



Theses and Dissertations

2020-07-27

Be Good for Goodness' Sake: Parenting Practices that Promote Value-Congruent Behavior During Adolescence

Ryan David McLean
Brigham Young University

Follow this and additional works at: <https://scholarsarchive.byu.edu/etd>



Part of the [Family, Life Course, and Society Commons](#)

BYU ScholarsArchive Citation

McLean, Ryan David, "Be Good for Goodness' Sake: Parenting Practices that Promote Value-Congruent Behavior During Adolescence" (2020). *Theses and Dissertations*. 8603.
<https://scholarsarchive.byu.edu/etd/8603>

This Thesis is brought to you for free and open access by BYU ScholarsArchive. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of BYU ScholarsArchive. For more information, please contact ellen_amatangelo@byu.edu.

Be Good for Goodness' Sake: Parenting Practices that Promote Value-Congruent Behavior
During Adolescence

Ryan David McLean

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirement for the degree of
Master of Science

Laura L. Padilla-Walker, Chair
Alexander C. Jensen
Adam A. Rogers

School of Family Life
Brigham Young University

Copyright © 2020 Ryan David McLean

All Rights Reserved

ABSTRACT

Be Good for Goodness' Sake: Parenting Practices that Promote Value-Congruent Behavior During Adolescence

Ryan David McLean
School of Family Life, Brigham Young University
Master of Science

Research indicates that adolescence is an especially crucial time for developing habits of values congruent behavior that will persist throughout the lifespan. Past research has suggested that parents may play an important role in socializing their children, however few studies have looked at the mechanism through which this socialization occurs. The current study explored associations between different types of proactive and reactive parenting and value congruent behavior using nationally representative data from across three years during adolescence. Additionally, the current study attempted to further explain these associations through the mechanism of extrinsic and intrinsic values regulation. The current sample included 500 families including parents (67.7% two-parent families, 69.9% of mothers and 68% of fathers had a bachelor's degree or higher) and an adolescent (*Mean* = 13.89 years, 50.9% female, 70.4% European Descent) from the Northwestern USA. The hypotheses of the study were tested using structural equation models. Results of the study were not strong enough to confirm direct or indirect associations among study variables, and results should be interpreted with caution. One finding suggested that reactive parenting practices may be detrimental, above and beyond the level of autonomy granted to adolescents, in that reactive parenting practices were associated with higher rates of deviant peer association and delinquent behavior. Discussion focuses on future studies and methodologies that may be better able to detect meaningful associations.

Keywords: proactive, adolescence, values, autonomy-support, parenting, discipline

ACKNOWLEDGMENTS

I want to thank my mentor, Laura Padilla-Walker, for taking a chance on me. When I first approached her about research, I had little experience and had much to learn, but her guidance made this project possible. I would not be the researcher that I am today without her constant support, love, and red pen. Additionally, I would like to thank Alexander Jensen and Adam Rogers, and all the other faculty in the school of Family Life for collaborating with me and providing valuable insights throughout the course of this and other projects to help me along my academic journey.

This project would similarly not be possible without my wife, who gave me the courage to follow my passion; my kids who motivate me every day to work hard and play hard; and the great circle of family (both biological and by marriage), fellow students, and friends, that have supported me and helped me become the man I am today. I would not be here without all of you and I cannot thank you enough!

TABLE OF CONTENTS

| | |
|--|-----|
| TITLE PAGE | i |
| ABSTRACT..... | ii |
| ACKNOWLEDGMENTS | iii |
| LIST OF TABLES | vi |
| LIST OF FIGURES | vii |
| Be Good for Goodness’ Sake: Parenting Practices that Promote Value-Congruent Behavior | |
| During Adolescence..... | 1 |
| Introduction..... | 2 |
| Parenting Predicts Behavior..... | 2 |
| Proactive Parenting..... | 3 |
| Reactive Parenting | 5 |
| Value Regulation as a Mediator..... | 7 |
| The Current Study..... | 9 |
| Methods..... | 11 |
| Participants..... | 11 |
| Procedure | 12 |
| Measures | 12 |
| Proactive Parenting | 12 |
| Reactive Parenting | 13 |
| Internalization of Values..... | 13 |

| | |
|--|----|
| School Engagement | 14 |
| Prosocial Behavior | 14 |
| Association with Deviant Peers | 15 |
| Externalizing Behavior (Delinquency) | 15 |
| Analytic Strategy | 15 |
| Results..... | 16 |
| Preliminary Correlations..... | 16 |
| Mediational Structural Equation Models | 17 |
| Discussion..... | 20 |
| Is Reactive Parenting Better than Nothing?..... | 21 |
| External Motivation | 22 |
| Early Adolescence May Be the Wrong Developmental Period..... | 23 |
| Measurement Bias..... | 24 |
| Limitations & Future Directions..... | 26 |
| Conclusion | 27 |
| References..... | 29 |
| Appendix..... | 43 |

LIST OF TABLES

| | |
|--|----|
| Table 1 Correlations and Descriptive Statistics for the study variables | 43 |
| Table 2 Results of a SEM with mother reported parenting variables and other child reported variables. | 44 |
| Table 3 Results of a SEM with father reported parenting variables and other child reported variables. | 45 |

LIST OF FIGURES

Figure 1 Results of a SEM run using the mother-reported parenting variables..... 46

Figure 2 Results of a SEM run using the father-reported parenting variables..... 47

Be Good for Goodness' Sake: Parenting Practices that Promote Value-Congruent Behavior During Adolescence

Adolescence is an important time for developing healthy patterns of behavior that will persist throughout the lifespan (National Academies of Sciences, Engineering, and Medicine, 2019). Scholars have written extensively on the subject of helping children participate in both positive behaviors (e.g., engagement in school and prosocial behavior) while limiting participation in risky behaviors (e.g., delinquency and association with deviant peers). The extant literature identifies various parenting practices that are effective at instilling behavioral patterns in adolescent children. One dimension of these parenting practices is that of timing. Timing refers to whether the parental socialization occurs before or after an opportunity presents itself to engage in positive behaviors or limit risky behaviors. When parents are proactive (i.e., socialize before the opportunity), past research has suggested that adolescents develop more patterns of value-congruent behavior (Padilla-Walker et al., 2012b) whereas reactive parenting (i.e., socializing in response to a missed opportunity) is usually less effective (Duncombe et al., 2012; McGillicuddy-De Lisi & Sigel, 1995). Additionally, according to Self-Determination Theory (Ryan & Deci, 2000; Deci & Ryan, 2000), all human beings have inherent needs of autonomy, competence, and relatedness and the degree to which parents meet those needs determines the effectiveness of a parenting strategy at promoting patterns of behavior (Joussemet et al., 2008; Roth & Assor, 2012). While all of these needs are important, the need for autonomy may be especially important during the period of adolescence when children are learning to navigate more sophisticated cognitive processes in preparation for adult roles and responsibilities (Steinberg & Morris, 2001). The first purpose of this study will be to look at direct effects

between different types of parenting strategies and value-congruent behaviors during adolescence.

While the association between parenting practices and behaviors has been well-established, much research remains to be conducted which determines the process underlying those associations. Further examination of Self-Determination Theory may help identify one such process. The authors of SDT suggest that all human beings need to (1) be given sufficient freedom for autonomous action, (2) feel and develop competence, and (3) engage in meaningful relationships. Further, they assert that when an individual is socialized in a way that meets these needs, they are more likely to develop an internalized system of values where they behave in value-congruent ways because they are motivated by an internal sense to be good rather than a motivation for external rewards (Grusec & Goodnow, 1994). Therefore, the second purpose of this study is to look at indirect effects of parenting practices on behaviors through the mechanism of values internalization.

Introduction

Parenting Predicts Behavior

Due to increased cognitive capacities for abstract reasoning (Piaget, 1970), adolescence is meant to be an important period of identity exploration (Luyckx et al., 2007; Marcia, 1966). This can be stressful for many parents who are trying to find the balance between control, which is healthy for children (Gerardy et al., 2015), and the autonomy that the adolescent craves (Froiland, 2011). When parents find this balance and practice autonomy-support their children typically show increased prosocial behavior (Roth, 2008), better emotional regulation (Brenning et al., 2015; Roth et al., 2019), and more positive reactions during discipline situations (Van Petegem et al., 2017). This is consistent with SDT because it suggests that when adolescents'

need for autonomy is met, optimal outcomes occur. One distinction between types of parenting that has been especially meaningful in helping children navigate their need for autonomy and establish healthy behavioral patterns is whether the socializing they receive from parents is proactive or reactive.

Proactive Parenting

Proactive parenting was first operationalized as whether a parent told their child beforehand that they would not be receiving a candy bar in the grocery store compared to reactive parenting which was waiting until the tantrum at the checkout counter (Holden, 1983). That has since been generalized to include any strategy that attempts to address misbehavior before it occurs, in other words, proactive parenting is anticipatory rather than reactive (Goodnow, 1997). Since then, various researchers have given evidence of the effectiveness of proactive parenting across the formative years (Chang et al., 2015; Gardner et al., 2007; Shelleby et al., 2012). Additionally, different content areas have attempted to identify subtypes of proactive parenting. While studies containing peers (Mounts, 2002), sexuality (Usher-Seriki et al., 2008), and media (Padilla-Walker et al., 2012a; Padilla-Walker et al., 2018), have used many different words, most studies share in common some form of a reasoning subtype and a sheltering subtype.

The reasoning subtype, referred to in this study as *proactive autonomy-support*, focuses on the importance of discussions which arm the child with defensive tactics against negative influences before misbehavior occurs (Goodnow, 1997). The sheltering subtype, referred to in this study as *proactive autonomy-restriction*, is characterized by a parent attempting to shelter a child from negative influences so as not to threaten values and influence behavior (Goodnow, 1997). An example of adolescent alcohol use may help to illustrate these different subtypes of

proactive parenting. A parent who engages in proactive autonomy-restriction would attempt to restrict their child from ever being in a situation where alcohol is present. This could mean not allowing the adolescent to engage in activities without adult supervision or forbidding them from going to parties where alcohol risk is high. A parent who engages in proactive autonomy-support might sit the child down sometime before going to the party, explain the risks of alcohol use, and practice or role-play how to say no in situations where alcohol is offered. The parent then needs to trust that the adolescent has the capabilities to resist alcohol use and an understanding of the consequences should they choose to drink alcohol. It can be challenging for many parents to allow their children to make their own decisions, especially when those decisions may be serious mistakes, but that freedom is essential to proactive autonomy-supportive parenting.

Proactive autonomy supportive approaches are consistently linked with positive moral outcomes (Padilla-Walker et al., 2011a), including lower levels of delinquency (Mounts, 2007) and drug-use (Mounts, 2002), less association with deviant peers (Soenens et al., 2009), and higher levels of prosocial behavior (Gerardy et al., 2015; Valentiner & Mounts, 2017). However, parental communication of disapproval can backfire when seen as a threat to autonomy (Tilton-Weaver et al., 2013) even when parental motivations are to support autonomy. Parents who use proactive autonomy-support typically report high levels of religiosity, attachment, involvement, and knowledge (Padilla-Walker et al., 2011a). Parental autonomy-restriction is usually most effective in childhood, possibly because once children enter adolescence, they start to spend more time with peers who introduce diverse influences outside the parents' control (Maunder & Monks, 2019), which could lead to lower parent-child relationship quality and influence the adolescents' perception that excessive control has occurred (Karmakar, 2015). During late childhood and adolescence, autonomy-restriction is negatively associated with adolescents'

internalization of parental rules (Soenens et al., 2009), negatively associated with prosocial behavior (Simpkins & Parke, 2002) and positively associated with deviant peer association (Keijsers et al., 2012; Soenens et al., 2007). Parents who use proactive autonomy-restriction typically value personal compliance from their children (Padilla-Walker & Thompson, 2005) and may also have lower levels of education and report high levels of religiosity and parental involvement (Padilla-Walker et al., 2011a).

Reactive Parenting

As shown, there is considerable evidence of the benefits of proactive parenting. However, in a practical world, proactive parenting is often not possible. Parents are regularly faced with situations in which they have to discipline their children and adolescents for misbehaviors that were not foreseen. Additionally, if all socialization occurred proactively, there would be no possibility of positive feedback that can be so key in promoting self-worth (Haimovitz & Corpus, 2011; Kamins & Dweck, 1999). Similar to proactive parenting, reactive parenting can also be split into a reasoning (i.e., autonomy-supportive) implementation and an autonomy-restrictive implementation.

The focus of reactive autonomy-supportive parenting is on parents' discussion of the consequences of the action/misbehavior from the point of view of the victim. In contrast, the reactive autonomy-restrictive implementation typically includes parental power-assertive or harsh discipline. Using the example of alcohol use above, if the adolescent comes home from the party having drunk alcohol, the parent has the choice to discipline in an autonomy-supportive way or in a controlling way. The parent who chooses to be autonomy-supportive may wait until the morning, and then start a discussion about the consequences of the action for the adolescent and for others that may get hurt due to their drinking. The goal here is to provide an opportunity

for the adolescent to express their reasons for drinking alcohol and to work together to come up with appropriate consequences for the misbehavior. The parent who chooses to be autonomy-restrictive may start yelling at the adolescent as soon as they come home with no opportunities for the adolescent to explain why they drank. When parents engage in this form of discipline, the emphasis is on the parent's dominance of the situation and on limiting the adolescent's contribution to the situation, thereby limiting the adolescent's opportunity to develop a deeper understanding of the reasoning behind the rules.

Reactive autonomy-support and reasoning is associated with greater development of a moral identity (Patrick & Gibbs, 2016), greater prosocial reasoning (Shen et al., 2013) and greater empathy (Eisenberg et al., 2015). On the other hand, reactive autonomy-restriction can be detrimental to children and adolescents by increasing depressive and anxious symptomology (Rodriguez et al., 2019). This may occur because the negative emotion present in the situation leads adolescents to be at such a heightened state of negative arousal (Merz et al., 2019) that they are unable to internalize the value-congruent message the parent is trying to express (McGillicuddy-De Lisi & Sigel, 1995). Similarly, there is evidence that negative parental emotional expressiveness is one of the strongest factors in predicting disruptive problem behavior (Duncombe et al., 2012). Taken together, empirical evidence suggests that similar to proactive techniques, reactive techniques are differentially effective based on whether they are autonomy-supportive or restrictive (Grusec & Goodnow, 1994; Patrick & Gibbs, 2012).

In both reactive and proactive parenting situations, providing developmentally appropriate autonomy allows adolescents opportunities to make decisions which prepare them for the transition to adulthood (Kakihara et al., 2010) by increasing their well-being and by helping them develop habits of value-congruent behaviors. However, a further examination of

SDT may provide an additional mechanism that facilitates the associations between parenting practices and behaviors.

Value Regulation as a Mediator

This paper has already mentioned that Self Determination Theory (SDT) outlines three inherent human needs (SDT; Ryan & Deci, 2000; Deci & Ryan, 2000). Research examining this theory has found that optimal adjustment occurs when an individual reports that their needs are met (e.g., Mabbe et al., 2018; Roth et al., 2019). Additionally, SDT also asserts that all human beings are motivated to perform any action somewhere along a spectrum from entirely extrinsic motivation to entirely intrinsic. The authors further assert that this spectrum can be separated into 4 different categories.

External regulation occurs when an individual is motivated out of fear of an external punishment or a promise of external rewards. *Introjected* regulation occurs when an individual receives pressure to conform to an authority figure's point of view. Both of these types are extrinsically motivated because the primary motivation is a result of compliance or control to an authority figure rather than acting from an internal moral compass. This produces an incongruence between the internal value system and the behavior—a behavior that will likely cease when the control disappears (Deci et al., 1999). Therefore, more permanent values transmission occurs when the motivation comes from the internal moral compass of the adolescent. *Identified* regulation is characterized by an individual accepting the value by recognizing the importance of the value or behavior. *Integrated* regulation is the most internalized form of regulation and is reached by recognizing that acting according to that value is important for maintaining one's current identity. This level is similar to *identified* in that both of them are acting according to intrinsic motivation, while the key difference is that an individual

that has achieved *integrated* regulation recognizes that this new value will help him or her achieve *personal*, not extrinsic, goals.

Past research has suggested that the ways in which parents meet, or fail to meet, their adolescents' needs in socialization situations influence the development of a specific regulation style (Soenens & Vansteenkiste, 2010; Yu et al., 2018). According to extant research, proactive autonomy-support shows some of the strongest associations with internalized values regulation styles (Padilla Walker et al., 2012b; Soenens et al., 2009), but proactive autonomy-restriction is commonly associated with lower internalization of parental rules and values (Soenens et al., 2009). Additionally, many parents attempt to teach values internalization during discipline (i.e., reactive) situations (McGillicuddy-De Lisi & Sigel, 1995). Reactive autonomy-support may be related to higher internalization of values but reactive autonomy-restriction is almost always associated with external motivation styles (Al-Dhamit & Kreishan, 2016; Gardner, 1989; Grusec & Goodnow, 1994). Whether reactive or proactive, autonomy-support is associated with higher internalization of values (Darling & Steinberg, 1993; Hardy et al., 2008; Joussemet et al., 2008).

Furthermore, past research also provides evidence that as individuals move from more externalized toward internalized regulation styles, that should be reflected in their value-congruent behavior (Padilla-Walker et al., 2012b), meaning that the adolescents will participate in more positive behaviors (e.g., engagement in school and prosocial behavior) while limiting participation in risky behaviors (e.g., delinquency and association with deviant peers).

Adolescents who are engaged at school have less time to get involved with deviant peers (Moses & Villodas, 2017; Wang et al., 2018), have better self-regulation and adjustment (Stefansson et al., 2018) and are more prepared for the transition to adulthood (Salmela-Aro & Tynkkynen, 2010). Intrinsic motivation has been consistently associated with prosocial behavior toward

various targets (for a review, see Hertz & Krettenauer, 2016) including family members (Padilla-Walker et al., 2012b) and strangers (Gerardy et al., 2015). Because motivations to engage in prosocial behavior may differ by target (Nielsen et al., 2017), this study will use strangers because fewer relationship factors provide confounding motivations. There is also evidence that association with deviant peers is linked with delinquency (Mounts & Steinberg, 1995) and greater risk of substance abuse (Price et al., 2019), but adolescents with an internalized value system are less likely to associate with deviant peers (Oxford et al., 2001; Simons et al., 2004; Telzer et al., 2014) or be frequently engaged in delinquency (Chen & Kaplan, 1997). Clearly, values internalization plays a big part in the motivation of value-congruent behaviors during adolescence. Taken together, it appears that both parent influences and values internalization may influence behavioral patterns. Because parent influences also contribute to the development of values internalization, there may be both direct and indirect effects present in the relations between parenting influences and value-congruent behaviors such as school engagement, prosocial behavior, deviant peer association, and delinquent behavior.

The Current Study

Taken together, there is much work suggesting that parents play an important role in helping adolescents develop healthy habits of value-congruent behavior. However, few studies have examined the differential impact that proactive and reactive parenting may have on these behavioral patterns. Additionally, few studies have examined possible mechanisms for these associations. According to SDT, when parents socialize their children in a way that meets their inherent human needs, they help their children develop an internalized value system which may help explain the associations between parenting and behaviors. Therefore, the purpose of the current study is two-fold. First, to compare the relative effectiveness of the different types of

parenting practices at promoting value congruent behavior such as academic engagement and prosocial behavior while limiting risky behaviors such as delinquency and association with deviant peers. Second, to examine whether an inclusion of value regulation practices helps to further explain the associations between parenting and adolescent behavior. Based on previous research, the following research questions and hypotheses were formed:

RQ1: Is proactive or reactive parenting more effective at promoting values congruent behavior?

RQ2: Does separating into autonomy-supportive and reactive provide additional insights into these associations?

RQ3: Does inclusion of value regulation help to further explain the associations between parenting practices and behaviors?

H1: Proactive parenting will be positively associated with prosocial behavior and school engagement, but negatively associated with deviant peer association and delinquent behavior.

Reactive parenting will be the opposite.

H2: Autonomy-supportive implementations of proactive and reactive parenting will be positively associated with prosocial behavior and school engagement, but negatively associated with deviant peer association and delinquent behavior. Autonomy-restrictive implementations will be the opposite.

H3A: Values regulation styles will serve as mediators to help explain the associations between parenting and behavior.

Specifically, proactive and autonomy-supportive practices will be

positively associated with integrated and identified value regulation and negatively associated with introjected and external value regulation. Reactive parenting and autonomy-restrictive implementations will be the opposite.

H3B: Integrated and Identified value regulation will be positively associated with school engagement and prosocial behavior, but negatively associated with deviant peer association and delinquent behavior. The direction of the associations will be opposite for external and introjected value regulation.

Methods

Participants

The participants for this study were taken from Waves 3, 4, and 5 of the Flourishing Families Project (FFP), which is a longitudinal study of inner family life with waves taken approximately one year apart. Analysis will start at wave 3 because that is when values measures were introduced, and subsequent waves will be used to investigate the long-term effects of parent influences on the development of values internalization and behavioral patterns. The current sample will consist of 500 families with an adolescent child (67.7% two-parent families and 32.3% single-parent families) from the Northwestern United States. Participant children averaged 13.89 years of age at Wave 3, and were 50.9% female and 48.7% male, with mothers averaging 44.13 years in age and fathers 46.2 years. 70.4% families were of European American ethnicity, 12.7% were African American, with smaller number for Hispanics (1.04%) and Asian Americans (2.9%). 7.9% families are considered multi-ethnic in nature, based on a combination

of two or more ethnic cultures among family members. In terms of parental education, 69.9% of mothers and approximately 68% of fathers had a bachelor's degree or higher.

Procedure

Participant families for the FFP were selected from a Northwestern city in the United States and were interviewed during the first eight months of 2007 for Time 1. At Time 1, all families were contacted directly using a multi-stage recruitment protocol. Of the 692 eligible families contacted, 423 agreed to participate, resulting in a 61% response rate. For more information regarding participant selection, please see (Padilla-Walker et al., 2011b). At each wave of data collection, interviewers visited the family's home and conducted an assessment interview that included video-taped interactions (not used in current study), as well as questionnaires that were completed in the home (participants were encouraged to complete questionnaires in separate rooms and not to discuss answers during administration). Both parents and children completed informed consent documents at the start of each in-home visit, and the project was approved by the institutional review board at the university from which the research originated.

Measures

Proactive Parenting

Six items of a 9-item measure were used to assess proactive parenting (Padilla-Walker & Thompson, 2005). 3 items were used to operationalize proactive autonomy-support and 3 items were used to operationalize proactive autonomy-restriction. Sample questions include, "How often do you talk to your child about rules in order to avoid misbehavior before it occurs?" (proactive autonomy-support) and "How often do you shelter your child from influences that might be negative in order to avoid misbehavior before it occurs?" (proactive autonomy-restrictive). Responses were based on a 5-point Likert scale ranging from 1 (*never*) to 5 (*very*

often). Higher scores indicate higher frequency of proactive parenting on each separate subscale. These scales will be modeled as latent variables, and thus factor loadings will be given in results section.

Reactive Parenting

Discipline strategies utilized by parents were measured using a combination of items from two different scales. Reactive autonomy-restriction was measured using three items adapted from the Dimensions of Discipline Inventory (Straus & Fauchier, 2007) and reactive autonomy-support was measured using three items taken from the inductive discipline subscale of the Parenting Styles and Dimensions Questionnaire Short Version (PSDQ, Robinson et al., 2001). Sample items included, “How often do you take away your child’s allowance or other privileges (e.g., phone, video games) because of misbehavior?” (reactive autonomy-restriction) and while three items assessed autonomy-supportive discipline and a sample item includes and “How often do you help your child to understand the impact of behavior by encouraging your child to talk about the consequences of his/her own actions?” Responses from both scales were based on a 5-point Likert scale ranging from 1 (*never*) to 5 (*always*). Higher scores indicate higher frequency of reactive parenting on each subscale. These scales will be modeled as latent variables, and thus factor loadings will be given in results section. analysis is included.

Internalization of Values

The different sources of motivation for adolescent values internalization were assessed using items drawn from the SRQ-A (Grolnick et al., 1997). Participants responded to 20 items about their motivations to succeed in school, be nice, be honest, avoid drugs and drinking, and choose good friends. Responses were collected using a 4-point Likert scale ranging from 1 (*not at all true*) to 4 (*very true*). Four subscales were present, and each subscale was created using 5

items. Sample items from each of the subscales included external (“I try to do well in school because I will get in trouble if I don't do well.”), introjected (“I try to do well in school because my parents will be disappointed if I don't do well.”), identified (“I try to do well in school because I enjoy doing my school work.”), and integrated (“I try to do well in school because it's important to me to try to do well in school.”). Cronbach's Alpha coefficients were computed at each wave, including wave 3 (range: 0.70 – 0.78), wave 4 (range: 0.65 – 0.81).

School Engagement

The child's level of behavioral functioning at school, including his/her ability to get homework done and behave appropriately was measured using a 9-item modified version of a school engagement scale (Fredericks et al., 2004). Respondents were asked the degree to which they agreed or disagreed with items such as “I pay attention in class” and “I am interested in the work at school.” Responses ranged from 1 (strongly disagree) to 5 (strongly agree). Higher scores reflect greater ability to focus and get homework done. Cronbach's Alpha coefficients were computed at both wave 4 ($\alpha = 0.85$) and wave 5 ($\alpha = 0.85$).

Prosocial Behavior

Children's prosocial behavior was measured using 9 items based on the Inventory of Strengths (Peterson & Seligman, 2004). The measure assesses prosocial behavior directed toward others/strangers (9 items, a modified version of the Peterson and Seligman original measure). Respondents answered on a 5-point Likert-type scale, ranging from 1 (*not like me at all*) to 5 (*very much like me*) in terms of how much they disagreed or agreed with statements about themselves. Sample statements included, “I help people I don't know, even if it is not easy for me,” and “I voluntarily help my neighbors.” These and other questions were adapted to apply to their actions toward friends and family as well. Higher scores indicate greater levels of

kindness and generosity toward strangers. Cronbach's Alpha coefficients were computed at both wave 4 ($\alpha = 0.85$) and wave 5 ($\alpha = 0.85$).

Association with Deviant Peers

Associations with deviant peers was measured with an 11-item measure adapted from Elliott and colleagues (1985). Youth reported on how many of their friends participate in delinquent behaviors such as "Purposely damage or destroy property" and "Get in fights at school." Responses range on a 5-point Likert-type scale from 1 (*none of my friends*) to 5 (*all of my friends*), with higher scores indicating higher levels of deviant behavior. Cronbach's Alpha coefficients were computed at both wave 4 ($\alpha = 0.90$) and wave 5 ($\alpha = 0.90$).

Externalizing Behavior (Delinquency)

Externalized problem behavior was measured using delinquency-related items (Barber et al., 2005). Sample items include: "I lie or cheat" and "I steal things from places other than home." Responses ranged from 0 (not true) to 2 (often true), with higher scores representing higher levels of delinquent behavior. There is extensive evidence of both reliability and validity of this measure, and there is evidence that this scale has cross-ethnic equivalence (Krishnakumar et al., 2003). Cronbach's Alpha coefficients were computed at both wave 4 ($\alpha = 0.77$) and wave 5 ($\alpha = 0.82$).

Analytic Strategy

In order to test the direct and indirect hypotheses outlined above, a structural equation model will be used. Each of these models will be run separately for mother-reported parenting behaviors and father-reported parenting behaviors. It should also be noted that all the parenting behaviors are parent-report and the values and behavioral items are adolescent report. First, Pearson correlations will be calculated to look at preliminary associations. Then, in order to

assess longitudinal indirect effects, the study variables will be placed in a longitudinal structural equation modelling (SEM) framework. The parenting variables were reported at wave 3, the value regulation items were reported at wave 4 and all associations control for value regulation at wave 3, the behavior items are similar in that associations were tested at wave 5, after controlling for reports of behavior given at wave 4.

Results

Preliminary Correlations

The first step in my analysis was to use Pearson correlations to examine preliminary associations between study variables. These correlations can be seen in table 1 along with means and standard deviations for study variables. For the direct paths between parenting variables at wave 3 and behavior at wave 5, it is of note that maternal proactive autonomy-supportive parenting was positively associated with delinquent behavior (P1: $r = .13, p < .01$) and proactive autonomy-restrictive parenting was negatively associated with prosocial behavior (P1: $r = -.10, p < .05$). Additionally, reactive autonomy-restrictive parenting was positively associated with deviant peer association (P1: $r = .27, p < .001$; P2: $r = .22, p < .001$) and delinquent behavior (P1: $r = .21, p < .001$; P2: $r = .25, p < .001$) but negatively associated with school engagement (P1: $r = -.25, p < .001$; P2: $r = -.22, p < .001$) and prosocial behavior (P2: $r = -.15, p < .01$). Furthermore, paternal reactive autonomy-supportive parenting was positively associated with deviant peer association (P2: $r = .14, p < .05$) and delinquent behavior (P2: $r = .13, p < .05$), but negatively associated with school engagement (P2: $r = -.12, p < .05$).

For the associations between the parenting variables at wave 3 and value regulation at wave 4, there were also various significant correlations. Namely that proactive autonomy-supportive parenting was negatively associated with introjected motivation (P1: $r = -.11, p < .05$)

while reactive autonomy-restrictive parenting was negatively associated with extrinsic (P1: $r = -.13, p < .01$; P2: $r = -.22, p < .001$) and introjected (P1: $r = -.21, p < .001$; P2: $r = -.17, p < .01$) value regulation.

There were also multiple correlations between the value regulation items at wave 4 and behaviors at wave 5. Specifically, extrinsic regulation was positively associated with prosocial behavior ($r = .25, p < .001$) and school engagement ($r = .24, p < .001$), but negatively associated with deviant peer association ($r = -.35, p < .001$) and delinquent behavior ($r = -.41, p < .001$). Introjected regulation was also positively associated with prosocial behavior ($r = .37, p < .001$) and school engagement ($r = .39, p < .001$), but negatively associated with deviant peer association ($r = -.42, p < .001$) and delinquent behavior ($r = -.46, p < .001$). Identified motivation was negatively associated with deviant peer association ($r = -.12, p < .01$) and delinquent behavior ($r = -.17, p < .05$). Integrated motivation was positively associated with prosocial behavior ($r = .11, p < .05$) and negatively associated with deviant peer association ($r = -.17, p < .001$) and delinquent behavior ($r = -.21, p < .01$).

Mediational Structural Equation Models

The first step in the structural equation model was to run a confirmatory factor analysis (CFA) to determine the latent variable structure of the parenting variables. Results of the CFA are consistent with theory for the fathers but also suggest that maternal proactive autonomy-supportive and proactive autonomy-restrictive may, in this sample, represent more similar constructs than previous theory would suggest. Therefore, these two constructs were combined in the model containing the maternal reports. Additionally, in order to properly estimate the latent variables in this sample, it was necessary to use Bayesian estimation which allowed me to constrain all other cross-loadings to be near zero (not exceeding .02).

After establishing a measurement model, the study variables were put into a Structural Equation Modelling framework in Mplus. The structure of the model was longitudinal mediational, meaning that I specified direct paths between the latent parenting variables at wave 3 and the reported behaviors at wave 5, with stability paths from the reported behaviors at wave 4. I also specified indirect effects from the latent parenting variables to the behaviors through the styles of value regulation at wave 4, with stability paths from the value regulation styles at wave 3. Model fit with Bayesian estimation is not as frequently discussed as with full information maximum likelihood estimation, including only one indicator of model fit, called the Posterior Predictive P-Value (PPP), which should be above .05, however, this indicator is directly linked to sample size and is similar to a Chi-square estimate of model fit (Muthén & Asparouhov, 2012). Ideally, the Chi-square value would be non-significant, but it commonly is not (Hu & Bentler, 1999). The models used in this study were not able to achieve adequate model fit (i.e., $PPP > .05$), and although this is a limitation of the generalizability of these results, the models may still be of value since the PPP is generally a bad indicator of model fit at large sample size (Cain & Zhang, 2019). The parenting variables were reported at wave 3, the value regulation items were reported at wave 4 and all associations control for value regulation at wave 3, the behavior items are similar in that associations were tested at wave 5, after controlling for reports of behavior collected at wave 4.

The results of the structural equation models can be found in the tables and figures (Mother: Figure 1 & Table 2; Father: Figure 2 & Table 3). In response to hypothesis 1 and 2 regarding direct associations between parenting styles and behaviors, there was mixed support. First of all, there were no significant associations with proactive parenting. However, in support of hypothesis 1, reactive parenting practices were positively associated with delinquency,

specifically maternal autonomy-restrictive ($\beta = .15, p < .001$), paternal autonomy-supportive ($\beta = .19, p < .01$), and paternal autonomy-restrictive ($\beta = .13, p < .05$). Furthermore, reactive parenting practices were also negatively associated with school engagement, specifically maternal reactive autonomy-restrictive ($\beta = -.14, p < .01$) and paternal reactive autonomy-supportive ($\beta = -.20, p < .01$). Finally, paternal reactive autonomy-supportive parenting was associated with an increase in deviant peer association ($\beta = .22, p < .05$), but contrary to hypothesis 1 and 2, maternal reactive autonomy-restrictive parenting was negatively associated with deviant peer association. These findings provide evidence that the timing of the parenting (i.e., reactive) has a stronger influence on adolescents' behavioral habits than whether the parenting was done in an autonomy-supportive or restrictive way.

In response to Hypothesis 3A which predicted associations between parenting practices and values regulation, there was also mixed support. In support of this hypothesis, paternal reactive autonomy-restrictive parenting was associated with lower integrated motivation. However, contrary to this hypothesis, reactive autonomy-restrictive parenting practices were associated with decreases in external (P1: $\beta = -.12, p < .05$; P2: $\beta = -.12, p < .05$) and introjected regulation styles ($\beta = -.27, p < .01$) instead of increases; this will be explored below. Although there were significant paths that may suggest mediation, when these associations were tested using the IND command in Mplus, there was not significant mediation. It should also be noted that bootstrapping was not used since it is not required for Bayesian estimation (Yuan & MacKinnon, 2009).

In response to Hypothesis 3B, which predicted associations between values regulation and behavior, no associations supported my hypothesis. However, contrary to my hypothesis, external regulation was negatively associated deviant peer association ($\beta = -.12, p < .05$) and

delinquency ($\beta = -.12, p < .01$). Additionally, introjected regulation was positively associated with school engagement and negatively associated with deviant peer association. These results were also good news because they provide evidence that even external motivation styles may be associated with positive behavioral habits during adolescence.

In addition to the study variables, all paths controlled for demographic characteristics including age, gender, race, and income, and a stability path (i.e., the outcome measure measured at a previous wave). These paths suggested that being younger was associated with a drop in delinquent behavior ($\beta = -.08, p < .05$), but being older was associated with higher values of identified regulation ($\beta = .14, p < .001$). Being male, compared to being female, was associated with decreases in integrated regulation ($\beta = -.13, p < .01$) and prosocial behavior ($\beta = -.08, p < .05$) and being white, compared to all other races, was associated with greater introjected regulation ($\beta = .09-11; p < .05$). It should also be noted that in every model run, the stability path always had the strongest effect on the outcome variable and can be seen in tables 3 and 4.

Discussion

The purpose of the current study was to examine the impact of proactive and reactive parenting practices on adolescent behaviors and explore the mechanism of values regulation to further explain those associations. Results of the current study partially supported study hypotheses, but overall, there were few findings compared to what was hypothesized and no indirect effects were found in the models. According to previous literature, proactive parenting should be related to many of the behaviors and values included in the model, but no significant associations were found. The main finding was that reactive parenting (both autonomy supportive and restrictive) had a consistent significant association with adolescents' values and behaviors, suggesting that perhaps parental timing is more salient than autonomy supportive vs.

reactive parenting. Furthermore, there were two key findings that were contrary to hypotheses. Namely that (1) reactive and autonomy-restrictive parenting strategies were associated with decreases in external motivations and (2) external motivation protected children from getting involved with deviant peers and delinquency. Interpretation of these findings, as well as suggestions for why hypotheses might not have been supported will be discussed in turn.

Is Reactive Parenting Better than Nothing?

One of the primary purposes of this study was to compare proactive parenting practices with reactive parenting practices during adolescence. Unfortunately, the statistical findings did not support any relations between proactive parenting and adolescent values or behaviors, but the findings for reactive parenting were quite interesting. Both maternal and paternal reactive parenting were associated with increases in delinquent behavior and decreases in school engagement. There was also an interesting discrepancy between maternal reactive parenting, which was associated with decreases in deviant peer association and paternal reactive parenting, which was associated with increases in deviant peer association. In addition, paternal reactive parenting was associated with lower levels of intrinsic values regulation. Taken together, these findings are consistent with previous literature suggesting that reactive parenting is associated with lower intrinsic motivation (Grusec & Goodnow, 1994) and disruptive behavior (Duncombe et al., 2012). However, the results were confusing because most of the literature suggests the autonomy-supportive reactive parenting is usually positive but harsh discipline is negative (Patrick & Gibbs, 2016). In this study, the associations between paternal *autonomy-restrictive* (i.e., controlling or harsh) parenting and negative child outcomes was positive and consistent with theory, but in the mother-reported model, the links between parenting and negative child outcomes were significant for the *autonomy-supportive* measures. This suggests that even when

done in an autonomy-supportive way, maternal reactive parenting will still be associated with negative consequences, possibly because during this period, too much autonomy support from mom may look like permissive parenting (Denham et al., 2000) but future research should examine the disparity found between mothers and fathers. Previous literature has suggested that although extremely common (McGillicuddy-De Lisi & Sigel, 1995), reactive parenting may be less effective at changing adolescent behavior because of the emotional stress present in discipline situations (Merz et al., 2019), especially when the child perceives little to no control over the discipline situation and circumstances (Rodriguez et al., 2019) because children typically view parents as more restrictive than parents see themselves (du Bois-Reymond & Ravestloot, 1996). Given the current study used parent-reports of parenting instead of child reports, it is possible that parental perception of autonomy support was still interpreted by the adolescent child as controlling, and thus associated longitudinally with negative behavioral outcomes.

External Motivation

There were also two findings that contradicted my hypothesis which need more in-depth examination. Hypothesis 3A predicted that reactive and autonomy-restrictive forms of parenting would be positively associated with external forms of motivation (i.e., motivation due to rewards/punishments or obedience to authority figures). This hypothesis was based on Self Determination Theory which states that when parents meet their adolescents' inherent need for autonomy, that adolescent will have more internalized value regulation (Deci & Ryan, 2000). However, results from the current study showed that reactive and autonomy-restrictive forms of parenting were negatively associated with external value regulation. One likely explanation is that parents who report engaging in restrictive or autonomy-supportive parenting are inconsistent

(Gardner, 1989) or the situations are filled with such high levels of negative emotional valence (Duncombe et al., 2012; Merz et al., 2019) that adolescents cease to be motivated by rewards or parental approval because they do not trust that proper behavior will earn them anything. Further research should explore this finding to further examine the difference between effective, harsh, and inconsistent discipline. Another possible explanation for this finding is that during early adolescence, control is good because it keeps children from making bad decisions they were too young to handle (Borca et al., 2017), but as adolescents grow up and their need for autonomy increases (Deci & Ryan, 2000), this control will backfire. This line of reasoning helps to explain the other contradictory finding.

The second finding which contradicted hypothesis 3B showed that external motivation was associated with lower reported deviant peer association and delinquency. In the short term, this is good news because limiting these behaviors keeps adolescents safe, however the issue with parents focusing on just behavioral obedience is that the behavior might stop when the reinforcement (i.e., the reward stops or the parent/authority figure is no longer present; Bandura, 1977; Deci et al., 1999). Further studies should examine what parents can do to support their children as they become autonomous adults (Borca et al., 2017) that choose to make the right decision simply because it is right, in other words, they will be good for goodness' sake.

Early Adolescence May Be the Wrong Developmental Period

Although previous literature suggested strong support for the hypotheses of this study, the findings of the current study were unable to detect associations significantly different from chance, especially for the proactive parenting measures. This was true in both the correlations and in the results of the structural equation model. One explanation for the limited number of associations is that the constructs measured in this study are not related. Given the sizable

theoretical and empirical body of extant research on the subject (e.g., Padilla-Walker & Son, 2019; Segrin & Flora, 2019), that is unlikely. Another explanation may be that adolescence is the wrong developmental period to study the constructs in question.

For example, the current study suggested that the associations between parenting and the behaviors used in this study typically have small effect sizes (Hoeve et al., 2009; Piquart, 2016) possibly because too much autonomy-support during early adolescence may be associated with negative outcomes (Padilla-Walker et al., 2011b), possibly because without sufficient preparation (Denham et al., 2000), autonomy-support may look like permissive parenting. This may be especially true in samples where the rates of the negative behaviors (e.g., deviant peer association and delinquency) have such low rates (see table 1). Therefore, future research should examine the influence of parenting when the adolescents are actually engaging in the behaviors of interest, perhaps during later adolescence and into emerging adulthood.

Additionally, although the behaviors in the study may manifest at later ages, much of the value internalization may have already occurred by this period and should be examined earlier. For example, much of the research detailing the process of developing internalized motivation shows that internalization occurs in early childhood (Brannon, 2008; Habenicht, 1994; Kochanska, 1994) and thus it may be difficult to detect meaningful changes in values regulation during the ages measured in the current study. Taken together, there may be developmental reasons which explain the limited associations identified in this study. However, there were also significant measurement biases which further limit the results of this study.

Measurement Bias

The second explanation for the limited number of associations in this study is measurement error. While this may be an issue with all research, it is especially relevant for this study. One of

the biggest unique contributions of this study was to compare constructs that had not previously been compared, but that created a problem in finding established scales that measured all the constructs of interest. Therefore, the two different constructs for reactive parenting (autonomy-supportive and autonomy-restrictive) were measures using specific items from two different established scales. (Robinson et al., 2001; Straus & Fauchier, 2007). Although this decision was made based on theoretical understanding and the items appeared to generally load well, a more developed and validated scale of reactive parenting would have strengthened the measurement used in this paper considerably.

Furthermore, the proactive parenting measures also had considerable issues that changed the analysis. The first issue was that although the measure of proactive parenting was developed to show separate constructs (Padilla-Walker & Thompson, 2005), in this sample, the different measures of proactive parenting had such high cross-loadings that a different type of analysis (i.e., Bayesian) and factor structure (combining maternal autonomy-supportive and autonomy-restrictive) was necessary to reliably estimate the SEM parameters. Given the wide range of research showing that autonomy-supportive and autonomy-restrictive proactive parenting are separate constructs (e.g., Keijsers et al., 2012; Valentiner & Mounts, 2017), the results of this study are surprising and inconsistent with theory. Previous research has also suggested that this scale may be better used to create profiles of parents (Padilla-Walker et al., 2012) and thus future research should explore different ways of measuring and categorizing proactive parenting practices for more accurate measurement.

The final issue of measurement relates to the items used in all of the parenting scales. While the intention in using these items was to measure general proactive and reactive parenting, it may be useful in future research to use measures that specifically measure proactive and reactive

parenting related to the variables of interest. For example, if the endogenous variable relates to values or behaviors, the parenting measures would contain questions that specifically ask about socialization of values and behaviors. While it may be more difficult to find measures that are that specific, the goodness of fit between operationalizations may provide valuable and reliable insights to the current body of literature.

Limitations & Future Directions

Although there are many strengths to the current study, there are a few limitations that are important to note in the validity and generalizability of this research. The biggest problem with this research is that the sample contains a higher proportion of white individuals than the current national average (i.e., 70.4% rather than 60.4%) as well as a higher proportion of well educated individuals (~70% hold a bachelor's degree or higher). This limits the generalizability of these results to more ethnically diverse and lower education and income populations. This may be especially relevant to the current study because well-adjusted populations are typically less involved in the risky behaviors (Forehand & Kotchick, 2016; Smith & Krohn, 1995) such as those measured in the study. Additionally, much of the change this study tried to predict may not have been detectable in a population where the family circumstances are so stable. Another limitation is that the current study only measured one socializing influence, but past research has suggested that adolescence is a period where peers (Laursen & Collins, 2009) and media (Lauricella et al., 2016; Rideout, 2016) play a key role in shaping adolescents' values and behaviors. Therefore, future studies should examine more at-risk populations and include more socializing influences to paint a more complete picture of the development of adolescent values and behaviors.

An additional limitation of this research is that the hypothesis suggested a unidirectional process but the underlying processes are likely bidirectional. For instance, it is possible that adolescents are choosing behaviors, which influences their value regulation style, and forces the parents to participate in more reactive parenting. By definition, because proactive parenting presumably comes before the misbehavior, there is a theoretical argument for the unidirectional process, but bidirectionality in all family processes should be considered when conducting a correlational study design. Additionally, parents engaging in proactive and value regulated teaching may be difficult to detect over time. Specifically, questionnaires usually contain self-report and social desirability biases, and that is especially true when asking questions related to parenting, values, and behaviors. Therefore, when asking parents about how they do something, or asking children about how true statements about their values and behaviors are, the participants might respond about their general perception, but a more specific measurement could be useful in detecting these processes. Future research should use various methodologies, including daily diaries, to capture these microprocesses that questionnaires and 3-year longitudinal cannot capture.

Conclusion

The purpose of this research was to dive deeper into the processes involved in helping adolescents develop healthy patterns of behavior that will prepare them to taken on adult roles and responsibilities. Specifically, does the measurement of values regulation help to explain the associations between parenting practices and behaviors? Although many of the hypotheses given in this research were not supported and there are various methodological flaws in this study, the results can still be used to help parents and researchers develop understanding regarding adolescents. Specifically, that parents should be especially cautious of using reactive parenting

practices during adolescence because those practices are associated with increases in delinquency and deviant peer association. Additionally, parents and researchers should continue to look at children and adolescents across development to understand the processes underlying values regulation and behavioral pattern using varied and strong methodologies to help families know how to prepare their children to navigate the challenges of adolescence and prepare for adulthood.

References

- Al-Dhamit, Y., & Kreishan, L. (2016). Gifted students' intrinsic and extrinsic motivations and parental influence on their motivation: From the self-determination theory perspective. *Journal of Research in Special Educational Needs, 16*(1), 13-23. doi:10.1111/1471-3802.12048
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.
- Barber, B. K., Stolz, H. E., Olsen, J. A., & Maughn, S. L. (2005). Parental support, psychological control, and behavioral control: Assessing relevance across time, culture, and method. *Monographs of the Society for Research in Child Development, 70*(4).
- Borca, G., Rabaglietti, E., Roggero, A., Keller, P., Haak, E., & Begotti, T. (2017). Personal values as a mediator of relations between perceived parental support and control and youth substance use. *Substance Use & Misuse, 52*(12), 1589–1601. <https://doi-org.erl.lib.byu.edu/10.1080/10826084.2017.1293103>
- Brannon, D. (2008). Character education: It's a joint responsibility: Instilling positive character traits in children requires teachers, parents, and administrators to work together. *Kappa Delta Pi Record, 44*(2), 62-65.
- Brenning, K., Soenens, B., Van Petegem, S., & Vansteenkiste, M. (2015). Perceived maternal autonomy support and early adolescent emotion regulation: A longitudinal study. *Social Development, 24*(3), 561–578. <https://doi.org/10.1111/sode.12107>
- Cain, M. K., & Zhang, Z. (2019). Fit for a Bayesian: An evaluation of PPP and DIC for structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal, 26*(1), 39-50.

- Chang, H., Shaw, D. S., Dishion, T. J., Gardner, F., & Wilson, M. N. (2015). Proactive parenting and children's effortful control: Mediating role of language and indirect intervention effects. *Social Development, 24*(1), 206–223. doi:10.1111/sode.12069
- Chen, Z., & Kaplan, H. B. (1997). The impact of family structure during adolescence on deviance in early adulthood. *Deviant Behavior, 18*(4), 365–391.
<https://doi.org/10.1080/01639625.1997.9968067>
- Darling, N., & Steinberg, L. (1993). Parenting style as context: An integrative model. *Psychological Bulletin, 113*, 487-496. <http://dx.doi.org/10.1037//0033-2909.113.3.487>
- Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin, 125*(6), 627.
- Deci, E. L., & Ryan, R. M. (2000). The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227-268.
doi:10.1207/S15327965PLI1104_01
- Denham, S. A., Workman, E., Cole, P. M., Weissbrod, C., Kendziora, K. T., & Zahn-Waxler, C. (2000). Prediction of externalizing behavior problems from early to middle childhood: The role of parental socialization and emotion expression. *Development and Psychopathology, 12*(1), 23–45. <https://doi.org/10.1017/S0954579400001024>
- du Bois-Reymond, M., & Ravesloot, J. (1996). The roles of parents and peers in the sexual and relational socialization of adolescents. In K. Hurrelmann & S. F. Hamilton (Eds.), *Social problems and social contexts in adolescence: Perspectives across boundaries* (pp. 175-197). Hawthorne, NY, US: Aldine de Gruyter.

- Duncombe, M. E., Havighurst, S. S., Holland, K. A., & Frankling, E. J. (2012). The contribution of parenting practices and parent emotion factors in children at risk for disruptive behavior disorders. *Child Psychiatry and Human Development, 43*(5), 715–733. <https://doi.org/10.1007/s10578-012-0290-5>
- Eisenberg, N., VanSchyndel, S. K., & Hofer, C. (2015). The association of maternal socialization in childhood and adolescence with adult offsprings' sympathy/caring. *Developmental Psychology, 51*(1), 7–16. <https://doi.org/10.1037/a0038137>
- Elliott, D. S., Huizinga, D., & Ageton, S. (1985). *Explaining delinquency and drug use*. Beverly Hills, CA: Sage.
- Forehand, R., & Kotchick, B. A. (2016). Cultural diversity: A wake-up call for parent training—republished article. *Behavior Therapy, 47*(6), 981-992.
- Fredericks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*, 59-109.
- Froiland, J. M. (2011). Parental autonomy support and student learning goals: A preliminary examination of an intrinsic motivation intervention. *Child & Youth Care Forum, 40*(2), 135–149. <https://doi.org/10.1007/s10566-010-9126-2>
- Gardner, F. E. M. (1989). Inconsistent parenting: Is there evidence for a link with children's conduct problems? *Journal of Abnormal Child Psychology, 17*, 223-233.
- Gardner, F., Shaw, D. S., Dishion, T. J., Burton, J., & Supplee, L. (2007). Randomized prevention trial for early conduct problems: Effects on proactive parenting and links to toddler disruptive behavior. *Journal of Family Psychology, 21*(3), 398–406. [doi:10.1037/0893-3200.21.3.398](https://doi.org/10.1037/0893-3200.21.3.398)

- Gerardy, H., Mounts, N. S., Luckner, A. E., & Valentiner, D. P. (2015). Mothers' management of adolescent peer relationships: Associations with aggressive, prosocial, and playful behavior. *Journal of Genetic Psychology, 176*(5), 299–314.
doi:10.1080/00221325.2015.1066746
- Goodnow, J. J. (1997). Parenting and the transmission and internalization of values: From social-cultural perspectives to within-family analyses. In J. E. Grusec & L. Kuczynski (Eds.), *Parenting and children's internalization of values: A handbook of contemporary theory* (p. 333–361). John Wiley & Sons Inc.
- Grolnick, W. S., Deci, E. L., & Ryan, R. M. (1997). Internalization within the family: The self-determination theory perspective. In J. E. Grusec & L. Kuczynski (Eds.), *Parenting and children's internalization of values: A handbook of contemporary theory* (pp. 135-161). Hoboken, NJ: Wiley.
- Grusec, J. E., & Goodnow, J. J. (1994). Impact of parental discipline methods on the child's internalization of values: A reconceptualization of current points of view. *Developmental Psychology, 30*(1), 4-19. doi:10.1037/0012-1649.30.1.4
- Habenicht, D. J. (1994). *How to Help Your Child Really Love Jesus: Practical Suggestions for Instilling Spiritual Values*. Review and Herald Pub Association
- Haimovitz, K., & Corpus, J. H. (2011). Effects of person versus process praise on student motivation: Stability and change in emerging adulthood. *Educational Psychology, 31*(5), 595–609. <https://doi.org/10.1080/01443410.2011.585950>
- Hardy, S. A., Padilla-Walker, L., & Carlo, G. (2008). Parenting dimensions and adolescents' internalisation of moral values. *Journal of Moral Education, 37*(2), 205-223.
doi:10.1080/03057240802009512

- Hertz, S. G., & Krettenauer, T. (2016). Does moral identity effectively predict moral behavior?: A meta-analysis. *Review of General Psychology, 20*(2), 129–140.
doi:10.1037/gpr0000062
- Hoeve, M., Dubas, J. S., Eichelsheim, V. I., Van der Laan, P. H., Smeenk, W., & Gerris, J. R. (2009). The relationship between parenting and delinquency: A meta-analysis. *Journal of Abnormal Child Psychology, 37*(6), 749–775.
- Holden, G. W. (1983). Avoiding conflict: Mothers as tacticians in the supermarket. *Child Development, 54*(1), 233–240. <https://doi.org/10.2307/1129881>
- Hu, L. T., & Bentler, P. M. (1999). Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives, structural equation modelling. *Ref. Bibliográfica, 237*.
- Joussemet, M., Landry, R., & Koestner, R. (2008). A self-determination theory perspective on parenting. *Canadian Psychology-Psychologie Canadienne, 49*, 194e200.
<http://dx.doi.org/10.1037/a0012754>.
- Kakihara, F., Tilton-Weaver, L., Kerr, M., & Stattin, H. (2010). The relationship of parental control to youth adjustment: Do youths' feelings about their parents play a role? *Journal of Youth and Adolescence, 39*(12), 1442–1456. <https://doi.org/10.1007/s10964-009-9479-8>
- Kamins, M. L., & Dweck, C. S. (1999). Person versus process praise and criticism: Implications for contingent self-worth and coping. *Developmental Psychology, 35*(3), 835–847.
<https://doi.org/10.1037/0012-1649.35.3.835>

- Karmakar, R. (2015). Does parenting style influence the internalization of moral values in children and adolescents? *Psychological Studies*, *60*(4), 438-446. doi:10.1007/s12646-015-0338-2
- Keijsers, L., Branje, S., Hawk, S. T., Schwartz, S. J., Frijns, T., Koot, H. M., ... Meeus, W. (2012). Forbidden friends as forbidden fruit: Parental supervision of friendships, contact with deviant peers, and adolescent delinquency. *Child Development*, *83*(2), 651–666. doi:10.1111/j.1467-8624.2011.01701.x
- Kochanska, G. (1994). Beyond cognition: Expanding the search for the early roots of internalization and conscience. *Developmental Psychology*, *30*(1), 20–22. <https://doi.org/10.1037/0012-1649.30.1.20>
- Krishnakumar, A., Buehler, C., & Barber, B.K. (2003). Youth perceptions of interparental conflict, ineffective parenting, and youth problem behaviors in European-American and African-American families. *Journal of Social and Personal Relationships*, *20*, 239-260.
- Lauricella, A. R., Cingel, D. P., Beaudoin-Ryan, L., Robb, M. B., Saphir, M., & Wartella, E. A. (2016). *The Common Sense census: Plugged-in parents of tweens and teens*. San Francisco, CA: Common Sense Media.
- Laursen, B., & Collins, W. A. (2009). Parent—child relationships during adolescence. *Handbook of Adolescent Psychology*, *2*.
- Luyckx, K., Soenens, B., Vansteenkiste, M., Goossens, L., & Berzonsky, M. D. (2007). Parental psychological control and dimensions of identity formation in emerging adulthood. *Journal of Family Psychology*, *21*(3), 546–550. <https://doi.org/10.1037/0893-3200.21.3.546>

- Mabbe, E., Soenens, B., Vansteenkiste, M., van der Kaap-Deeder, J., & Mouratidis, A. (2018). Day-to-day variation in autonomy-supportive and psychologically controlling parenting: The role of parents' daily experiences of need satisfaction and need frustration. *Parenting: Science and Practice, 18*(2), 86–109. <https://doi.org/10.1080/15295192.2018.1444131>
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology, 3*(5), 551–558. <https://doi.org/10.1037/h0023281>
- Maunder, R., & Monks, C. P. (2019). Friendships in middle childhood: Links to peer and school identification, and general self-worth. *British Journal of Developmental Psychology, 37*(2), 211–229. <https://doi.org/10.1111/bjdp.12268>
- McGillicuddy-De Lisi, A. V. & Sigel, I. E. (1995). Parental beliefs. In M. H. Bornstein, (Ed.), *Handbook of parenting, Vol. 3. Status and social conditions of parenting* (pp. 333–358). Mahwah, NJ: Lawrence Erlbaum Associates.
- Merz, E. C., Maskus, E. A., Melvin, S. A., He, X., & Noble, K. G. (2019). Parental punitive discipline and children's depressive symptoms: Associations with striatal volume. *Developmental Psychobiology, 61*(6), 953–961. <https://doi.org/10.1002/dev.21859>
- Moses, J. O., & Villodas, M. T. (2017). The potential protective role of peer relationships on school engagement in at-risk adolescents. *Journal of Youth and Adolescence, 46*(11), 2255–2272. <https://doi.org/10.1007/s10964-017-0644-1>
- Mounts, N. S. (2002). Parental management of adolescent peer relationships in context: The role of parenting style. *Journal of Family Psychology, 16*(1), 58–69. doi:10.1037/0893-3200.16.1.58

- Mounts, N. S. (2007). Adolescents' and their mothers' perceptions of parental management of peer relationships. *Journal of Research on Adolescence, 17*(1), 169–178.
doi:10.1111/j.1532-7795.2007.00517.x
- Mounts, N. S., & Steinberg, L. (1995). An ecological analysis of peer influence on adolescent grade point average and drug use. *Developmental Psychology, 31*(6), 915–922.
- Muthén, B. & Asparouhov, T. (2012). Bayesian SEM: A more flexible representation of substantive theory. *Psychological Methods, 17*, 313-335.
- National Academies of Sciences, Engineering, and Medicine. (2019). *The promise of adolescence: Realizing opportunity for all youth*. National Academies Press.
- Nielson, M. G., Padilla-Walker, L., & Holmes, E. K. (2017). How do men and women help? Validation of a multidimensional measure of prosocial behavior. *Journal of Adolescence, 56*, 91–106. <https://doi.org/10.1016/j.adolescence.2017.02.006>
- Oxford, M. L., Harachi, T. W., Catalano, R. F., & Abbott, R. D. (2001). Preadolescent predictors of substance initiation: A test of both the direct and mediated effect of family social control factors on deviant peer associations and substance initiation. *The American Journal of Drug and Alcohol Abuse, 27*(4), 599–616. <https://doi.org/10.1081/ADA-100107658>
- Padilla-Walker, L. M., Christensen, K. J., & Day, R. D. (2011a). Proactive parenting practices during early adolescence: A cluster approach. *Journal of Adolescence, 34*(2), 203-214.
doi:10.1016/j.adolescence.2010.05.008

- Padilla-Walker, L. M., Coyne, S. M., Fraser, A. M., Dyer, W. J., & Yorgason, J. B. (2012a). Parents and adolescents growing up in the digital age: Latent growth curve analysis of proactive media monitoring. *Journal of Adolescence*, *35*(5), 1153–1165.
<https://doi.org/10.1016/j.adolescence.2012.03.005>
- Padilla-Walker, L.M., Coyne, S. M., Kroff, S., & Memmott-Elison, M. (2018). The protective role of parental media monitoring style from early to late adolescence. *Journal of Youth and Adolescence*, *47*(2), 445–459. <https://doi.org/10.1007/s10964-017-0722-4>
- Padilla-Walker, L. M., Fraser, A. M., & Harper, J. M. (2012b). Walking the walk: The moderating role of proactive parenting on adolescents' value-congruent behaviors. *Journal of Adolescence*, *35*(5), 1141–1152.
<https://doi.org/10.1016/j.adolescence.2012.03.003>
- Padilla-Walker, L. M., Harper, J. M., & Bean, R. A. (2011b). Pathways to parental knowledge: The role of family process and family structure. *The Journal of Early Adolescence*, *31*(4), 604–627. <https://doi.org/10.1177/0272431610366246>
- Padilla-Walker, L. M., & Son, D. (2019). Proactive parenting and moral development. In D. Laible, G. Carlo, & L. M. Padilla-Walker (Eds). *The Oxford handbook of parenting and moral development*. New York, NY: Oxford University Press.
- Padilla-Walker, L. M., & Thompson, R. A. (2005). Combating conflicting messages of values: A closer look at parental strategies. *Social Development*, *14*(2), 305–323.
[doi:10.1111/j.1467-9507.2005.00303.x](https://doi.org/10.1111/j.1467-9507.2005.00303.x)
- Patrick, R. B., & Gibbs, J. C. (2012). Inductive discipline, parental expression of disappointed expectations, and moral identity in adolescence. *Journal of Youth and Adolescence*, *41*(8), 973–983. <https://doi.org/10.1007/s10964-011-9698-7>

- Patrick, R. B., & Gibbs, J. C. (2016). Maternal acceptance: Its contribution to children's favorable perceptions of discipline and moral identity. *The Journal of Genetic Psychology: Research and Theory on Human Development*, 177(3), 73–84.
<https://doi.org/10.1080/00221325.2016.1173008>
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. Washington, DC: Oxford University Press.
- Piaget, J. (1970). *Science of education and the psychology of the child*. New York: Viking Press.
- Pinquart, M. (2016). Associations of parenting styles and dimensions with academic achievement in children and adolescents: A meta-analysis. *Educational Psychology Review*, 28(3), 475-493.
- Price, J., Drabick, D. A. G., & Ridenour, T. A. (2019). Association with deviant peers across adolescence: Subtypes, developmental patterns, and long-term outcomes. *Journal of Clinical Child and Adolescent Psychology*, 48(2), 238–249.
<https://doi.org/10.1080/15374416.2017.1405351>
- Rideout, V. (2016). Measuring time spent with media: The common sense census of media use by US 8- to 18-year-olds. *Journal of Children and Media*, 10(1), 138-144.
[doi:10.1080/17482798.2016.1129808](https://doi.org/10.1080/17482798.2016.1129808)
- Robinson, C. C., Mandleco, B., Olsen, S. F., & Hart, C. H. (2001). The Parenting Styles and Dimensions Questionnaire (PSQD). In B. F. Perlmutter, J. Touliatos, & G. W. Holden (Eds.), *Handbook of family measurement techniques: Vol. 3. Instruments & index* (pp. 319 - 321). Thousand Oaks: Sage.

- Rodriguez, C. M., Pu, D. F., & Foiles, A. R. (2019). Cognitive-affective pathways to child depressive and anxious symptoms: Role of children's discipline attributions. *Child Psychiatry and Human Development, 50*(1), 163–171. <https://doi.org/10.1007/s10578-018-0831-7>
- Roth, G. (2008). Perceived parental conditional regard and autonomy support as predictors of young adults' self- versus other-oriented prosocial tendencies. *Journal of Personality, 76*(3), 513–533. <https://doi.org/10.1111/j.1467-6494.2008.00494.x>
- Roth, G., & Assor, A. (2012). The costs of parental pressure to express emotions: Conditional regard and autonomy support as predictors of emotion regulation and intimacy. *Journal of Adolescence, 35*(4), 799–808. <https://doi.org/10.1016/j.adolescence.2011.11.005>
- Roth, G., Vansteenkiste, M., & Ryan, R. M. (2019). Integrative emotion regulation: Process and development from a self-determination theory perspective. *Development and Psychopathology*. <https://doi.org/10.1017/S0954579419000403>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68-78. [doi:10.1037/0003-066X.55.1.68](https://doi.org/10.1037/0003-066X.55.1.68)
- Salmela-Aro, K., & Tynkkynen, L. (2010). Trajectories of life satisfaction across the transition to post-compulsory education: Do adolescents follow different pathways? *Journal of Youth and Adolescence, 39*(8), 870–881.
- Segrin, C., & Flora, J. (2019). Fostering social and emotional intelligence: What are the best current strategies in parenting? *Social and Personality Psychology Compass, 13*(3), 12439. <https://doi.org/10.1111/spc3.12439>

Shelleby, E. C., Shaw, D. S., Cheong, J., Chang, H., Gardner, F., Dishion, T. J., & Wilson, M.

N. (2012). Behavioral control in at-risk toddlers: The influence of the Family Check-Up.

Journal of Clinical Child & Adolescent Psychology, 41(3), 288–301. doi:

10.1080/15374416.2012.664814

Shen, Y.-L., Carlo, G., & Knight, G. P. (2013). Relations between parental discipline, empathy-

related traits, and prosocial moral reasoning: A multicultural examination. *The Journal of*

Early Adolescence, 33(7), 994–1021. <https://doi.org/10.1177/0272431613479670>

Simons, L. G., Simons, R. L., & Conger, R. D. (2004). Identifying the mechanisms whereby

family religiosity influences the probability of adolescent antisocial behavior. *Journal of*

Comparative Family Studies, 35(4), 547–563.

Simpkins, S. D., & Parke, R. D. (2002). Maternal monitoring and rules as correlates of

children's social adjustment. *Merrill-Palmer Quarterly, 48*(4), 360–377.

doi:10.1353/mpq.2002.0021

Smith, C., & Krohn, M. D. (1995). Delinquency and family life among male adolescents: The

role of ethnicity. *Journal of Youth and Adolescence, 24*(1), 69-93.

Soenens, B., & Vansteenkiste, M. (2010). A theoretical upgrade of the concept of parental

psychological control: Proposing new insights on the basis of self-determination theory.

Developmental Review, 30(1), 74–99. <https://doi.org/10.1016/j.dr.2009.11.001>

Soenens, B., Vansteenkiste, M., & Niemiec, C. P. (2009). Should parental prohibition of

adolescents' peer relationships be prohibited? *Personal Relationships, 16*(4), 507–530.

doi:10.1111/j.1475–6811.2009.01237.x

- Soenens, B., Vansteenkiste, M., Smits, I., Lowet, K., & Goossens, L. (2007). The role of intrusive parenting in the relationship between peer management strategies and peer affiliation. *Journal of Applied Developmental Psychology, 28*(3), 239–249. doi:10.1016/j.appdev.2007.02.003
- Stefansson, K. K., Gestsdottir, S., Birgisdottir, F., & Lerner, R. M. (2018). School engagement and intentional self-regulation: A reciprocal relation in adolescence. *Journal of Adolescence, 64*, 23–33. <https://doi.org/10.1016/j.adolescence.2018.01.005>
- Steinberg, L., & Morris, A. S. (2001). Adolescent development. *Annual Review of Psychology, 52*(1), 83-110.
- Straus, M. A., & Fauchier, A. (2007). *Manual for the Dimensions of Discipline Inventory (DDI)*. University of New Hampshire: Family Research Laboratory.
- Telzer, E. H., Gonzales, N., & Fuligni, A. J. (2014). Family obligation values and family assistance behaviors: Protective and risk factors for Mexican–American adolescents' substance use. *Journal of Youth and Adolescence, 43*(2), 270–283. <https://doi.org/10.1007/s10964-013-9941-5>
- Tilton-Weaver, L. C., Burk, W. J., Kerr, M., & Stattin, H. (2013). Can parental monitoring and peer management reduce the selection or influence of delinquent peers? Testing the question using a dynamic social network approach. *Developmental Psychology, 49*(11), 2057–2070. doi:10.1037/a0031854
- Usher-Seriki, K. K., Bynum, M., & Callands, T. A. (2008). Mother-daughter communication about sex and sexual intercourse among middle- to upper-class African American girls. *Journal of Family Issues, 29*(7), 901–917. doi:10.1177/0192513x07311951

- Valentiner, D. P., & Mounts, N. S. (2017). Method variance in adolescents', mothers', and observers' reports of peer management: Nuisance or information? *Journal of Youth and Adolescence*, *46*(5), 1038–1056. doi:10.1007/s10964-016-0595-y
- Van Petegem, S., Zimmer-Gembeck, M. J., Soenens, B., Vansteenkiste, M., Brenning, K., Mabbe, E., ... Zimmermann, G. (2017). Does general parenting context modify adolescents' appraisals and coping with a situation of parental regulation? The case of autonomy-supportive parenting. *Journal of Child and Family Studies*, *26*(9), 2623–2639. <https://doi.org/10.1007/s10826-017-0758-9>
- Wang, M. T., Kiuru, N., Degol, J. L., & Salmela-Aro, K. (2018). Friends, academic achievement, and school engagement during adolescence: A social network approach to peer influence and selection effects. *Learning and Instruction*, *58*, 148-160. <https://doi.org/10.1016/j.learninstruc.2018.06.003>
- Yu, S., Deng, Y., Yu, H., & Liu, X. (2018). Attachment avoidance moderates the effects of parenting on chinese adolescents' having an inner compass. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues*, 1-8. doi:10.1007/s12144-018-0007-4
- Yuan, Y., & MacKinnon, D. P. (2009). Bayesian mediation analysis. *Psychological Methods*, *14*(4), 301.

Appendix

Table 1 Correlations and Descriptive Statistics for the study variables

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|--------|--------|-------|---------|--------|--------|-------|---------|---------|---------|---------|---------|---------|---------|---------|-------|
| 1. Mother Proactive Autonomy Supportive | -- | | | | | | | | | | | | | | | |
| 2. Mother Proactive Autonomy Restrictive | .42*** | -- | | | | | | | | | | | | | | |
| 3. Mother Reactive Autonomy Supportive | .46*** | .17*** | -- | | | | | | | | | | | | | |
| 4. Mother Reactive Autonomy Restrictive | .18*** | .20*** | .10* | -- | | | | | | | | | | | | |
| 5. Father Proactive Autonomy Supportive | .11 | .16** | .14* | .11 | -- | | | | | | | | | | | |
| 6. Father Proactive Autonomy Restrictive | .11 | .35*** | .07 | .19** | .48*** | -- | | | | | | | | | | |
| 7. Father Reactive Autonomy Supportive | .12* | .06 | .17** | .06 | .48*** | .22*** | -- | | | | | | | | | |
| 8. Father Reactive Autonomy Restrictive | .03 | .06 | -.10 | .50*** | .14* | .16** | .06 | -- | | | | | | | | |
| 9. Extrinsic Motivation | -.07 | .05 | -.07 | -.13** | .03 | .10 | .01 | -.22*** | -- | | | | | | | |
| 10. Introjected Motivation | -.11* | .00 | -.05 | -.21*** | .09 | .11 | .04 | -.17** | .60*** | -- | | | | | | |
| 11. Identified Motivation | .01 | -.00 | .00 | -.05 | .06 | .04 | -.01 | -.03 | .47*** | .26*** | -- | | | | | |
| 12. Integrated Motivation | .03 | .06 | .00 | -.05 | .08 | .03 | .01 | -.08 | .55*** | .35*** | .77*** | -- | | | | |
| 13. Prosocial Behavior | -.06 | -.10* | -.02 | -.15** | -.05 | .07 | -.02 | -.17** | .25*** | .37*** | .02 | .11* | -- | | | |
| 14. Deviant Peer Association | .08 | .00 | .02 | .27*** | .08 | -.08 | .14* | .22*** | -.35*** | -.42*** | -.12** | -.17*** | -.20*** | -- | | |
| 15. Delinquent Behavior | .13** | -.03 | .01 | .21*** | .01 | -.10 | .13* | .25*** | -.41*** | -.46*** | -.17*** | -.21*** | -.23*** | .71*** | -- | |
| 16. School Engagement | -.08 | -.03 | -.05 | -.25*** | -.04 | .04 | -.12* | -.22*** | .24*** | .39*** | .03 | .15** | .47*** | -.48*** | -.49*** | -- |
| Mean | 3.49 | 2.60 | 4.07 | 1.82 | 3.04 | 2.41 | 3.69 | 1.63 | 2.95 | 3.50 | 2.55 | 2.85 | 3.25 | 1.55 | 0.26 | 3.56 |
| (Standard Deviation) | (.90) | (.87) | (.66) | (.57) | (.87) | (.84) | (.74) | (.48) | (.74) | (.59) | (.70) | (.81) | (.75) | (.58) | (.32) | (.64) |

*Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Table 2 Results of a SEM with mother reported parenting variables and other child reported variables.

| | Prosocial Behavior | Deviant Peer Association | Delinquent Behavior | School Engagement | Integrated Regulation | Identified Regulation | Introjected Regulation | External Regulation |
|-------------------|--------------------|--------------------------|---------------------|-------------------|-----------------------|-----------------------|------------------------|---------------------|
| Proactive | -0.05 | -0.02 | 0.03 | 0.04 | 0.06 | 0.01 | -0.05 | 0.01 |
| Reactive | | | | | | | | |
| Autonomy | | | | | | | | |
| Supportive | 0.03 | -0.02 | -0.07 | -0.05 | -0.03 | -0.03 | -0.05 | -0.06 |
| Reactive | | | | | | | | |
| Autonomy | | | | | | | | |
| Restrictive | 0.02 | 0.21*** | 0.15** | -0.14** | -0.11 | -0.10 | -0.12* | -0.12* |
| Integrated | | | | | | | | |
| Regulation | 0.00 | -0.02 | -0.05 | 0.08 | | | | |
| Identified | | | | | | | | |
| Regulation | -0.04 | 0.08 | 0.10 | -0.08 | | | | |
| Introjected | | | | | | | | |
| Regulation | 0.07 | -0.10 | -0.06 | 0.06 | | | | |
| External | | | | | | | | |
| Regulation | 0.01 | -0.12* | -0.12** | -0.01 | | | | |
| Age | 0.03 | -0.05 | -0.08* | 0.01 | 0.06 | 0.15*** | 0.02 | 0.04 |
| Gender (male = 1) | -0.05 | -0.01 | 0.03 | -0.02 | -0.13** | -0.03 | -0.02 | -0.05 |
| Race (white = 1) | 0.03 | -0.07 | 0.03 | 0.00 | 0.02 | -0.01 | 0.09* | 0.01 |
| Income | 0.03 | -0.02 | 0.00 | 0.05 | -0.01 | -0.03 | -0.07 | -0.03 |
| Stability Path | 0.70*** | 0.47*** | 0.60*** | 0.63*** | 0.32*** | 0.33*** | 0.49*** | 0.43*** |

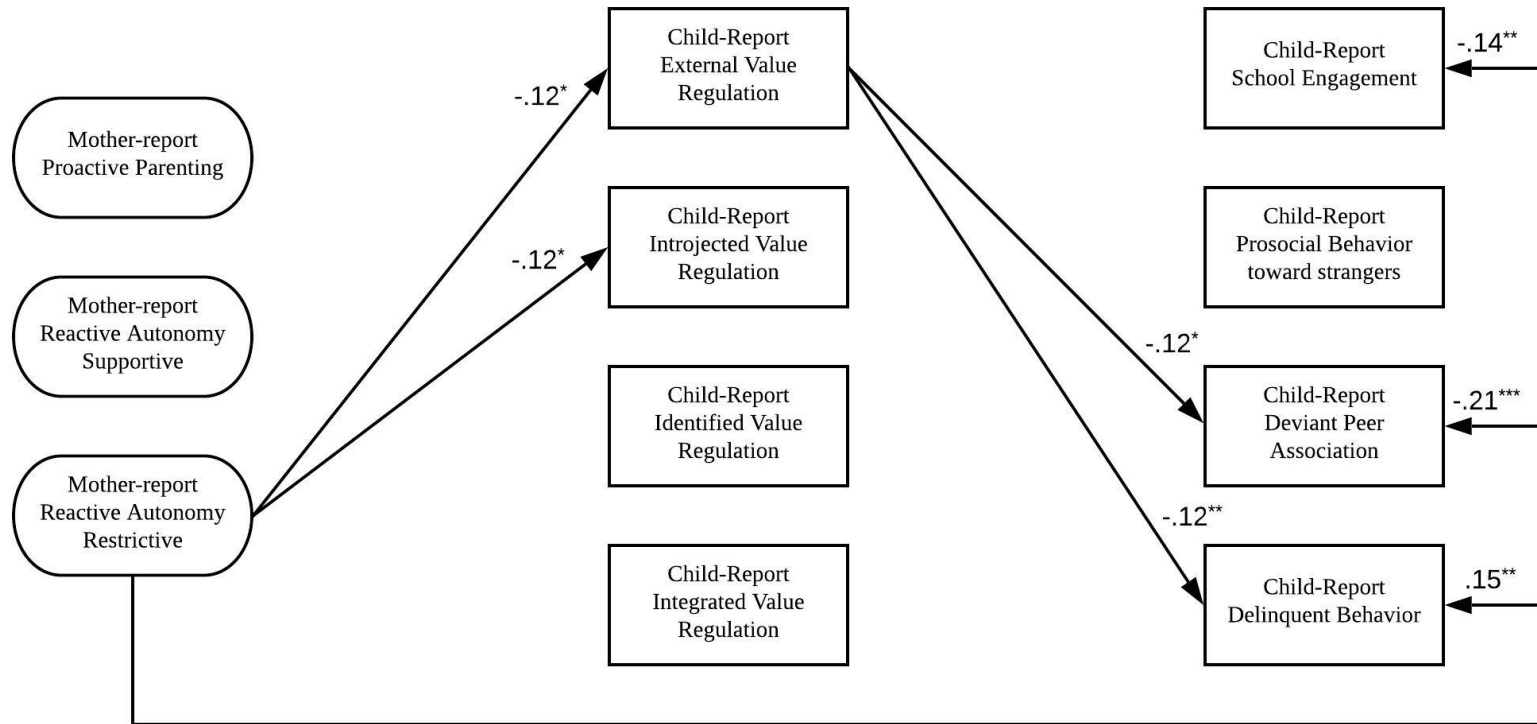
*Note: *** $p < .001$, ** $p < .01$, * $p < .05$. Stability path indicates inclusion of a control for the variable. For example, the stability path for prosocial behavior is a report of prosocial behavior from the previous year.

Table 3 Results of a SEM with father reported parenting variables and other child reported variables.

| | Prosocial Behavior | Deviant Peer Association | Delinquent Behavior | School Engagement | Integrated Regulation | Identified Regulation | Introjected Regulation | External Regulation |
|--------------------------------|--------------------|--------------------------|---------------------|-------------------|-----------------------|-----------------------|------------------------|---------------------|
| Proactive Autonomy-supportive | -0.19 | 0.04 | -0.06 | 0.05 | 0.18 | 0.08 | 0.04 | 0.04 |
| Proactive Autonomy-Restrictive | 0.15 | -0.18 | -0.05 | 0.03 | 0.02 | 0.05 | 0.08 | 0.12 |
| Reactive Autonomy Supportive | 0.04 | 0.22* | 0.19** | -0.20** | -0.09 | -0.06 | 0.01 | -0.02 |
| Reactive Autonomy Restrictive | -0.01 | 0.14 | 0.13* | -0.08 | -0.21* | -0.14 | -0.13 | -0.27** |
| Integrated Regulation | 0.03 | -0.02 | -0.06 | 0.09 | | | | |
| Identified Regulation | -0.05 | 0.06 | 0.08 | -0.08 | | | | |
| Introjected Regulation | 0.07 | -0.18** | -0.11* | 0.10* | | | | |
| External Regulation | -0.03 | -0.06 | -0.06 | -0.03 | | | | |
| Age | 0.00 | -0.04 | -0.08 | 0.01 | 0.05 | 0.14*** | 0.02 | 0.03 |
| Gender (male = 1) | -0.08* | -0.02 | 0.02 | -0.01 | -0.09 | -0.03 | -0.03 | -0.05 |
| Race (white = 1) | 0.03 | -0.06 | 0.03 | -0.01 | 0.01 | -0.01 | 0.11* | 0.00 |
| Income | 0.04 | -0.01 | 0.00 | 0.04 | -0.03 | -0.03 | -0.07 | -0.05 |
| Stability Path | 0.69*** | 0.42*** | 0.60*** | 0.64*** | 0.32*** | 0.34*** | 0.51*** | 0.44*** |

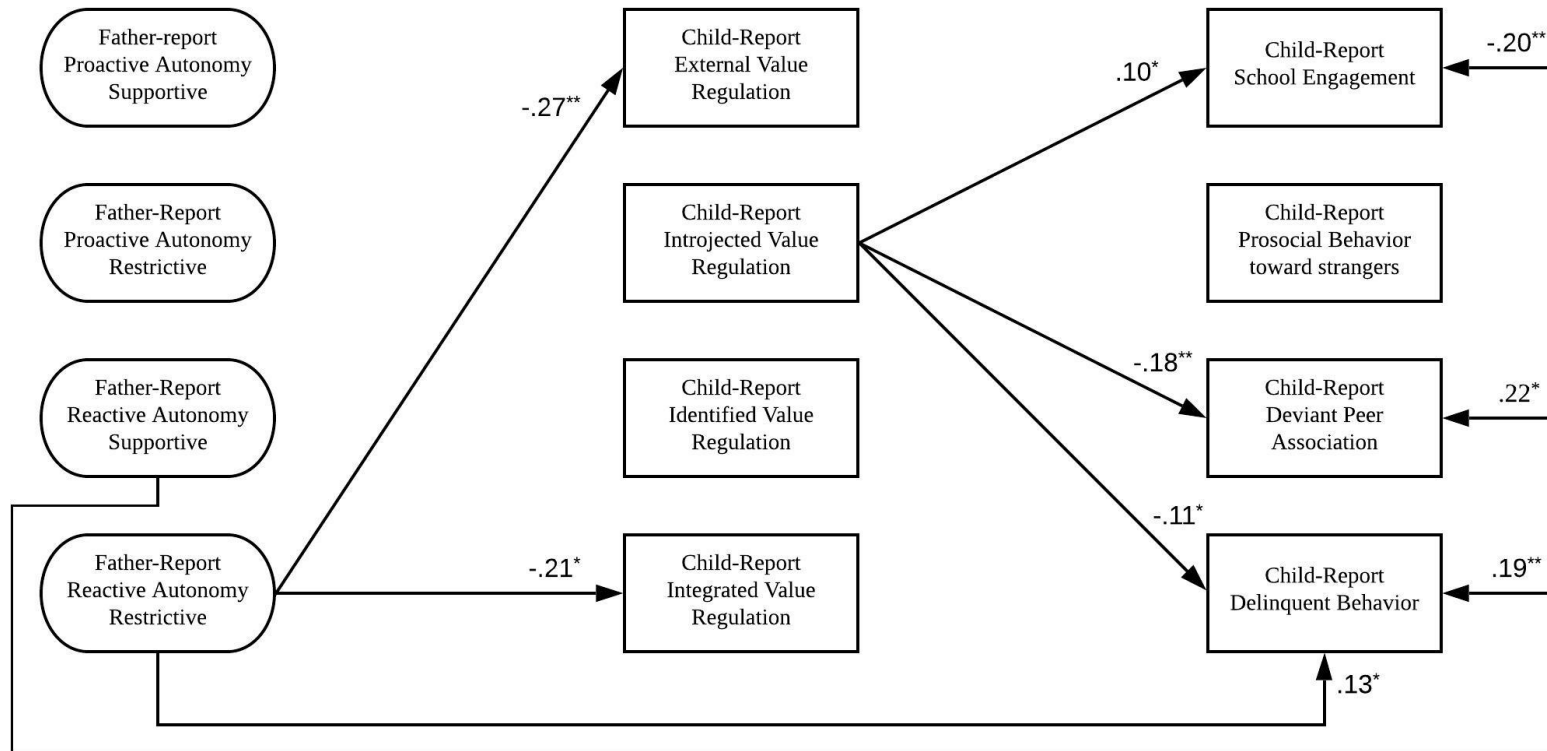
*Note: *** $p < .001$, ** $p < .01$, * $p < .05$. Stability path indicates inclusion of a control for the variable. For example, the stability path for prosocial behavior is a report of prosocial behavior from the previous year.

Figure 1 Results of a SEM run using the mother-reported parenting variables.



*Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Figure 2 Results of a SEM run using the father-reported parenting variables.



*Note: *** $p < .001$, ** $p < .01$, * $p < .05$.