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# The Role of Mothers and Fathers in Predicting Adolescents' Peer Affiliation and Behavioral Adjustment

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**THE ROLE OF MOTHERS AND FATHERS IN PREDICTING  
ADOLESCENTS' PEER AFFILIATION AND BEHAVIORAL  
ADJUSTMENT**

**BY**

**BECKY GRELE**

**BACHELOR OF ARTS IN PSYCHOLOGY**

THESIS

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**by**

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**ABSTRACT**

The current study aimed to examine the associations between parental warmth and control and adolescents' social behaviors (altruistic and public prosocial behaviors, aggression, and delinquency) in a low-income, Midwestern sample. The study also aimed to examine how peer relationships may play an indirect role in these associations. The results demonstrated complex links between parenting dimensions and adolescents' peer affiliation and social behaviors. Specifically, maternal and paternal warmth were predictive of peer affiliation, which in turn predicted adolescents' prosocial behaviors as well as negative social behaviors. There were also direct links between maternal and paternal parenting dimensions and social behaviors, highlighting the role of both mothers and fathers in adolescents' socialization. The discussion focuses on the complex links between parental behaviors, peer relationships, and social behaviors. Additionally, the

present study illustrates the differential role of mothers and fathers in adolescents' social relationships, as well as sociobehavioral outcomes.

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## Chapter 1: Introduction

Researchers are interested in gaining a better understanding of the role of parenting in youth behavioral outcomes. A significant amount of research indicates that aspects of positive parenting (including parental warmth and involvement) promote healthy development in adolescents (Ainsworth, 1985; Day & Padilla-Walker, 2009; Padilla-Walker, Nielson, & Day, 2016). It is important to understand the associations between parenting dimensions and youth social behavior, as parental socialization is a primary predictor of adolescents' adjustment (Darling & Steinberg, 1993). One indicator of healthy development is prosocial behaviors. Prosocial behaviors are defined as voluntary behaviors intended to benefit others (Eisenberg & Fabes, 1998; Padilla-Walker et al., 2016), and include a number of helping actions such as comforting others, volunteering, and responding in emergency situations (Carlo & Randall, 2002; Padilla-Walker et al., 2016). Prosocial behaviors are of interest to researchers because they are associated with a number of positive outcomes, including higher self-esteem (Laible, Carlo, & Roesch, 2004), and are typically inversely related with aggressive and delinquent behaviors (Laible et al., 2004; Padilla-Walker, Carlo, & Nielson, 2015).

Prosocial behaviors have historically been examined as a general, unidimensional construct; however, more recent studies recognize them as a complex, multidimensional set of behaviors (Carlo & Randall, 2002; Padilla-Walker & Carlo, 2014). Two forms of prosocial behaviors are altruistic and public prosocial behaviors. Altruistic prosocial behaviors are helping behaviors with no expected benefit for the helper. This form of helping is also common among youth who have a strong moral identity (Carlo & Randall, 2002). Public prosocial behaviors, on the other hand, are motivated by a desire to gain

the respect and approval of others and to enhance one's self worth (Carlo & Randall, 2002). Because of the differing motivations underlying altruistic and public prosocial behaviors, these two forms of helping are typically negatively correlated (Carlo & Randall, 2002).

Because of the salient role of parenting in predicting adolescents' adjustment, more work is needed to better understand how mothers and fathers each play a role in youth socialization. The first goal of the current study is to examine the associations between mothers' and fathers' parenting dimensions and adolescents' prosocial and aggressive and delinquent behaviors. Second, the current study will examine the indirect role of peer affiliation in the links between parenting and adjustment. Because peer relationships become increasingly important in adolescence (Brown, Bakken, Ameringer, & Mahon, 2008), it is important to understand how peer relationships might mediate the associations between parenting dimensions and social behaviors of adolescents.

### **Parenting and Adolescents' Social Behaviors**

Scholars have focused on dimensions of parenting that predict youth outcomes (Darling & Steinberg, 1993; see Spera, 2005). Two specific parenting dimensions of interest are parental warmth and parental control (Barber, Stolz, & Olsen, 2005). Parental warmth, sometimes referred to as support, refers to the degree of positive affection existing in parent-child relationships (see Carlo, McGinley, Hayes, Batenhorst, & Wilkinson, 2007). Parental warmth might mitigate negative adjustment and promote prosocial behaviors among youth because warm mothers may be providing adolescents with a positive family climate in which moral internalization and prosocial development can occur (Hoffman, 2000). Parental control is broken down into two types of control:

behavioral control and psychological control. Behavioral control and psychological control are both used to control the child or adolescent (Barber et al., 2005) and refer to degrees of strictness, behavioral rules, and expectations. Psychological control, in particular, is defined as a parent's controlling attempts that intrude into the psychological and emotional world of the child or adolescent and is thought to be a more negative parenting strategy (Barber & Harmon, 2002). Psychologically controlling parents are likely to use manipulation in an effort to elicit the response they want from their child. Therefore, behavioral control is typically considered a protective strategy, while psychological control might be a risk factor (Barber & Harmon, 2002). While there is an abundance of research on parenting and youth outcomes, researchers still tend to focus on preventing negative adjustment (Carlo, et al., 2014). Although it is important to understand the role of parenting in negative behaviors among youth, it is also important to understand what fosters positive behavioral adjustment.

Social learning theory suggests that people learn from one another through observation, imitation, and modeling (Bandura, 1977). This suggests that children learn from and model the behaviors of their parents. More specifically, children exposed to modelled prosocial behavior are more likely to emulate prosocial behavior (Bandura, 1986). Parents who are warm and responsive also often model well-regulated moral emotions, which may then facilitate prosocial behaviors (Eisenberg & Murphy, 1995). Adolescents with warm and supportive parents may therefore exhibit more supportive and helping behaviors towards others and may engage less frequently in aggressive and delinquent behaviors.

**Research on parenting and prosocial behaviors.** A significant amount of research has found evidence to support a link between parental behavior and positive behavioral outcomes among adolescents. Several studies have reported that a warm, responsive parent-child interaction is positively related to self-esteem and social acceptability (Estrada, Arsenio, Hess, & Holloway, 1987). Additionally, maternal warmth is positively associated with school engagement and academic motivation (Lowe & Dotterer, 2013) and maternal and paternal warmth are associated with academic achievement (Uddin, 2011).

Researchers have also studied the influence of parenting styles on prosocial behavior in children repeatedly (Carlo et al., 2007; Carlo, Mestre, Samper, Tur, & Armenta, 2010) and positive links between warm parenting and prosocial behaviors have been well established (Carlo, Roesch, & Melby, 1998; Padilla-Walker et al., 2015). Other parental behaviors, like connectedness and monitoring, are also related positively to prosocial behaviors (Carlo et al., 2007; Carlo et al., 2010). Parents who are controlling and assert power, on the other hand, are less likely to elicit prosocial behavior in their children (Padilla-Walker, 2014). Accordingly, Carlo, Mestre, Samper, Tur, and Armenta (2010) found that both paternal and maternal psychological control were equally weakly and nonsignificantly associated with prosocial traits and behaviors. There are, however, some differences depending on the specific prosocial behavior examined. Specifically, control was weakly associated with public prosocial behaviors (Richaud, Mesurado, & Lemos, 2013). Richaud, Mesurado, and Lemos (2013) found that public prosocial behavior was carried out to avoid punishment or obtain approval. As such, parental

warmth may positively predict prosocial behaviors and negatively predict aggressive behaviors, while psychological control may function in the opposite manner.

**Parental behaviors and adolescents' negative adjustment.** There is evidence that parental warmth is negatively associated with aggression and delinquency (Khaleque, 2013). Maternal warmth is related negatively to adolescents' problem behavior (Deutsch, Crockett, Wolff, & Russell, 2012). Psychological control is an important predictor for externalizing and internalizing behavior in adolescents (Symeou & Georgiou, 2017). A controlling parental style mixed with harsh and neglectful parent-child interactions has been linked to antisocial behaviors and aggressive outcomes (Murray, Dwyer, Rubin, Knighton-Wisor, & Booth-LaForce, 2014). While most research on parental psychological control pertains either to maternal psychological control or to a general parental measure, there is evidence that paternal psychological control is as equally impactful as maternal psychological control on externalizing and internalizing behaviors (Symeou & Georgiou, 2017) including aggression (Kuppens, Grietens, Onghena, & Michiels, 2009). To better understand the influence parents have on development, it is necessary to consider the role of both mothers and fathers in predicting adolescents' positive and negative social behaviors.

**Mothers' and fathers' unique role in development.** Behaviors exhibited by mothers and fathers may predict adolescents' social behaviors in independent ways (Stolz, Barber, & Olsen, 2005). Few studies have directly compared the effects of fathers versus mothers in prosocial development (Carlo et al., 1998; Carlo, White, Streit, Knight, & Zeiders, 2018). In fact, most studies assess parenting through mothers' behavior alone, disregarding the role of fathers (Bean, Bush, McKenry, & Wilson, 2003). While the

research on fathers' role in parenting and prosocial behaviors is growing, there is a lack of consensus about the role they perform. There is work that demonstrates no associations between fathers' behaviors and youth prosocial behaviors (see Hastings, Utendale, & Sullivan, 2007). However, these findings are mixed. Padilla-Walker, Nielson, and Day (2016) found that father hostility negatively predicted adolescents' prosocial behaviors more strongly than mothers' hostility. Another study's results varied slightly in that both mothers' and fathers' warmth were both positively associated with prosocial behaviors, yet mothers' warmth remained more predictive than fathers' (Carlo et al., 2010). In addition, a study of U.S. Mexican young adults found that maternal and paternal acceptance (which incorporates warmth) were both indirectly, positively associated with prosocial behaviors (Streit, Carlo, Killoren, & Alfaro, 2018). Based on the inconclusive role of fathers and the generally supportive role of mothers in fostering prosocial behaviors, further research is needed to better understand the role fathers may play and how their role may differ from mothers.

It is also important to consider the role of mothers and fathers in adolescents' negative adjustment (i.e., aggression and delinquency). Studies have documented positive links between fathers' harsh parenting and indicators of negative adjustment, including delinquency (Lippold, Hussong, Fosco, & Ram, 2018; Simmons, Steinberg, Frick, & Cauffman, 2018). There is evidence the relationship between parental involvement and connectedness with internalizing and externalizing behaviors differs by parent (Day & Padilla-Walker, 2009). More specifically, researchers found that fathering was more consistently related to adolescents' problem behaviors whereas mothering was more consistently related to adolescents' positive behaviors (Bean, Barber, & Crane,

2006; Day & Padilla-Walker, 2009; Grant et al., 2000). Additionally, when one parent's involvement was high while the other was low, there were fewer internalizing behaviors (Day & Padilla-Walker, 2009). One explanation in these discrepant findings may be that mothers' parenting is more focused on relationship-building skills and fathers' is more centered on norm compliance (Lamb, 2004). Similarly, when quality of one parent's parent-child relationship is high, the effect of the other parents' psychological control on aggressive outcomes is reduced (Murray et al., 2014). The current study aims to extend the existing literature by examining the role of both mothers and fathers in adolescents' prosocial and antisocial behaviors.

### **The Role of Peer Relationships**

Other factors, such as peer relationships, also influence development during adolescence (Clasen & Brown, 1985). Erikson's psychosocial theory suggests that advanced identity development occurs in adolescence (Erikson, 1964). In order to attain identity, adolescents strive to be independent from the influence and control of their parents, which thereby pushes them to seek support and acceptance from peers (Erikson, 1968). As children transition through adolescence and into adulthood, relationships with peers become increasingly more influential (Fulgini & Eccles, 1993). Peer group membership facilitates a sense of identity by way of demands to conform to group norms (Clasen & Brown, 1985). These demands may lead to positive identity development or, for some, can lead to peer pressure toward antisocial behaviors (Clasen & Brown, 1985). Therefore, it is important to understand how peer relationships may play a role in the links between parenting behaviors and adolescent social behavior.

**Parenting dimensions and peer relationships.** Parental behavior also influences the nature of peer relationships during adolescence. The Peer Influence Model states that ineffective parenting leads children to maintain deviant friends (Vitaro, Tremblay, Kerr, Pagani, & Bukowski, 1997). For example, ineffective parenting, such as use of psychological control, could deter identity-formation, leading to the adolescent's failure to develop the ability to make independent judgments and decisions while forcing them to seek out assurance and guidance from their peers (Barber & Harmon, 2002). Parental warmth on the other hand might promote positive peer affiliation as adolescents might seek out positive social relationships, as support and guidance have been highlighted as salient aspects of parenting that shape adolescents' peer groups (Mounts, 2002).

Researchers have found direct paths between parenting practices and peer group affiliation (Brown, Mounts, Lamborn, & Steinberg, 1993). Warm and supportive parenting helps facilitate strong parent-child bonds that lead to social competence in interactions with peers and minimize the influence of antisocial peers (Brown et al., 2008; Putallaz, 1987). Parental monitoring, affection, responsiveness, discipline, and attachment are related to peer attachment (Engels, Dekovic, & Meeus, 2002). Inadequate, detached parenting practices, such as a lack of parental monitoring or joint decision-making, contribute to involvement in deviant peer groups (Brown et al., 1993). The evidence suggests that adolescents are more likely to have satisfying friendships when their parents are warm and responsive (Engels et al., 2002).

Ineffective or harsh parenting, on the other hand, is associated with the child's involvement in deviant peer groups (See Brown & Bakken, 2011; Brown et al., 1993). Chan and Chan (2011) found that for adolescents whose mothers used psychological

control, including anxiety and guilt, overprotection, and infantilization, the more they looked to their peers for assurance of values and behavioral standards. Similarly, adolescents with psychologically controlling parents have been found to have increased susceptibility to peer pressure (Chan & Chan, 2011). For instance, Deutsch, Crockett, Wolff, and Russell (2012) found that when higher levels of parental control were coupled with lower levels of maternal support, adolescents reported higher affiliation with deviant peers, which in turn was associated with higher levels of delinquent behavior. Evidence suggests that most deviant adolescents become involved with deviant peers prior to participating in deviant behavior themselves and that involvement with deviant peers predicts delinquency level even after controlling for prior delinquency (Elliott, Huizinga, & Ageton, 1985).

**Peer relationships and social behaviors.** Just as adolescents learn from their parents by way of modeling, social learning theory also indicates that adolescents learn from their peers by way of modeling as well as through rewards and punishment (Carlo, 2006; see Rubin et al., 2006). Peers punish those whose behavior is non-normative or fails to comply with culturally accepted behavior within the group. Peers reward or reinforce those whose behaviors comply with norms or are found to be culturally appropriate (see Rubin, Bukowski, & Parker, 2006). Social learning theory is supported by Wentzel's model, which describes the reciprocal relationship between peers that reinforces specific behaviors (See Wentzel, 2014). In this model, individuals will value and pursue personal goals that are in alignment with perceived expectations defined by their peers. While this could include prosocial behaviors, it may also include antisocial behaviors.

Research has demonstrated links between peer affiliation and adolescents' social behaviors. Deviant peer groups influence adolescents' involvement in deviant behavior, which can also shape their social development (Vitaro et al., 1997). Researchers have identified association with deviant peers as a risk factor associated with aggression and delinquency (Patterson, Dishion, & Yoerger, 2000). Deviant peers may reinforce behaviors that contradict prosocial norms and conventions and provide social scripts that produce antisocial tendencies (Dishion, McCord, & Poulin, 1999).

Peers are not only a source of negative influence on adolescents, peers can also serve to support prosocial development (Carlo, 2006). Prior research has demonstrated that prosocial behaviors are negatively linked to involvement with delinquent peers (Carlo et al., 2014). Adolescents with friends who are not involved in deviant behavior are also less likely to be involved in deviant behavior (Eisenberg & Fabes, 1998). Research has demonstrated that adolescents who exhibit altruistic prosocial tendencies are less likely to be associated with deviant peers (Carlo et al., 2014) or physical aggression (Carlo, McGinley, Hayes, & Martinez, 2011). In addition, involvement with positive peers has been linked to higher levels of engagement in prosocial behaviors among adolescents (Laible, Carlo, Davis, & Karahuta, 2016). There is also evidence that peer affiliation plays a role in the links between parenting and adolescents' social behaviors. In one study, adolescents who received higher maternal support had less association with deviant peers, thereby predicting lower involvement in delinquent behaviors (Deutsch et al., 2012). Similarly, parental control and delinquent behavior were found to be mediated by deviant peers (Carlo et al., 2014).

## **The Current Study**

The current study sought to fill several gaps in the literature. The first goal of the current study was to examine the associations between mothers' and fathers' parenting dimensions and adolescents' prosocial and aggressive behaviors. We hypothesized parental warmth would be positively associated with altruistic prosocial behavior and negatively associated with aggression and delinquency. Additionally, we hypothesized parental psychological control would be positively associated with public prosocial behavior, aggression, and delinquency and negatively associated with altruistic prosocial behavior. Furthermore, we sought to analyze similarities and differences between mothers and fathers in their association with adolescent's social behaviors. Our second goal of the study was to extend the research on the role of peer relationships when examining parenting dimensions and adolescents' sociobehavioral outcomes. We hypothesized that parental warmth would positively predict positive peer relationships, which would then positively predict altruistic prosocial behavior and negatively predict aggression and delinquency. We also hypothesized parental psychological control would positively predict negative peer relationships, which would then positively predict public prosocial behavior, aggression, and delinquency. Additionally, little research has evaluated the relative influence of one parent on the other. Therefore, we examined parents' relative influence by including both mothers and fathers in the same model. Finally, we examined whether there are differences according to gender or age by comparing adolescent males and females and comparing younger adolescents and older adolescents.

Additionally, considering the moderating role of gender and age in the links between parenting, peer affiliation, and social behaviors might be highly relevant. Previous research has demonstrated gender differences in prosocial behaviors among adolescents such that girls tend to be more likely to report engaging in selfless and emotional forms of prosocial behaviors, while boys tend to report engaging in more public forms of prosocial behaviors (Carlo, Hausmann, Christiansen, & Randall, 2003). Additionally the role of mothers and fathers might predict social functioning differently for boys and girls. Based on social learning theory and gender socialization expectations, parental sex might be important in predicting social outcomes for same-sex youth (Bandura, 1977). Because of documented gender effects, the current study also examined the moderating role of gender. Additionally, there is evidence that peer relationships become increasingly important across adolescence (see Santos & Vaughn, 2018). Therefore, the role of parents and peers might shift as adolescents age. In order to better understand the role of age in these processes, we conducted analyses to examine the moderating role of adolescent age.

## Chapter 2: Methods

### Participants and Procedures

Adolescents were recruited from a public high school in Missouri. The high school is situated in a working class, low-resource area of the broader metropolitan community (median income = \$35,062; City Data, 2017). The community is approximately 82% European American, 7% Latino/a, and 6% African American (City Data, 2017). The attendance rate at this particular school was below the state average, and approximately 61% of students qualify for the free or reduced lunch program (DESE, 2017). The final sample consisted of 311 adolescents ( $M$  age = 16.10 years; range = 14-19 years; 58.7% girls; 82.7% European American; 13.6% Latino/a). Adolescents reported on their mothers' education as an indicator of socioeconomic status (9.7% some high school, 34.5% high school, 20.6% some college, 19.7% college). Parental consent forms and recruitment letters were sent home with all students who were in class on the recruitment day. The students who returned their parental consent forms were eligible to participate in the study. All students with parental consent chose to participate in the study and all participants signed an assent form. Data were collected during classes at the high school. Students who did not participate were allowed to work on an alternative assignment.

### Measures

**Mothers' and fathers' warmth and psychological control.** Adolescents completed the Revised Children's Reports of Parental Behavior Inventory (RCRPBI) (Barber et al., 2005). Using a 3-point Likert-type scale (1 = *not like her/him*, 3 = *a lot like her/him*), participants rated the extent to which their parents exhibited warm or

psychologically controlling behavior. The warmth and psychological control subscales were used in the current study. A sample item for the warmth subscale includes, “Often speaks of the good things I do” and the psychological control subscale includes, “Wants to control whatever I do.” The maternal warmth subscale consists of 27 items ( $\alpha = 0.97$ ) and the paternal warmth subscale consists of 27 items ( $\alpha = 0.91$ ). The maternal psychological control subscale consists of 14 items ( $\alpha = 0.87$ ) and the paternal psychological control subscale consists of 14 items ( $\alpha = 0.90$ ). The RCRPBI has been used extensively with diverse adolescent populations and has demonstrated consistent reliability and validity (Margolies & Weintraub, 1977).

**Affiliation with positive and negative peers.** Adolescents completed a measure of their affiliation with positive peers (Fredricks & Eccles, 2005) and a measure of their affiliation with negative peers (Dishion, Patterson, Stoolmiller, & Skinner, 1991). The positive peers subscale consists of six items ( $\alpha = 0.83$ ) and participants used a 7-point Likert-type scale (1 = *none*, 7 = *all*) to indicate the number of their friends who engaged in positive behaviors. A sample item from the positive peers measure includes, How many of your friends... “encourage you to go to college.” The negative peers subscale consists of nine items ( $\alpha = 0.92$ ) and participants used a 3-point Likert-type scale (1 = 1, 3 = 3) to indicate the number of their closest three friends who engaged in negative behaviors. A sample from the affiliation with negative peers measure includes, “How many of your friends have stolen something worth more than 10 dollars.”

**Public and altruistic prosocial behaviors.** Adolescents completed the altruistic and public subscales from the Prosocial Tendencies Measure – Revised (PTM-R) (Carlo, Hausmann, Christiansen, & Randall, 2003). Using a 5-point Likert-type scale (1 = *does*

*not describe me at all, 5 = describes me very well*), participants rated the extent to which sentences described their own behavior. A sample item from the public prosocial behavior subscale is, “I can help others best when people are watching me,” and a sample item from the altruistic prosocial behavior subscale is, “One of the best things about doing charity work is that it looks good” (reverse-scored). The public prosocial behavior subscale consists of three items ( $\alpha = 0.69$ ) and the altruistic prosocial behavior subscale consists of four items ( $\alpha = 0.73$ ). The PTM-R has demonstrated good internal reliability and validity across diverse samples of adolescents (Carlo et al., 2010; Carlo & Randall, 2002).

**Delinquency.** Adolescents completed the Self-Report Delinquency Scale (SRDS) (Trzesniewski & Donnellan, 2010). Using a 5-point Likert-type scale (1 = *not at all*, 5 = *5 or more times*), participants indicated the number of times they engaged specific behavior in the last 12 months. A sample item includes, “Taken part in a fight where a group of your friends were against another group.” This measure consists of 14 items ( $\alpha = 0.91$ ). The SRDS is a frequently used instrument that has been well-validated (Elliott, Ageton, Huizinga, Knowles, & Canter, 1983; Liddle, et al., 2018)

**Aggression.** Adolescents completed a short version of the Weinberger Adjustment Inventory (WAI) (Weinberger, 1991). Using a 5-point Likert-type scale (1 = *almost never or never*, 5 = *almost always or always*), participants rated how statements describe them. A sample item includes, “People who get me angry better watch out.” This measure consists of five items ( $\alpha = 0.84$ ). The WAI is a frequently used instrument that has demonstrated consistent reliability and validity (Laible, Carlo, & Raffaelli, 2000; Laible et al., 2004; Weinberger, 1991).

## Chapter 3: Results

### Descriptives and Correlations

Descriptive statistics (means and standard deviations) were initially examined and reported for each of the variables (see Table 1). Bivariate correlations were also conducted for all variables. The parenting dimensions were all positively related to one another. Maternal warmth and paternal warmth were moderately positively correlated and maternal psychological control and paternal psychological control were strongly positively correlated. Paternal warmth and paternal psychological control were also moderately positively correlated with one another. All four parenting dimensions were positively correlated with positive peers, although weakly, with maternal and paternal warmth being slightly stronger than maternal and paternal psychological control. Maternal and paternal warmth were both negatively correlated with negative peers. In contrast, there were no significant relations between parental psychological control and negative peers. Altruistic prosocial behaviors were negatively correlated with maternal psychological control and negative peers. Public prosocial behavior was positively correlated with maternal warmth, maternal psychological control, and paternal warmth. Although there were no significant correlations between public prosocial behavior and peers, public prosocial behavior was strongly negatively correlated with altruistic prosocial behavior. Delinquency was negatively correlated with maternal warmth, paternal warmth, and altruistic prosocial behavior. Delinquency was moderately positively correlated with negative peers and weakly positively correlated with public prosocial behavior. Aggression was negatively correlated with maternal warmth, paternal

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Mom Warm										
2. Mom Control	.21*									
3. Dad Warm	.44*	.20*								
4. Dad Control	.14*	.55*	.32*							
5. Positive Peers	.21*	.15*	.24*	.17*						
6. Negative Peers	-.20*	.05	-.21*	.01	-.16*					
7. Altruistic	-.02	-.28*	-.02	-.10	-.01	-.15*				
8. Public	.13*	.17*	.14*	.06	.10	-.06	-.53*			
9. Delinquency	-.19*	.05	-.14*	-.06	-.08	.38*	-.23*	.15*		
10. Aggression	-.22*	.04	-.15*	-.16*	-.14*	.40*	-.21*	.08	.43*	
Mean (SD)	2.29(.55)	2.00(.50)	1.93(.62)	1.80(.55)	3.55(1.41)	.99(.80)	3.88(.96)	2.12(.97)	1.20(.48)	1.88(.89)

Table 1. Means, standard deviations, and correlations among parental behaviors, peer relationships, and adolescents' behavioral outcomes; \*  $p < 0.05$

warmth, paternal psychological control, positive peers, and altruistic prosocial behavior. Aggression was moderately positively correlated with negative peers and delinquency.

### **Path Analysis Results**

Path analyses were conducted using SPSS AMOS to examine the proposed hypotheses. We included gender, race, and maternal education as statistical controls in the model. Researchers have highlighted the role of culture and racial demographics in predicting parenting behaviors (see Coll & Patcher, 2002); therefore, we have included race as a statistical control. In addition, socioeconomic status (SES) strongly predicts parenting behavior as well as developmental outcomes in children (see Bornstein & Bradley, 2002). Scholars have found that maternal education largely accounts for the effects SES has on child behavioral outcomes throughout development (see Bornstein & Bradley, 2002), so we included maternal education as a control variable in the model.

Maternal and paternal warmth and psychological control were entered as the exogenous variables which were set to predict positive and negative peers and the behavioral outcome measures. Peer affiliation were also be set to predict prosocial behaviors, aggression, and delinquency. All exogenous variables were allowed to correlate. Positive and negative peer affiliation were allowed to correlate. Covariates were also included for all outcome measures. We examined the Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and the SRMR values. The model fit in SEM is considered good if the Comparative Fit Index (CFI) is .95 or greater (fit is adequate at .90 or greater), and the Root Mean Square Error of Approximation (RMSEA) is less than or equal to .06 (fit is adequate at .08 or less) and the SRMR value

is less than .06 (Byrne, 2010; Hu & Bentler, 1999). Results demonstrated good fit for the initial proposed model (CFI = .98; RMSEA = .08;  $\chi^2(5) = 14.86, p = .01$ ).

To examine gender differences in the model, each path was constrained to be equal across the two groups (boys and girls). A chi-square difference test was conducted to examine whether the constrained and unconstrained models were significantly different. The results of the moderation by gender analyses demonstrated that the constrained model (CFI = .98; RMSEA = .03;  $\chi^2(42) = 54.06, p = .10$ ) and the unconstrained model (CFI = .99; RMSEA = .04;  $\chi^2(11) = 15.88, p = .15$ ) were not significantly different ( $\Delta\chi^2(31) = 38.18, p = .18$ ). Because there were no differences between boys and girls, the results are presented for the whole sample.

To examine age differences in the model (see Figure 1), we conducted moderation by age (group 1 was younger adolescents ages 14-16 and group 2 was older adolescents ages 17-19). The results of the moderation by age analyses demonstrated that the constrained model (CFI = .95; RMSEA = .04;  $\chi^2(44) = 70.00, p = .01$ ) and the unconstrained model (CFI = .98; RMSEA = .06;  $\chi^2(10) = 20.76, p = .02$ ) were significantly different ( $\Delta\chi^2(34) = 49.24, p = .04$ ). Next, chi-square difference tests were conducted on each specific path to examine the paths that differed for younger and older adolescents. The results demonstrated that the following paths were significantly different: paternal psychological control to altruistic prosocial behaviors ( $\Delta\chi^2(1) = 4.31, p = .04$ ); maternal warmth to negative peer affiliation ( $\Delta\chi^2(1) = 10.52, p = .001$ ); and maternal psychological control to positive peer affiliation ( $\Delta\chi^2(1) = 5.45, p = .02$ ). Paternal psychological control did not significantly predict altruistic prosocial behaviors

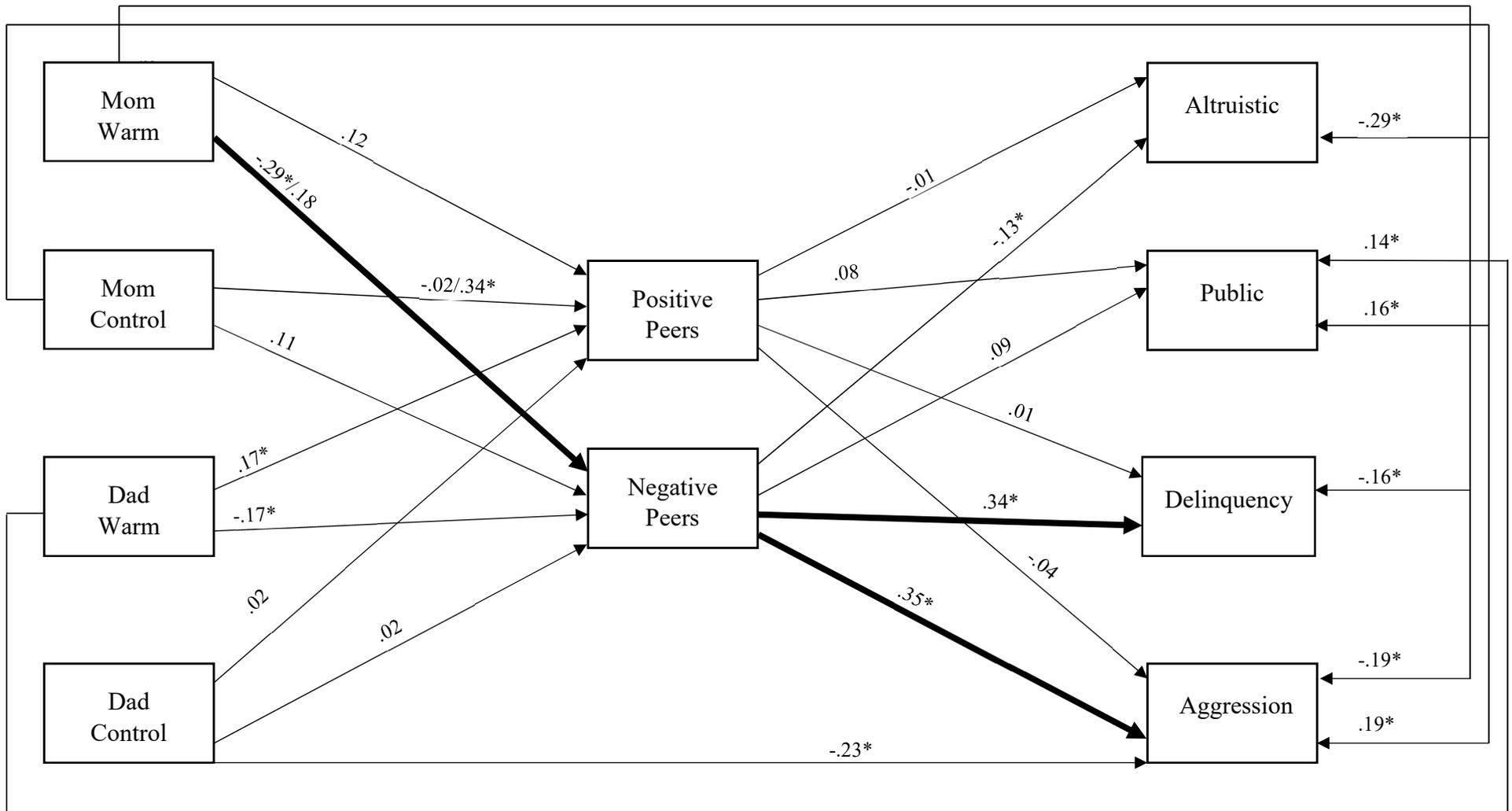
for either group (even though these paths were significantly different), so this path is not represented in the figure.

The results demonstrated maternal warmth was not significantly associated with positive peer affiliation and was negatively associated with negative peer affiliation for younger adolescents (this link was not significant for older adolescents). Maternal psychological control was not associated with positive peer affiliation for younger adolescents but was positively associated with positive peer affiliation for older adolescents. Maternal psychological control was not significantly associated with negative peer affiliation. Paternal warmth was positively associated with positive peer affiliation and negatively associated with negative peer affiliation. There were also direct links between parenting and adolescents' social behaviors. Maternal warmth was negatively associated with both aggression and delinquency. Maternal psychological control was positively associated with aggression and public prosocial behaviors. Paternal warmth was positively associated with public prosocial behaviors and paternal psychological control was negatively associated with aggressive behaviors. Positive peer affiliation did not predict social behaviors. Negative peer affiliation, however, was negatively associated with altruistic prosocial behaviors and was positively associated with aggression and delinquency.

### **Indirect Effects**

Mediation tests using bootstrapping procedures in SPSS AMOS were conducted. First, we conducted bootstrapping analyses for the whole sample. There were two significant indirect effects: the path from maternal warmth to aggressive behaviors ( $\beta = -.06$ ; CI =  $-.12 - (-.02)$ ;  $p = .02$ ) and maternal warmth to delinquency ( $\beta = -.06$ ; CI =  $-.12 -$

(-.02);  $p = .02$ ). Next, we ran the specific indirect effects of maternal warmth to both aggression ( $\beta = -.05$ ;  $CI = -.12 - (-.02)$ ;  $p = .01$ ) and delinquency ( $\beta = -.06$ ;  $CI = -.12 - (-.02)$ ;  $p = .01$ ), and the results demonstrated that the effects were significant through negative peer affiliation. Next, we ran the indirect effects for younger and older adolescents separately, and there were no significant indirect effects.



Model 1. Significantly different paths are presented separately by age (younger/older). All other paths are presented across the whole sample. Bold lines represent significant indirect effects. \*  $p < 0.05$

## Chapter 4: Discussion

Overall, we found evidence that parenting behaviors were significantly associated with peer relationships and with adolescents' behavioral outcomes. We also found some evidence of indirect effects through negative peer affiliation. Thus, we found partial support for the mediating role of peer relationships in the relations between parental behavior and adolescent behavioral outcomes. The relations among parenting behaviors, peer relationships, and adolescent behavioral outcomes varied in a number of ways. These findings extend our understanding of the role of parental behavior and peer relationships in adolescents' behavioral outcomes.

The goals of the present study were, first, to examine the associations between mothers' and fathers' parenting dimensions and adolescents' prosocial and aggressive behaviors and, second, to extend the research on the role of peer relationships when examining parenting dimensions and adolescents' sociobehavioral outcomes. To accomplish these goals, we hypothesized that (1) parental warmth would be positively associated with altruistic prosocial behavior and negatively associated with aggression and delinquency; (2) parental psychological control would be positively associated with public prosocial behavior, aggression, and delinquency and negatively associated with altruistic prosocial behavior; (3) parental warmth would positively predict positive peer relationships, which would then positively predict altruistic prosocial behavior and negatively predict aggression and delinquency; and (4) parental psychological control would positively predict negative peer relationships, which would then positively predict public prosocial behavior, aggression, and delinquency. Additionally, we explored differential relations between mothers' and fathers' parenting dimensions as well as gender and age differences in all associations as exploratory hypotheses.

We found partial support for our first hypothesis. In line with previous research (Deutsch, et al. 2012; Khaleque, 2013), maternal and paternal warmth were both significantly negatively associated with delinquency and aggression. It may be that warm parents provide a supportive context for adolescents that promotes internalization of values that ultimately contributes to lower levels of maladaptive social behaviors (Hoffman, 2000). Paternal warmth positively predicted public prosocial behaviors and was not associated with altruistic prosocial behaviors. This may be because those more likely to participate in altruistic prosocial behaviors do so out of internal motivation and not due to parental factors (see Carlo & Randall, 2002). Warm fathers might have close relationships with their adolescents and therefore adolescents might engage in higher levels of prosocial behaviors in order to gain approval. Additionally, the previous work on fathers' parenting and adolescents' prosocial behaviors is mixed, as some studies have suggested no significant associations (see Hastings et al., 2007) while others have demonstrated positive associations between fathers' warmth and adolescents' prosocial behaviors (Streit et al., 2018). Therefore, more research is needed to better understand links between paternal warmth and specific types of prosocial behaviors among adolescents. Interestingly, maternal parenting dimensions did not significantly predict prosocial behaviors, suggesting that paternal warmth might be a stronger direct predictor of helping behaviors depending on the underlying motivation.

We also only found partial support for our second hypothesis. First, while maternal psychological control was positively associated with public prosocial behaviors, paternal psychological control did not predict either prosocial behavior. This finding is similar to Richaud et al.'s (2013) finding that parental psychological control was weakly associated with public prosocial behaviors, although they did not separate maternal from paternal psychological

control. Motivators for public prosocial behavior are not clear cut. Although people may conduct public prosocial behaviors in order to gain approval or acceptance (Carlo & Randall, 2002), this can be achieved in multiple ways. While for some this may include complying with a controlling parents' expectations or demands, it could also include seeking positive reinforcement from a warm parent. Therefore, considering the motivations that underlie helping behaviors remains an important avenue for research.

Additionally, maternal psychological control was positively associated with aggressive behaviors. Consistent with previous research (Symeou and Georgiou 2017), mothers who intrude on the psychological processes of their children as a form of control might undermine their autonomy and contribute to maladaptive behaviors. Interestingly, paternal psychological control was negatively associated with aggression. Scholars have suggested that fathers' behaviors might play a salient role in shaping adolescents' negative adjustment (Bean et al., 2006), and previous research has found that fathers' harsh parenting positively predicts indicators of maladjustment (Lippold et al., 2018). However, because fathers in low-income and Midwestern communities might still be primary disciplinarians of children, consistent with gender socialization theories (Siegel & Barclay, 1985), gender role expectations in parenting might play a role in this finding. It may be that maternal and paternal psychological control is viewed differently by adolescents and has different meanings. Additionally, researchers have demonstrated that harsh fathering behaviors are not linked to maladjustment for youth in the presence of a positive mother (Murray et al., 2014). However, more research is needed to better understand the role of paternal psychological control. As has been found in other research (Bean et al., 2006; Deutsch et al., 2012), there were no significant associations between parental psychological control and delinquency. Although this runs counter to what we expected, there is

research that supports our hypothesis (Brauer, 2016). While contrary to our hypothesis and other research (Kuppens et al., 2009), this could result from an unidentified third variable. Finally, maternal psychological control was negatively associated with altruistic prosocial behavior.

Consistent with our hypotheses, there were significant indirect effects from parenting dimensions to adolescents' social behaviors. Maternal warmth was negatively associated with aggression and delinquency via negative peer affiliation, but only for younger adolescents. This finding is consistent with previous research demonstrating deviant peers as a mediator of maternal support and adolescents' deviant behaviors (Deutsch et al., 2012). Warm mothers might model positive social behaviors for adolescents and might prompt positive friend groups for youth (Carlo, 2006). Ultimately, peer groups provide significant social reinforcements and modeling that impact adolescent social behaviors (Rubin et al., 2006). Additionally, because peer relationships become increasingly important across adolescence and the role of parents shifts as adolescents age, their parents might particularly influence younger adolescents' friend groups in the early high school years (see Santos & Vaughn, 2018). These findings add to the existing literature by highlighting both mothers and peers as important socializers of negative adjustment.

Maternal psychological control was positively associated with positive peer affiliation. Previous theory has highlighted the detrimental role of maternal psychological control in adolescents' peer groups (Barber and Harmon 2002), so this finding is particularly interesting. However, because this link was only significant for older adolescents, age might play a salient role. It may be that older adolescents with more advanced cognitive skills seek out peer groups to avoid psychologically controlling mothers and positive peers might provide adolescents with social support networks that meet the needs of older high school students. Paternal warmth was

positively associated with positive peer affiliation and negatively associated with negative peer affiliation. The majority of existing research has focused on the role of mothers' parenting in shaping peer affiliation, this study demonstrates the salient role of fathers in shaping adolescents' friend groups for both younger and older adolescents. Paternal psychological control was not associated with peer affiliation, suggesting that paternal warmth is the primary pathway by which fathers' shape the friend groups of adolescents.

### **Limitations**

Although the current study extends our understanding of the influence of parental behaviors on adolescents' positive and negative social behaviors and how adolescent peer relationships serve to mediate that influence, a number of limitations should be considered. First, all measures were self-report and therefore may reflect self-presentation bias. Second, since all reports in this study were provided by the adolescent themselves, mono-reporter bias may exist. Future studies should utilize multiple reporters and behavioral observations to account for these biases. Third, this study was a cross-sectional study and therefore potential reciprocal effects cannot be determined. Future studies should utilize a longitudinal approach to determine whether reciprocal relationships may exist. Finally, our sample derives from one high school in Missouri and is a largely white sample; therefore, the findings may not generalize to other populations. Future research should include a more diverse sample in other areas of the country. Future research should also examine different developmental periods.

### **Conclusions**

The present findings contribute to the growing research on the associations among parenting behaviors, adolescents' peer relationships, and adolescents' negative and positive social behaviors. Our findings suggest that parenting behaviors influence both negative and

positive social behaviors and expand our understanding of the unique role that mothers and fathers play. Importantly, these findings highlight the salient role of parental warmth in shaping adolescents' peer groups. These results indicate that more research needs to include fathers and the influence they have on developmental outcomes. Additionally, our findings indicate that two avenues to reduce aggression and delinquency in adolescents may be to support warm parenting behaviors and reduce negative peer associations for high school age adolescents. Educators and policymakers can focus on creating supportive environments for adolescents both at home and at school where they can gain support from both adults and same age peers.

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