’ antisocial behavior (ASB) is well documented. However, we ask if this association partially can be explained by family conflict and cohesion as mediating factors. The sample consisted of 159 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 by family conflict on the association between parental mental distress and adolescent ASB. Indicating that higher levels of mental distress in parents increase family conflict, which in turn is associated with the adolescents' exhibition of ASB. 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, Depression, Anxiety, Family Conflict, Family Cohesion, Mediation, Bayes, Family Stress Model

**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**

Adolescence is a time known for change in relationships, and family structure. Normative for this period is increased family conflict and reduced family cohesion. However, in families with parental psychopathology and adolescent antisocial behaviors, these changes may be more severe. Interpersonal relationships and interactions between family members are highlighted as certain aspects that may exacerbate this influence, and are 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, vandalism, and delinquency (Dishion & Patterson, 2006). Persistent ASB may have major long-term consequences, both for the individual and society (e.g., academic failure, drug abuse, violence, and economic struggle) (LoBraico et al., 2020; Moffitt, 2018). Exhibition of ASB is both a common and heterogeneous form of problem behavior among youth (Frick & Viding, 2009). Early emerging ASB have a higher chance of persisting into adulthood, due to more severe individual and environmental risk factors. Research indicates that maternal psychopathology, harsh and neglectful parenting, and elevated family conflict are some of such risk factors (Dishion & Patterson, 2006; Moffitt, 2015).

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., threats, physical aggression 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). Steinberg (2011) 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**

The connection between parental mental distress, symptoms of depression and anxiety, are well established risk factors for negative 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). 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). However, for anxious parents, they tend to be more controlling and overprotective, parenting their offspring closely, expecting disclosure of information, and allowing less autonomy (Jones et al., 2021; Vera et al., 2012).

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. Greater parental symptoms were associated with intrusiveness, control through guilt, and less parental warmth. Parental rejection and overprotection has been found to mediate the association 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. 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). Parental rejection and overprotection was found to mediate the association between parental psychopathology and offspring ASB (Vera et al., 2012).

Research is somewhat conflicted on mothers and fathers separate influence on offspring maladjustment (Cummings et al., 2005; Sweeney & MacBeth, 2016). Both Marmostein and Iacono (2004), and Vera and colleagues (2012) found that maternal psychopathology had greater influence and predicted higher levels of maladjustment, compared to fathers. Conversely, a meta-analysis 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 greater influence.

**Family Conflict and Cohesion as Mediators**

PMD 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 may be a source for frustration, friction, and conflict (Buehler, 2006; Saxbe et al., 2014), as they attempt to adjust boundaries, renegotiate parental authority, and increase their independence (Weymouth et al., 2016). High family conflict is associated with emotional and behavioral problems (e.g. mental distress, aggression, delinquency, and school problems) (Fosco & Lydon-Staley, 2020; Sun et al., 2021; Xu et al., 2017). Similarly, a meta-analysis by Weymouth and colleagues (2016) found positive associations between parent-adolescent conflict and youth maladjustment. Family conflict is also connected to heightened engagement in risky behavior (Skinner & McHale, 2016). Elevated levels of conflict may increase the use of coercive strategies in parent-adolescent interactions (LoBraico et al., 2020), where ASB emerges and stabilizes over time (Granic & Patterson, 2006).

Family cohesion is characterized by warmth, openness, emotional connection, and flexibility. Offspring in such families are found to have better psychological and behavioral adjustment (Coe et al., 2018; Richmond & Stocker, 2006; Sun et al., 2021). High and stable levels of cohesion make family members less adversely affected by PMD, adolescent ASB, or other life challenges (Coe et al., 2018). Adolescents who feel connected to their family, are more likely to seek guidance, disclose information, 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). Family cohesion tends to decrease through adolescent development and liberation process (Bear, 2002; Deković et al., 2003). Decrease in family cohesion was lower and had less impact on youth who initially reported high connectedness to their family, while low levels in early adolescence predicted more delinquent behavior in later adolescence (Lin & Yi, 2019). Other studies also found that low family cohesion predicted externalizing behavior as Conduct Disorder, Oppositional Defiant Disorder and hostility (Coe et al., 2018; Richmond & Stocker, 2006).

Depressed mothers report that their family environments more often are less cohesive and more conflict-filled, compared to non-affected mothers (Slee, 1996). Higher levels of maternal depression is associated with lower levels of family cohesion, reported by both mothers and adolescents (Pérez et al., 2018). 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.

#### **SES (Agathe)**

**The Current Study**

The current study aims to investigate whether family conflict and cohesion mediate the effect of PMD on ASB. We hypothesize that higher symptoms of PMD will increase family conflict, and decrease family cohesion. Further, we expect 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 the mediators to covary, with high levels in one resulting in low levels in the other. **Skal SES nevnes her, eventuelt hvordan?**

**Methods**

**Participants**

The current sample is collected from a Norwegian randomized control trial of Functional Family Therapy (FFT) sought to treat moderate to severe antisocial behavior. Adolescents and their families (*N* = 159) participated (Bjørnebekk, 2013). The inclusion criteria were: adolescents age (11-19 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 experienced an acute psychotic episode, home environments considered not safe for the therapist, cases with ongoing investigation by the local child welfare service, and participation in interventions or treatments incompatible with FFT.

Two observations were excluded due to whole-row missing data. 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, and T3 – follow-up one year after intervention. 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. Both parents and adolescents completed all questionnaires on portable computers, programmed in Ci3 software (Sawtooth Software, n.d.).

**Measures**

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

To measure adolescent ASB, primary caretakers filled out Child Behavior Checklist 6-18 (CBCL; Achenbach & Rescorla, 2001). CBCL consists 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), based on their adolescent’s behavior the last six months. We utilized the subscales "Externalizing Behavior", consisting of two syndrome scales: "Aggressive Behavior" ("Attacks other people physically") and "Rule-Breaking Behavior ("Breaks rules at home, school, or other places") (Achenbach & Rescorla, 2001). Acceptable reliability and validity has been found both previously (Achenbach & Rescorla, 2001; Lurie, 2006); Naar-King et al., 2004; Pandolfi et al., 2014), and here: 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, short version of Hopkins Symptom Checklist (SCL-90; Derogatis et al., 1974)) was used to measure PMD, based on self-reporting of symptoms of mental illness and distress. They answered eight items about the presence and intensity related to symptoms of anxiety and depression the last 14 days (“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). SCL-8 is suggested to be a valid and robust, brief screening tool (Fink et al., 2004a; Fink et al., 2004b). We also found good reliability (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***

The Norwegian version of the Family Environment Scale (FES) was used to measure family conflict and cohesion, using parental self-reports. 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”). Cohesion 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), however, we found acceptable reliability for the subscales (𝛼= .76 and 𝛼 = .73, respectively).

**Control variables**

Adolescent age and gender were included as control variables. In addition, for parents, their perception of economic hardship (SES), 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).

**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 purpose of this current study was to investigate whether family conflict and cohesion have a mediating role on the relationship between parental mental distress (PMD) and adolescent antisocial behavior (ASB). Results revealed a direct association between PMD and adolescent ASB, and is consistent with previous research. Indicating that PMD with all the possible behaviors or attitudes this measure includes, directly affects adolescents development and exhibition of ASB. Some mechanisms that might influence, but are not controlled for in the current study include parenting styles (Hautmann et al., 2015; Vera et al., 2012), parental hostility and overprotection (Sellers et al., 2014), and coping strategies (Francisco et al., 2015), as well as environmental factors outside the family (KILDE). Further, our overall results indicate that family conflict has a mediating effect on adolescent ASB, while cohesion does not. Unsurprisingly, elevated and chronic patterns of family conflict, and within specific dyads, e.g. parent-adolescent, results in deteriorated family cohesion.

As to our first hypothesis, results indicate that elevated levels of PMD is associated with increased levels of family conflict, and reduction in family cohesion. These results are consistent with previous findings (e.g., Garber, 2005; Pérez et al., 2018; Xu et al., 2017). We assume that PMD 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 monitoring (Korhonen et al., 2014; Perez et al., 2018). Factors like these are possible explanations for 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). Hostile and conflict-filled interpersonal relationships can result in withdrawal by family members (Romm & Alvis, 2022). Hence, explaining the reduction in family cohesion when PMD is high. These results are also in line with previous research (Li et al., 2021; Van Loon et al., 2014). It is reasonable to assume that within a clinical sample, with interactions characterized by higher conflict and PMD, any deterioration in family cohesion will escalate the situation.

As expected, results indicate that family conflict has a mediating role on the relationship between PMD 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 family environments characterized by coercive and hostile attitudes and behaviors. LoBraico et al. (2020) found that adolescents in coercive families experienced the most robust risk across ASB outcomes. 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 within the family, offsprings may adopt and stabilize these attitudes to other social relations, encouraging affiliation with antisocial groups and peers (Carroll et al., 2009; Ciranka & van den Bos, 2021; Moffitt, 2015). Conversely, research shows that living with antisocial or delinquent adolescents have transactional adverse consequences on PMD and family conflict (Gross et al., 2009). For instance, having a teen not complying to rules, expressing hostile and aggressive behaviors, and parents' awareness that they engage in antisocial activities may create significant stress (Allen et al., 2010).

Adolescence brings normative shifts in family relations, resulting in increased conflict and reduced cohesion between parent and youth, as they attempt to adjust boundaries, renegotiate parental authority, and increase their autonomy and independence (Bear, 2002; Lin & Yi, 2019; Weymouth et al., 2016). Youth also tend to become more oppositional during adolescence (Steinberg, 2011), which may exacerbate adverse patterns of communication and interaction. Also, parents modeling role on behaviors and attitudes are gradually replaced by peers. Developmental trends like these become more problematic for mentally distressed parents, compared to non-distressed. We assume that PMD might exacerbate their ability to meet and adjust to adolescent autonomy seeking, resulting in even more friction and conflict. Connectedness and youth self-disclosure are found to significantly enhance youths' prosperity to seek guidance when navigating difficulties, 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; Vieno et al., 2009). Therefore, we assume that high conflict and lack of cohesion in our sample, contribute to the youth seeking affiliation with deviant peers and not their parents. Especially among mentally distressed parents, where rejection and love withdrawal are prominent. This may exacerbate the distance between parent and adolescent.

When controlling for economic hardship, we found that this had an influence on PMD and family conflict, but not on adolescent ASB. These findings suggest that economic hardship directly impacts parents. Previous research has found socioeconomic disadvantage to be a strong indicator of depressive symptoms in parents (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 stress, which further impair their parental practices and family climate. Further, PMD 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.

**Limitations**

This study has several limitations. Firstly, a 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 (e.g., De Los Reyes, 2011; Robinson et al., 2019), introducing a potential reporting bias (Allen et al., 2010). Parents and adolescents may interpret and observe each other's behaviors differently, therefore, research should attempt to include the offspring's perspectives. Further, cross-sectional data prevents us from drawing any causal conclusions. Our findings are an artifact of our modelling choices, reflecting that results could be different using other methods and samples. For example, compared to the general population, a clinical sample usually has higher levels of symptoms, with in turn affects the generalization of our findings. 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 provides insight and confirmation of previous research on the association between family mechanisms, PMD and adolescent ASB. This is important when establishing holistic interventions, targeting environmental factors and parents' psychopathology. Results 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, youths’ perspectives, and differentiate by gender when examining relations between interpersonal and environmental constructs.

**Data Availability**

**Acknowledgments:**

**Author Contributions:**

**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).

**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

Allen et al., 2010

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 and 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

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.

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

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

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

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.

Patterson, G. R. (2002). The early development of coercive family process. In J. B. Reid, G. R. Patterson, & J. Snyder (Eds.), *Antisocial behavior in children and adolescents: A developmental analysis and model for intervention* (pp. 25–44). American Psychological Association. <https://doi-org.ezproxy.uio.no/10.1037/10468-002>

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

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

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. (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>

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>

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

APPENDIX A

**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).