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UNIVERSITY OF CALIFORNIA
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The Role of Mother's Child-Based Self-Worth in Their Parenting Behaviors

A Dissertation submitted in partial satisfaction
of the requirements for the degree of

Doctor of Philosophy

in

Psychology

by

Yena Kyeong

June 2022

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ACKNOWLEDGEMENTS

First and foremost, I would like to thank my mentor, Dr. Cecilia Cheung, whose consistent encouragement and feedback have guided and inspired me over the course of my doctoral training. With her support and guidance, I could persist in this journey even in times of uncertainty and challenges. I am also grateful to my amazing committee members, Drs. Elizabeth Davis, Kalina Michalska, and Aerika Loyd, for their time and expertise. I appreciate their support throughout the years in my graduate training, as well as their insight and advice on my dissertation. I would also like to thank the faculty and staff of the Psychology Department for their help and all of the learning opportunities they have provided. What I have learned from this academic community will remain a valuable source of wisdom and integrity as a researcher.

To my awesome lab mates, Danielle Delany, Pamela Sheffler, Danyang Ma, and Minghui Wang in Culture and Child Development Lab, along with Vanessa Zavala, Yazleen Reyes, and research assistants. I will miss the time when we were working, joking, and laughing in the Olmsted basement. I was able to survive because Danielle and Pamela always have been there with me. I would like to express my gratitude to wonderful people I have met at UCR, especially Yeram Cheong, Sofia Stepanyan, Agnes Varghese, Heejoo Park, Hoju Park, Sarah Knapp, Elayne Zhou, Chuan Luo, Jing Wang, and Tanaya Jog. I feel lucky to have known them, and I could not have come this far without their friendship, assistance, and kindness.

I also would like to acknowledge my mentor at Ewha *Womans* University back in South Korea, Dr. Seol Kyoung-Ok, who sparked my passion and interest in research for

the first time, as well as my former lab members. They all have been my safe haven as I navigate academia in this whole new culture. To my friends, especially our honorary sisters, the Yong sisters, and my church community. I owe you a lot in so many ways and I hope I could pay it forward for the emotional and instrumental support I have gotten from you.

Finally, everything I have accomplished so far would not have been possible without the unwavering support from my family, especially my parents, Kyeong Sehyeon and Ryu Hyekyeong. Both of them have been my number one role model as a learner and inspiration for my research. I learned everything from my parents – including perseverance to push forward, as well as the courage to let go when needed. To my one and only sister Kyeong Yeseul. You are my best friend and the best sibling one could ever ask for. Had it not been for your encouragement and support, I would not have been able to achieve half of what I have so far. I also thank my newer family members, my brother-in-law, Choi Sunjae, and my newborn nephew, Hooni, for being the sunshine in our family. Lastly, I owe tremendously to my beloved grandmother, Chang Kwang-Saeng, uncles, aunts, and cousins. My ability to pursue higher education is indebted to their sacrifices for younger generations throughout the decades, and this accomplishment belongs to every one of them. I can never be prouder to be part of the Kyeong family and the Ryu family.

DEDICATION

This dissertation is dedicated to my family, my permanent roots and rock. It was my decision to study in the US, but it has taken much of their courage and support. In the guidance of God whom we believe in, they all brought me here, and together we made it.

ABSTRACT OF THE DISSERTATION

The Role of Mother's Child-Based Self-Worth in Their Parenting Behaviors

by

Yena Kyeong

Doctor of Philosophy, Graduate Program in Psychology
University of California, Riverside, June 2022
Dr. Cecilia Cheung, Chairperson

Psychologically controlling and autonomy supportive parenting practices have been consistently shown to predict children's academic and psychosocial functioning, yet the precursors of these behaviors remain relatively unclear. To shed light on the cognitive precedents of such parenting practices, the current study focused on parents' child-based worth, a tendency for parents to base their self-esteem on their children's accomplishments. Departing from a primary focus on child-based worth in the academic domain, the current study examined the role of mothers' child-based worth across various domains of child development, including virtue, academic competence, and physical appearance. Furthermore, given the role of perceived pressure in intrusive parenting, the moderating roles of internal (e.g., prevention focus) and external pressure (e.g., perceived environmental threat) in the association between child-based worth and parenting behaviors were explored.

In the current study, 302 mothers ($M_{\text{age}} = 42.16$, $SD_{\text{age}} = 8.54$) of early to middle adolescents (ages from 10 to 17) recruited through Qualtrics Panel reported on their child-based worth, parenting practices, and additional pressure-related factors (e.g.,

regulatory focus, perceived environmental threat). Results showed that mothers based their self-worth on children's academic competence to a greater extent than the virtue and physical appearance domains. Mothers who based their self-worth on children's virtue and physical appearance tended to endorse higher levels of psychological control. In addition, child-based worth in physical appearance was associated with dampened autonomy support. Interaction analyses revealed that mothers' characteristics related to internal pressure, such as prevention focus and emotion dysregulation, interacted with child-based worth dimensions in predicting psychological control. Little evidence was found to support hypotheses regarding the role of external pressure. Overall, the implications of child-based worth were larger and more consistent in predicting psychological control than autonomy support. Together, findings from this study augment our understanding of the roles of multiple domains of mothers' child-based self-worth in parenting behaviors and how these associations may be modulated by other factors related to perceived pressure.

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CHAPTER 1

Introduction

Self-esteem can be gained from domains of life where emotions are charged and values are invested (McAdams, 2013), and there are individual differences in the domains where one bases their self-esteem (Crocker & Wolfe, 2001). Children's accomplishments (e.g., academic achievement) can be an important source of their own self-worth for some parents, given their interest and investment in supporting children's success. Such a phenomenon, which aptly reflects parents' child-based worth, dovetails parents' tendency to gain or lose their self-esteem based on their children's successes and failures (Ng et al., 2014). Notably, as pursuing self-esteem has motivational power and serves a self-regulatory function (Crocker, 2002; Crocker & Park, 2004), researchers posit that child-based worth has implications for the practices parents use to support their children's development. For example, when parents' own self-worth is hinged on children's achievement, they may resort to using controlling practices, such as shaming, to ensure compliance in children (e.g., Ng et al., 2014; Otterpohl et al., 2020). The link between child-based worth and controlling parenting bears importance in the literature on parenting and child development, as this type of parenting behavior can hamper children's optimal development (for a review, see Scharf & Goldner, 2018).

Although the association between parents' child-based self-worth and their controlling behaviors has been examined in prior research (e.g., Ng et al., 2014; Soenens et al., 2015), there are several unresolved questions in the literature. First, beyond its association with psychological control, is child-based self-worth also associated with

parents' autonomy supportive behaviors? Second, do mothers gain or lose their self-esteem from their children's accomplishments in various domains of child development other than those in the academic arena? If so, to what extent does mothers' contingent self-esteem in different domains of child development impact their parenting practices? Third, does child-based self-worth heighten parents' tendency to behave in controlling or autonomy supportive ways under certain conditions? In this dissertation, I sought to address these questions, focusing on mothers whose child is in their early to middle adolescence (i.e., 10 to 17 years old), a critical developmental period when the implications of controlling and autonomy supportive parenting behaviors are especially salient. Utilizing data from mothers of adolescents in the United States, the current study aimed to examine the implications of multiple domains of child-based worth for two major dimensions of parenting: psychological control and autonomy support. Furthermore, this research investigated how internal pressure (e.g., regulatory focus) and external pressure (e.g., perceived threat in the environment) moderated the association between child-based self-worth and parenting behaviors.

In this chapter, I introduce the conceptual understanding of child-based worth, with theories supporting this notion and its implications for parents. Next, I present the two important types of parenting practice (i.e., psychological control and autonomy support), and review the literature suggesting their relations to child-based worth. I then provide a rationale for investigating multiple domains of child-based worth, as well as the roles of potential moderators. Lastly, I highlight the importance of examining mothers of

adolescents in addressing these research questions, followed by an overview of the current study.

Child-Based Worth

Although often defined as a global judgment of self-worth, researchers have also considered self-esteem as domain-specific – such that one’s self-esteem in a domain in life may or may not correlate with one’s self-esteem in another domain (Crocker & Wolfe, 2001). When achieving certain goals (e.g., receiving good grades, making much money) is directly linked to an individual’s self-esteem, successes and failures in these domains would lead to fluctuations in their feelings about the self (Crocker et al., 2006; Crocker & Wolfe, 2001). For example, if academic achievement is a domain in which one’s self-esteem is at high stakes, success or failure in this domain would result in fluctuation in their self-regard. This is in line with the central tenet in the contingencies of self-worth theory proposed by Crocker and colleagues in that variability in individuals’ self-esteem is often derived from specific domains in life (e.g., virtue, academic competence, physical appearance) on which their self-worth is hinged (Crocker, 2002; Crocker & Wolfe, 2001).

One’s self-evaluation is not shaped in isolation, such that individuals’ self-esteem can be enhanced/hampered by the success/failure of others of significance. The effect of others on one’s self-esteem bears relevance to the social psychological concept of “basking in reflected glory,” a tendency to increase one’s association with the successful others (Cialdini et al., 1976). The reverse process, known as “cutting off reflected failure,” is evident when individuals distance themselves from the unsuccessful others

(Snyder et al., 1986). Of note, perceptions of close others – particularly those from the same family – can serve as a guide to self-evaluation. Specifically, Aron and colleagues' self-expansion model posits that one's identity may include that of important others (Aron & Aron, 1986; Aron et al., 1991). Thus, individuals' self-evaluation can be influenced by those whose self-concept overlaps with theirs, and close others' performance or status plays a pivotal role in forming one's self-evaluation (e.g., Beach & Tesser, 1995). Building on the self-expansion model, a burgeoning literature on social comparison (e.g., Hannawa & Spitzberg, 2009; Thai et al., 2019) and contingent self-esteem (e.g., Duprez et al., 2019) indicates that individuals' self-evaluation processes involve others around them (e.g., children, parents, patients). Notably, Duprez and colleagues (2019) argue that individuals who play a socializing or motivating role for others (e.g., teachers, parents, healthcare professionals) might evaluate their own self-worth based on the performance of those being socialized (e.g., students, children, patients).

An expanded form of self-evaluation is often evident in familial relationships, especially in parent-child relationships, given the emotional connectedness between parents and their children. Following their children's performance outcomes, parents often experience vicarious emotions, such as pride and shame (e.g., Scarnier et al., 2009; Tofler et al., 1999). In their work where social comparisons involving family members were examined, Thai and colleagues (2019) argue that since parents take caregiving responsibilities and children share characteristics (e.g., physical characteristics, personality traits) with them, parents often view their children as part of their self-concept

(i.e., high self-other overlap, inclusion of other in self). These researchers also suggest that self-other overlap in parent-child relationships may be qualitatively different from other interpersonal relationships (e.g., romantic relationships or friendships), as this tie is involuntary and difficult to end. Furthermore, parents' integration of their children's success as part of their self-evaluation can be driven by parents' heightened concern over the success of their children (Hannawa & Spitzberg, 2009). Parent-child relationships, thus, are unique in that the inclusion of the child in the parent's self-concept and their self-evaluation is quite common (Thai et al., 2019). Indeed, parents may view children's accomplishments as a reflection of their own success (Brummelman et al., 2013).

Focusing on the family context, child-based self-worth or child-invested contingent self-esteem refers to the extent to which parents base their own self-worth on their children's accomplishments (Grolnick et al., 2007). When parents have strong child-based self-worth, their children's success will enhance their self-esteem, while their children's failure will dampen their self-esteem. Throughout children's development, parents devote resources (e.g., time, money) to support their children's learning (Yeung et al., 2002). To some parents, their investment in children may give rise to an expectation for reciprocity (Silverstein et al., 2002). For example, parents may expect that their investment in children's learning will lead to children's educational success (Kim et al., 2017), which is often viewed as a means of achieving higher social standing (Bullock & Limbert, 2003). Grolnick (2003) also maintains that given parents' financial and emotional investment in their children, they expect psychological gains (i.e., feeling proud) over the course of their children's (successful) development. As such, when

parents hold child-based self-worth, their sense of psychological satisfaction becomes inseparable from their children's outcomes (Grolnick et al., 2007).

Implications of Child-Based Worth for Parents' Behaviors

When one's self-worth is hinged on a particular domain, success in this domain promotes positive emotions and boosts in their self-worth, whereas failure incurs negative emotions and a feeling of worthlessness (Crocker & Wolfe, 2001). Theorists posit that contingent self-esteem is highly motivating and regulatory because individuals desire to succeed and avoid failure in the domains of their self-worth (Crocker et al., 2006). As such, contingent self-esteem has the motivational power since it can guide and drive individuals' attention and behaviors – particularly to maximize success and minimize failure (Crocker et al., 2004, 2006).

According to self-determination theory (Deci & Ryan, 1995, 2000), high contingent self-esteem is fragile and insecure, as it often involves external regulation, such as social comparison and meeting external standards. Thus, the relentless pursuit of contingent self-esteem can turn individuals away from pursuing activities that are intrinsically enjoyable (Deci & Ryan, 1995, 2000). Research has shown that the incessant pursuit of success in a domain deemed important to one's self-worth has short-term emotional benefits but has long-term costs in learning and mental and physical health (for a review, see Crocker & Park, 2004). For example, college students with high contingent self-esteem on academic competence experienced boosts in global self-esteem or positive emotions on the days when they made academic accomplishments (e.g., receiving good grades, getting accepted by graduate schools; Crocker et al., 2002, 2003). However, the

flip side is that they also experienced drops in self-esteem or positive emotional experiences when facing failure (e.g., receiving bad grades, getting rejected by graduate schools), even to a greater extent than the emotional benefits gained from success (Crocker et al., 2002, 2003). Furthermore, daily fluctuations of self-esteem predicted by contingent self-esteem in academic competence predicted increases in depressive symptoms over time (Crocker et al., 2003).

In addition to its cost to individuals' wellbeing, the detriments of heightened contingencies of self-worth are evident in interpersonal relationships as well (Crocker, 2002; Park & Crocker, 2005). When there is a threat to one's contingencies of self-worth, a conflict between the fundamental need for social connection and the need for self-protection occurs (Park & Maner, 2009), and striving for self-worth may preclude individuals from focusing on others' needs (Crocker et al., 2004). For example, when an individual's self-esteem is based on their own academic competence, one acts in a less supportive and caring way in the presence of others, as they are preoccupied with the pursuit of self-worth (Park & Crocker, 2005).

Likewise, in the parenting context, researchers have posited that child-based worth may take a toll on parent-child dyads, as it motivates certain types of parenting behaviors (e.g., Ng et al., 2014; Soenens et al., 2015). Theorists postulate that some parenting tactics (e.g., threatening or withdrawing parental affection) may have an immediate effect in inducing children's desired behaviors compared to other strategies (e.g., explaining why they should behave in a certain way from the child's perspectives; Grolnick et al., 2007; Soenens & Vansteenkiste, 2010). Although seemingly cost-

effective in producing the desired outcomes (e.g., children's compliance), such controlling behaviors are potentially detrimental to children's adjustment in the long run (e.g., Scharf & Goldner, 2018). When parents' self-esteem is at stake in their children's accomplishments, they may be motivated to behave in a controlling manner to ensure success and avoid failure of their children (Ng et al., 2014), even though such parenting practices may dampen their relationships with children. Indeed, a handful of studies on child-based worth have revealed that parents' tendency to uphold their child-based self-worth is associated with their use of parenting practices that can hurt their relationships with children or children's psychological adjustment in the long run, such as conditional regard (e.g., Otterpohl et al., 2020; Steffgen et al., 2022) and psychological control (e.g., Grolnick et al., 2007; Ng et al., 2014; Wuyts et al., 2015a, 2015b). Studies have also revealed that parents' child-based worth is associated with their tendency to promote extrinsic goals (Soenens et al., 2015) or even obsessive-compulsive preoccupation with children's flaws (Levy et al., 2020).

Psychological Control and Autonomy Support

Research has consistently shown that parental child-based worth is associated with parents' endorsement of psychologically controlling practices (e.g., Ng et al., 2014). Parental psychological control refers to parents' attempts to regulate children's psychological world (e.g., feelings, thoughts, views) by withdrawing parental affection or inducing a sense of shame or guilt among children (Barber & Harmon, 2002; Barber et al., 2005). Whereas a related controlling tactic, conditional negative regard (i.e., withholding parental affection when a child does not behave in the desired way), only involves love

withdrawal, psychological control encompasses shaming and guilt induction in addition to love withdrawal (Roth et al., 2009). Psychological control has also been differentiated from behavioral control – which refers to parents’ attempt to regulate children’s behaviors through monitoring or setting up limits and rules (Barber, 1996; Barber & Harmon, 2002). According to self-determination theory, psychological control thwarts children’s basic psychological needs (i.e., autonomy, competence, relatedness; Deci & Ryan, 2000) by coercing children to alter their behaviors and thoughts to meet parental expectations (Barber et al., 2005; Soenens & Vansteenkiste, 2010). Research in various cultural contexts has consistently revealed that parental psychological control undermines children’s functioning, including socioemotional (e.g., internalizing problems, externalizing problems, social problems) and academic adjustment (for a review, see Pomerantz & Wang, 2009; Scharf & Goldner, 2018).

In contrast to psychological control, autonomy support is often associated with positive child outcomes. Autonomy supportive parenting involves parents’ encouragement and promotion of children’s self-expression, decision making, and problem solving (Benito-Gomez et al., 2020; Silk et al., 2003). Notably, researchers have found that psychological control and autonomy support do not represent the same construct on the opposite ends as conceptualized in past research (e.g., Gray & Steinberg, 1999), but rather orthogonal constructs associated with differential child outcomes (Costa et al., 2016; Silk et al., 2003). In essence, the absence of autonomy support does not necessarily connote the presence of psychological control (Silk et al., 2003; Van der Kaap-Deeder et al., 2019). Van der Kaap-Deeder and colleagues (2017) further suggest

that the effects of psychological control on suboptimal child outcomes (i.e., dark pathway) are distinguished from the effects of autonomy support on optimal outcomes (i.e., bright pathway). Extant evidence also indicates that children's mental health problems are affected by the presence of psychological control, but only weakly associated with the absence of autonomy support (Silk et al., 2003). On the other hand, autonomy support is conducive to the development of socioemotional and academic competence, such as psychological wellbeing and academic achievement (Vasquez et al., 2016; Wang et al., 2007).

Child-Based Worth and Psychological Control and Autonomy Support

Despite a plethora of research has focused on the roles of psychological control and autonomy support in children's optimal development (e.g., Scharf & Goldner, 2018; Vasquez et al., 2016), the antecedents of these parenting practices have been relatively understudied (Costa et al., 2019; Soenens & Vansteenkiste, 2010). Yet, a growing body of research has begun to pay attention to their precursors and found that characteristics of parents (e.g., perfectionism), children (e.g., difficult temperament), and environmental context (e.g., stress) can contribute to psychological control (for a review, see Scharf & Goldner, 2018). Of note, within the framework of self-determination theory, researchers posit that parents are more likely to employ controlling parenting when their basic psychological needs (i.e., needs for autonomy, competence, and relatedness that are essential for one's growth and functioning; Deci & Ryan, 2000) are not met (Grolnick, 2003; Soenens & Vansteenkiste, 2010). Empirical evidence also indicates the associations between need frustration and psychological control and between need

satisfaction and autonomy support (Costa et al., 2019; Mabbe et al., 2018). Furthermore, Van der Kaap-Deeder and colleagues' (2019) work demonstrated that parents' need frustration predicted psychological control via stress, whereas the need satisfaction predicted autonomy support via psychological availability.

Grolnick (2003) delineates that one of the key determinants of controlling vs. autonomy supportive parenting behaviors is perceived pressure, which can stem from both internal (e.g., anxiety) and external (e.g., stressful life events) sources. Paralleling the notion that controlling parenting behaviors can thwart children's autonomy, parents' own autonomy can be undermined by pressure perceived by parents. In turn, parents may become more controlling in their interactions with children amid the added pressure (Grolnick, 2003). Conceivably, when parents are under pressure, they are more likely to utilize more controlling and less autonomy supportive parenting to induce immediate compliance (Wuyts et al., 2017). Grolnick and Apostoleris (2002) posit that the antecedents of parental control can be understood through three types of pressure that parents experience: pressure from below, pressure from without, and pressure from within. Specifically, pressure from below refers to children's characteristics (e.g., traits, competence), and pressure from without refers to external and contextual characteristics (e.g., economic, or other environmental stressors; Grolnick, 2003). Finally, pressure from within refers to internal pressure derived from parents' personality characteristics, such as perfectionism (e.g., Soenens et al., 2006), child-based worth (e.g., Grolnick et al., 2007), or negative emotionality (e.g., Aunola et al., 2017). Researchers posit that "pressure narrows parents' perspectives" (Gurland & Grolnick, 2005, p.105), such that parents

under pressure often utilize more controlling and less autonomy supportive (i.e., solving problems for children) parenting.

Among the three types of pressure, the predictive role of internal pressure on controlling parenting has been found in prior research (e.g., Grolnick et al., 2007). This is because internal pressure can drive ego-involvement, a motivational state where one's self-esteem is based on performance outcome (Ryan, 1982). As such, when individuals are ego-involved, they become preoccupied with performance to maintain their self-esteem. In line with this idea, Grolnick and colleagues found that parental ego-involvement predicted more controlling parenting behaviors (e.g., Grolnick, 2003; Grolnick & Apostoleris, 2002). These researchers maintain that when parents or teachers are ego-involved or pressured, they may put children's performance outcomes before children's inner worlds, resulting in more demanding and less autonomy supportive behaviors toward children (Grolnick, 2003).

These findings are also consistent with Crocker's contingencies of self-worth theory, which posits that when the pursuit of self-esteem is at the center of one's attention, an individual becomes less attentive to others' needs and more concerned about threats in a domain where their self-worth is at stake (Crocker et al., 2004; Park & Crocker, 2005). As such, child-based worth, a form of internal pressure that reflects ego-involvement, may motivate parents to focus on the outcome of performance (i.e., success or failure) of their children, which may lead parents to be less sensitive to their children's thoughts and feelings (Grolnick et al., 2007; Ng et al., 2014). For example, European American mothers who reported high tendencies to gain their self-esteem from their

children's social skills showed more controlling behaviors when they worked on a social problem-solving task with their children in the laboratory (Grolnick et al., 2007).

Similarly, Ng and colleagues (2014) found that maternal child-based worth predicted psychologically controlling parenting behaviors among Chinese and American mothers over time. A recent study by Ng et al. (2019) demonstrated that mothers with high child-based worth showed less warmth toward their children after their children experienced failure in a cognitive task in the laboratory as well as work assigned by their school.

Soenens and colleagues (2015) argue that when parents have high child-based worth, they are prone to using more pressuring parenting practices, as these methods are deemed efficient, at least in the short run to ensure children's success. In turn, the endorsement of pressuring practices may enhance their self-esteem if children indeed succeed. On a related note, Steffgen et al. (2022) argue that the underpinnings of controlling parenting (e.g., academic conditional negative regard) are twofold. First, parents may utilize conditional regard with a socialization goal in mind, such that their intention is in fostering children's optimal development (e.g., to promote children's school engagement). Alternatively, parents may enact intrusive parenting behaviors out of self-concern (e.g., angry reaction to children's academic failure), when children's performance regulates parents' self-esteem (i.e., child-based worth). Although it might be challenging to disentangle between these two routes to psychological control, Steffgen and colleagues' (2022) contention lends support to the case that child-based worth is a strong predictor of controlling parenting.

While prior research has examined the role of child-based worth in psychological control, the link between child-based self-worth and parents' autonomy supportive behaviors is unclear. Autonomy support involves understanding and accepting a child's perspectives and supporting their decision making (Silk et al., 2003), requiring time and psychological energy to do so (Gurland & Grolnick, 2005). Given that child-based self-worth reflects internal pressure that may deplete psychological resources (Grolnick et al., 2007), it is conceivable that child-based worth dampens autonomy supportive parenting. Extant evidence also indicates that psychological availability could be a precursor of autonomy support (Van der Kaap-Deeder et al., 2019). Hence, when the pursuit of self-worth is of heightened importance, parents may be less likely to endorse autonomy supportive behaviors, as they may not have sufficient psychological resources to remain available for their children. According to Danner-Vlaardingerbroek et al. (2013), parents are psychologically available when they can provide emotional and cognitive resources and support for their children. They also argue that when parents have mental capacity available for their children, they could be more sensitive to their children's needs. Based on this idea, Van der Kaap-Deeder and colleagues (2019) found that while psychological availability predicts autonomy support, stress on parents' parts predicts psychological control. Although the mechanism between child-based worth and parenting behaviors has not been examined, parents' high child-based worth may deplete their psychological availability, thereby reducing their tendency to use autonomy supportive parenting strategies. Nonetheless, empirical evidence on the link between child-based worth and autonomy support is still lacking.

Domain-Specific Child-Based Worth and Parenting

In addition to its implications for autonomy support, a major gap in the literature pertains to whether the link between child-based worth and parenting is domain-specific, as posited in the contingencies of self-worth theory. To shed light on the psychometric structure of contingencies of self-worth, Crocker and Wolfe (2001) proposed seven major factors that comprise one's contingencies of self-worth. These factors stem from internal and external sources (and in this order ranging from internal to external): God's love, virtue, family support, academic competence, competition, appearance, and others' approval. Importantly, Crocker and colleagues argue that basing self-worth on external domains (e.g., other's approval, appearance) can lead to negative mental health outcomes; while basing self-worth on internal domains (e.g., God's love, virtue) can result in relatively positive outcomes, such as volunteer activity and less alcohol and drug use (Crocker, 2002). Although the factor structure of personal contingent self-esteem has been well-established in the literature in support of the domain-specific model, much previous work on child-based worth (e.g., Ng et al., 2014, 2019; Wuyts et al., 2015a, 2015b) has used domain-general statements to assess child-based worth without paying attention to the specific domains of children's development.

Recently, researchers have begun to unpack nuances in child-based worth, with a focus on the multi-faceted nature of the construct. For example, consistent with some research on the valence of contingent self-esteem on others (e.g., upward vs. downward; Duprez et al., 2019; Levy et al., 2020; Wouters et al., 2016), Busquets et al. (2022) theorized that parents can both gain their self-worth from children's success and lose it

from children's failure. In their study on American parents, Busquets et al. (2022) found that parents' child-based worth on children's failure was associated with more negative parenting behaviors and beliefs. However, this was not the case for child-based worth on children's success. These findings highlight the importance and value of a more refined understanding of this construct. Building on these new insights, in the current research, I take a nuanced approach to understanding child-based worth, by focusing on various domains of child development that parents may base their self-esteem on.

Given the importance of contextualized understanding of parental beliefs (Costanzo & Woody, 1985; Nucci et al., 1996), it appears crucial that research examines parents' contingent self-worth in diverse domains of child development. In their domain-specific model of parenting, researchers suggest that parenting is bounded by the situation, such that parents' behaviors vary depending on the situation (e.g., at home vs. in public) or domain of children's development (e.g., morality, social skills; Nucci, 1996; Smetana, 1999; Smetana & Daddis, 2002). By the same token, Grusec and Davidov (2015) maintain that parents adopt different socialization goals, depending on the situations and domains of child outcomes. As such, parenting practices are defined as goal-directed behaviors to achieve specific goals in specific contexts, and parenting behaviors are governed by specific parental goals to promote certain behaviors of children (Darling & Steinberg, 1993).

Parents may value certain domains of their children's functioning to a greater or lesser extent than other domains (Costanzo & Woody, 1985). Thus, it is possible that the extent to which parenting behaviors are driven by child-based worth varies depending on

the domain of child outcomes. For example, some parents may experience more fluctuations in their self-worth depending on their children's academic accomplishments, while other parents may gain their self-worth from children's social competence. In the same vein, Wuyts et al. (2015a) propose that assessing child-based worth in specific life domains would be informative. Although a domain-specific approach has not been applied to research on child-based worth to date, a few studies have attempted to examine the role of child-based worth in specific contexts. In Grolnick et al.'s (2007) seminal work on child-based worth, researchers focused on child-based worth in the social domain. Their work investigated how child-based worth and situational pressure affect mothers' behaviors when mothers worked with their children in imaginary situations involving social problem-solving. In other studies, researchers focused on the associations between child-based worth and parenting behaviors or parent-child dynamics in specific domains, such as conditional negative regard contingent on the academic domain (Otterpohl et al., 2020), achievement-oriented psychological control (Wuyts et al., 2015b), and acculturation conflicts among Latinx mother-child dyads (Glatz et al., 2021). Relatedly, Levy and colleagues (2020) investigated the relationship between child-based worth and parents' obsessive preoccupation with their children's flaws in multiple domains including intelligence and physical appearance.

Among the various domains of contingent self-esteem, the current research focused on three domains most relevant to children's development: virtue, academic competence, and physical appearance. These domains were selected, as they are the three domains that encompass both external and internal contingencies of self-esteem. In

addition, these domains are deemed important in child socialization, and children's achievement in these three domains may be readily judged and evaluated by others, including parents (e.g., Ng et al., 2019; Smetana, 1999; Striegel-Moore & Kearney-Cooke, 1994). Crocker and colleagues note that the costs of contingent self-esteem to one's wellbeing including interpersonal relationships are greater when it is based on external sources (Crocker et al., 2003; Crocker & Park, 2004). Such differential effects may be driven by the fact that positive or negative events in external domains are less controllable than in internal ones (Crocker et al., 2004; Crocker & Wolfe, 2001). Hence, it is plausible that external domains of child development (e.g., physical appearance) may influence parenting practices to a greater extent, compared to the more internal domain (e.g., virtue). By investigating the roles of multiple domains of child-based worth in parenting behaviors, the current study aimed to illuminate if domain-specific views of child development apply to understanding parenting (Smetana, 1999). This approach is also consistent with the literature on child-based worth as well as the original contingent self-esteem theory (Crocker & Wolfe, 2001).

The Moderating Role of Perceived Pressure

Multiple factors within the family, including both individual (e.g., the personality of parents and children, developmental history) and contextual factors (e.g., situation, culture, socioeconomic status, neighborhood), work in concert to determine the approaches parents take to socialize their children (Belsky, 1984). While child-based self-worth has been identified as a factor that contributes to controlling parenting (e.g., Ng et al., 2014; Wuyts et al., 2015a, 2015b), the precise parenting practices parents adopt may

depend on both their contingent self-worth and circumstances. Given that research on child-based worth is relatively new, limited research has explored whether parent or child characteristics and contextual factors systematically modulate the association between child-based worth and parenting practices, such as psychological control. For example, previous studies have investigated the role of some moderating factors, such as situational pressure from their children's performance being evaluated in the experimental setting (Grolnick et al., 2007), gender and ethnicity of parents, and children's achievement levels and age (e.g., Ng et al., 2014; Wuyts et al., 2015b).

According to Grolnick (2003), heightened perceived pressure can lead parents to be controlling and less autonomy supportive. Moreover, as parenting behaviors are determined by multiple factors of parents, children, and contexts (Belsky, 1984), a pressuring factor (e.g., child-based worth) may interplay with other sources of pressure (e.g., situational pressure, child's responsiveness; Glatz et al, 2021; Grolnick et al., 2007). To clarify the variations in the link between parents' child-based self-worth and their parenting practices across families, the current research focused on two broad categories of possible moderating factors. Specifically, the roles of individual characteristics related to internal pressure (i.e., regulatory focus, emotion dysregulation), and contextual characteristics related to external pressure (i.e., perceived threat, cumulative family risk) were investigated.

Individual Characteristics: Internal Pressure

Regulatory Focus. In parents' motivational system, one potential factor that may facilitate the effect of child-based worth by posing additional pressure on parenting

behaviors is their motivational styles (i.e., regulatory focus) or orientation toward approach vs. avoidance. Contingencies of self-worth theory posits that high contingent self-esteem can motivate individuals to ensure maximizing success and minimize failure in that domain (Crocker, 2002). Based on Carver and Scheier's (1998) self-regulation theory, Crocker and Park (2004) note that pursuing contingent self-esteem entails both approach and avoidance motivations. They argue that approach self-esteem goals guide one to move closer to desired states (e.g., being competent), while avoidance self-esteem goals guide one to move away from undesired states (e.g., being incompetent). Moreover, having avoidance self-esteem goals is associated with being vigilant to avoid mistakes, errors, or failures, and anxiety (Crocker & Park, 2004). Researchers have suggested that when parents have high child-based self-worth, they are motivated to maximize success and minimize failure in children's performance, thereby exerting controlling parenting behaviors (Grolnick et al., 2007; Ng et al., 2014). Herein, parents' sensitivity to the success or failure of their children may dampen or intensify the associations between child-based worth and parenting behaviors. Given that both motivational styles and contingencies of self-worth have motivational power on one's course of actions, I anticipated that they could interact to predict parenting behaviors. In parents' motivational system, child-based worth may represent *what* parents pursue, and regulatory focus may represent *how* parents pursue the goals.

The regulatory focus theory proposed by Higgins (e.g., Higgins, 1997; Higgins et al., 2001) suggests that individuals differ in the extent to which they orient toward a promotion or prevention focus in pursuing their goals. While a promotion focus leads to

more approach strategy (e.g., taking risks), a prevention focus is associated with an avoidance strategy (e.g., vigilant and careful approaches to the problems) in attaining goals (Crowe & Higgins, 1997; Higgins et al., 2001). There is evidence that promotion-focused individuals are more sensitive to positive deviations from the status quo or gains vs. nongains (i.e., the difference between 0 and +1). On the contrary, prevention-focused individuals are more sensitive to negative deviations from the status quo or losses vs. nonlosses (i.e., the difference between 0 and -1; for a review, see Scholer & Higgins, 2012).

Given that regulatory focus directs one's attention to gains or losses and motivates one to select actions (Higgins, 1997), there is some evidence in support of the link between regulatory focus, especially prevention focus, and parenting behaviors. Specifically, research indicates that a higher prevention focus or sensitivity to behavioral inhibition system (BIS) is linked to more controlling parenting among young adult children (Rousseau & Scharf, 2018) or toddlers (Kiel & Maack, 2012). Similarly, using a sample of college students and their parents, Elliot and Thrash (2004) found that avoidance motivational tendency (i.e., fear of failure) predicted love withdrawal, a facet of psychological control, among mothers. Notably, such an association was not evident among fathers. There is a paucity of evidence on the role of promotion focus on parenting, but some researchers note that the behavioral activation system (BAS) relates to optimal parenting styles (e.g., nurturing; Desjardins et al., 2008). As individuals with a high promotion focus tend to focus on goal attainment and gains, perhaps such a tendency may prompt parents to view parenting experiences as opportunities for growth and

advancement (Vaughn, 2017), consequently utilizing parenting behaviors that scaffold children's development.

Although there is no direct evidence of the moderating role of regulatory focus in the association between child-based worth and parenting, research indicates that child-based worth characterized by heightened sensitivity to children's mistakes (vs. accomplishments) may have a more pronounced effect on parenting behaviors. For example, Busquets and colleagues' (2022) recent study revealed that the adverse effect of child-based worth on parenting behaviors was only found when parents base their self-worth on a child's failure, but not for a success-oriented child-based worth. As such, these researchers argue that the effect of child-based worth on negative parenting behaviors documented in the prior research might have been driven by failure-oriented child-based worth. In the same vein, emerging evidence indicates that the association between child-based self-worth and controlling parenting behaviors is stronger when children show poor performance or undesirable behaviors (Ng et al., 2019; Otterpohl et al., 2020). In Otterpohl and colleagues' (2020) work, mothers' child-based worth was associated with negative conditional regard following their child's poor performance or undesirable behaviors. Given that negative conditional regard constitutes parents' affection withdrawal following children's poor performance or undesirable behaviors, these researchers concluded that child-based worth may be more relevant in failure situations. Taken together, these studies inform the possibility that parents who strive to avoid children's failure in order to protect their own self-esteem may be more likely to use controlling parenting behaviors. As such, when parents with high child-based self-

worth also have high sensitivity to losses in self-worth, a high prevention focus may propel them to use even more controlling parenting behaviors to preempt failure.

Although prior research has examined the effects of parents' sensitivity to gain vs. loss and child-based worth on parenting behaviors separately, no study to date has examined the interplay between child-based worth and parental regulatory function.

Emotion Dysregulation. Another individual characteristic that may moderate the relationship between child-based worth and parenting behaviors is parents' capacity to regulate emotions. When negative emotions are unregulated, they can lead to maladaptive parenting behaviors, as preoccupation with such emotional experiences could steer parents' attention away from their children (Aunola et al., 2017; Mills et al., 2007). For example, prior research has indicated the associations between mothers' emotional dysregulation and negative parenting behaviors, such as psychological control (Brenning et al., 2020). These researchers argue that parents with emotional dysregulation are more likely to be overwhelmed by negative emotions, consequently being less sensitive to children's needs and reacting impulsively toward their children. In the current work, I expect that child-based worth, a form of internal pressure, may contribute to more controlling and less autonomy supportive parenting behaviors to a greater extent when another potential source of internal pressure (i.e., proneness to experience dysregulated negative emotions) is present.

Recent work by Steffgen et al. (2022) suggests that emotion dysregulation may play a role in the association between child-based worth and parenting behaviors. Their study on mother-adolescent dyads in Germany revealed that the link between child-based

worth and parents' use of conditional negative regard is mediated by experienced anger following a child's failure mediated child-based worth. Importantly, the association between anger and conditional negative regard was exacerbated when parents show dysregulated emotional expression. Of note, Steffgen et al. (2022) contend that parents with optimal emotional regulation may hold back from using less desirable parenting behaviors, even when they have child-based worth and face the child's underperformance. This is because their capability to regulate negative emotions deters them from using negative parenting practices that may hinder their socialization goals (i.e., child's wellbeing) in the long run. Conversely, given that child-based worth may also narrow parents' perspectives and pressure them to focus on their own self-image, their emotional dysregulation may heighten the likelihood of their preoccupation with self-image concerns. This count is also in line with a conceptual model of parenting by Dix (1991) postulating that parental cognition elicits emotions, and the enactment of behaviors is partially governed by the regulatory process (i.e., emotional regulation). As such, when parents have a self-focused goal (i.e., child-based worth) and less capacity to regulate their negative emotions, they may be more vulnerable to the risk of using suboptimal parenting practices.

Contextual Characteristics: External Pressure

Perceived Environment Threat. One of the major sources of controlling parenting behaviors is environmental or contextual factors, such as daily distress (Aunola et al., 2017), unsafe neighborhood (Levitt et al., 2020), and situational pressure (Grolnick et al., 2002, 2007). When parents perceive threats or harm in children's environment or

future, a sense of urgency is created that puts parents under pressure (Robichaud et al., 2020). This could result in parents adopting more controlling behaviors to protect their children or ensure success (Grolnick, 2003; Scharf & Goldner, 2018). Indeed, Gurland and Grolnick (2005) found that mothers' perceived threat in their children's present and future world is associated with their use of controlling parenting practices when working on the tasks that resemble schoolwork with their children. Similarly, Robichaud et al. (2020) found that parents displayed more controlling behaviors as they interacted with their children in a learning setting, especially when they were also led to perceive more environmental threats in modern society, such as scarcity of resources, competition, and unstable future that children may face.

Parents' concern about their children's future may heighten parents' use of controlling strategies and dampen their endorsement of autonomy supportive practices, especially when they also have concerns about their own self-esteem as reflected in their children's successes. In other words, when parents base their self-esteem on their children's accomplishments while also thinking their children's future is at stake, they may utilize even more controlling and less autonomy supportive parenting behaviors to ensure that their children can still thrive in such a gloomy environment. In Grolnick and colleagues' (2007) experimental study, the researchers found that mothers show the most controlling behaviors during a task in the laboratory when they have high contingent self-esteem and were induced to feel the pressure of their children being evaluated. These researchers suggest that the interplay between a mother's characteristics (i.e., child-based self-worth) and contextual factors (i.e., situational pressure) predicts mothers' use of

heightened control. Extending Grolnick et al.'s (2007) work, which focused on the specific situational pressure induced in the laboratory setting, the current research aimed to examine how child-based worth interacts with parents' naturalistic tendency to perceive the threat in the environment (e.g., global perception of instability of future opportunities or scarcity of resources for their children; Gurland & Grolnick, 2005).

Cumulative Family Risk. In addition to a subjective evaluation of the contextual characteristics, this dissertation study sought to explore the role of objective features of the family environment. Cumulative family risk refers to an index that summarizes several aspects of contextual risk, mainly the family's sociodemographic factors, such as economic hardship and low educational attainment or unemployment of a parent (Evans et al., 2013). The underlying assumption for this approach is that exposure to multiple risk factors or combinations of risk factors should better predict child outcomes, compared to the approach of relying on a single risk factor (Burchinal et al., 2008; Sameroff et al., 1987). When a family is exposed to multiple ecological risk factors, children are more likely to display poorer child outcomes (e.g., cognitive skills) as the quality of parenting may be hampered (Burchinal et al., 2008).

Stressful environmental context (e.g., poverty), either situational or chronic, may dampen optimal parenting behaviors, as parents undergo pressure and feel the urge to ensure children's safety (Scharf & Goldner, 2018). Numerous studies have indicated that higher family risk (e.g., less financial and educational resources) is predictive of more controlling and less autonomy supportive parenting behaviors (e.g., Burchinal et al., 2008; Conger et al., 1992). An observational study by Harvey et al. (2016) presents a more

nuanced picture of the relationship between family risk and parenting practices. In their work on toddlers, a family's socioeconomic status was negatively associated with parents' controlling behaviors (e.g., exhibiting rigidity, criticizing), in both free joint play context and in more stressful play context where mothers were being distracted by an additional task for them. Yet, socioeconomic status was positively associated with autonomy support (e.g., scaffolding, providing a rationale) only in the free play context. As such, the presence of extra challenges or pressure (e.g., daily hassles) can limit the positive influence of high socioeconomic status on autonomy support (Harvey et al., 2016). It is also noteworthy that the impact of family stressors (e.g., financial restraint) on family and parenting is not simply linear, as this link can be moderated by several factors, such as support from family members or community (for a review, see Masarik & Conger, 2017). Altogether, prior research indicates that multiple risk factors surrounding the family may discourage supportive parenting behaviors, although its effect may depend on the type of parenting behaviors and other factors related to pressure.

As hypothesized for perceived environmental threat, it is plausible that pressure from within (i.e., child-based worth) interacts with pressure from without (i.e., cumulative family risk) to present a compounded effect on parenting behaviors. That is, when parents' self-esteem is hinged on their children's performance and a need to secure a child's safety is salient due to structural constraints, their sense of urgency is intensified, thereby giving rise to more controlling and less autonomy supportive behaviors.

Adolescence as a Critical Developmental Period

During adolescence, as children's need for autonomy becomes increasingly salient (Barber & Harmon, 2002; Smetana & Rote, 2019), the renegotiation of parent-child relationships and reassessment of parental authority often takes place at the same time (Smetana & Daddis, 2002). The negative implications of heightened psychological control and lack of autonomy support tend to be especially heightened during this developmental period (for a review, see Scharf & Goldner, 2018). Indeed, several studies have highlighted that psychological control and autonomy support during early adolescence may have long-term implications for children's psychosocial functioning across the developmental stages, even into their adulthood. For example, recent longitudinal study revealed that psychological control in early adolescence is predictive of suboptimal psychosocial adjustment (i.e., less educational attainment and supportive romantic relationship) in adulthood (Loeb et al., 2021). Similarly, parents' autonomy support is associated with adolescents' psychological wellbeing over time (Van der Giessen et al., 2014).

Moreover, early and middle adolescence might be a developmental period that is pertinent to the three domains of child-based worth examined in the current study (i.e., virtue, academic competence, and physical appearance). For example, in adolescence, behaviors and misbehaviors are viewed as a result of children's own choices, suggesting that the moral conduct of adolescents can be perceived as an independent achievement (Tamis-LeMonda et al., 2008). Additionally, entering middle school, children's academic performance involves competition and social comparison (Eccles & Midgley, 1989),

often providing parents with evaluative information on their children. Research also indicates that as children progress into adolescence, parents tend to heighten their concerns about children's physical appearance, showing critical attitudes about their children's appearance (Striegel-Moore & Kearney-Cooke, 1994) or conveying sociocultural messages about ideal body image (McCabe & Ricciardelli, 2001). Taken together, for a parent of adolescents, children's accomplishments in various important life domains can become a source of evaluation for their children and parents themselves. Given the uniqueness of this developmental epoch, this dissertation study investigated child-based self-worth and psychological control and autonomy support among parents with adolescent children.

The Current Study

Given that most of the studies on child-based worth and controlling parenting have included mothers (e.g., Grolnick et al., 2007; see also Ng et al., 2014, 2019; Soenens et al., 2015), the current study followed suit, as a first step to begin this line of inquiry. In the extant literature, in general, women's self-concepts are more closely tied and related to their close relationships compared to men (for a review, see Cross & Madson, 1997). Women's parental identity tends to show earlier stabilization than men (e.g., Fadjukoff et al., 2016; McBride et al., 2005), suggesting that child-based self-worth might be more prevalent among mothers and have significant implications for them. Moreover, despite the sociocultural changes in the traditional gender roles, women still play a more active and central role in parenting than men (Perry-Jenkins & Gerstel, 2020), even amid the COVID-19 pandemic when many working parents in the United States –

of both genders – are working from home (Zamarro & Prados, 2021). As such, the current work focused on mothers of early to middle adolescents in the United States.

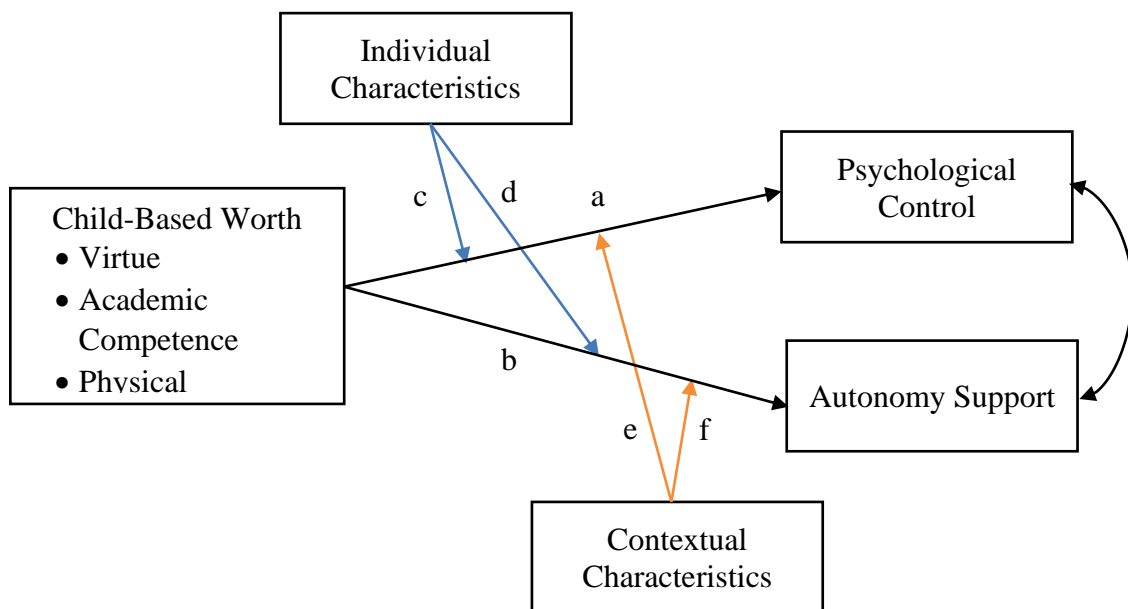
By elucidating the associations between multiple domains of child-based worth and different types of parenting practices, the current research sought to enhance our understanding of when and how mothers use such parenting behaviors. The main goals of this dissertation were threefold. First, this study explored whether and how mothers base their own self-esteem on multiple domains of child development. Drawing on Crocker's contingencies of self-worth theory (Crocker & Wolfe, 2001), this research included one external domain (i.e., physical appearance), one internal domain (i.e., virtue), and one in the middle (i.e., academic competence). Second, this research examined the implications of child-based self-worth for parenting practices (i.e., psychological control, autonomy support) that have a significant impact on various child outcomes during adolescence. Notably, the relative importance of the three domains of child-based worth on parenting practices was investigated to delineate potentially different implications of these domains for parenting behaviors. Third, this study explored the conditions under which the link between child-based worth and parenting practices is strengthened or weakened. Specifically, the moderating role of internal pressure (i.e., regulatory focus, emotion dysregulation) and external pressure (i.e., perceived threat in the environment, cumulative family risk) were examined.

Figure 1 depicts the guiding conceptual framework of this dissertation. As indicated in the model, the present study aimed to illustrate the associations between different domains of child-based worth and parenting practices (paths a and b).

Additionally, the roles of the factors that may heighten or dampen the implications of child-based worth (i.e., perceived threat and regulatory focus) were explored (paths c through f).

Figure 1

Conceptual Model of the Relations Among the Study Variables



Note. Conceptual model of the relations between three domains of child-based worth and parenting behaviors (i.e., psychological control and autonomy support), with individual characteristics (i.e., regulatory focus, emotion dysregulation) and contextual characteristics (i.e., perceived threat, cumulative family risk) functioning as moderators.

Hypothesis 1: Multiple Domains of Child-Based Worth

Do mothers base their self-worth on various domains in child development? That is, does mothers' self-worth hinge on multiple specific domains of child outcome such as

virtue, academic competence, and physical appearance differently? During adolescence, there is a heightened emphasis on academic achievement, and evaluative information on children's academic performance is easily visible (Eccles & Midgley, 1989; Hoover-Dempsey & Sandler, 1997). Therefore, I anticipated that mothers would show the highest levels of child-based worth in the academic competence domain. Although the other two domains were expected to show lower mean levels than the academic competence domain, I did not have a specific a priori hypothesis regarding the differences between child-based worth in virtue and physical appearance.

Hypotheses 2: Associations Between Child-Based Worth and Parenting Behaviors

- 2-1. Do specific domains of child-based worth predict psychological control (path a) and autonomy support (path b)?
- 2-2. Does child-based worth in external domains show a stronger association with more controlling and less autonomy supportive parenting practices?

As in prior research, child-based worth is expected to be associated with more controlling behaviors within each domain of development. Notably, drawing upon the idea that pursuing more external contingencies (vs. internal contingencies) is related to suboptimal psychosocial functioning (Crocker et al., 2003, 2004), I hypothesized that child-based worth in external (vs. internal) domains (e.g., physical appearance) would be more conducive to parents' use of controlling behaviors. Conversely, I expected that child-based worth in more external domains would be associated with less autonomy supportive parenting.

2-3. Are there factors that moderate the link between child-based worth and parenting behaviors? Specifically, do individual characteristics (i.e., prevention focus, emotion dysregulation) and contextual characteristics (i.e., perceived environmental threat, cumulative family risk) intensify the association between child-based self-worth and parenting behaviors?

I hypothesized that the link between child-based worth and parenting practices would be modulated by moderating factors such as individual characteristics representing internal pressure (paths c and d) and contextual characteristics signifying external pressure (paths e and f). For promotion focus, given the lack of evidence on its implications for parenting, no specific a priori hypothesis was made.

CHAPTER 2

Method

Participants

A total of 320 participants who identified themselves as a mother of early to middle adolescents residing in the United States were recruited to take an online survey. The sample size was determined based on a priori power analysis in *G*Power 3.1* (Faul et al., 2009), statistical software for power analysis. Results showed that a minimum sample size of 291 participants was required to detect a small effect size ($f^2 = 0.06$) in the linear multiple regression with an alpha level set at .05 and a power of 80%. The small effect size was estimated based on the descriptive statistics from prior research reporting the relationship between mother-reported child-based self-worth and psychological control (e.g., Soenens et al., 2015).

Among 320 participants, 302 individuals ($M_{\text{age}} = 42.16$, $SD_{\text{age}} = 8.54$) were included in the final sample for analysis, after excluding 18 participants (exclusion criteria detailed in the Procedure section). Table 1 shows detailed sociodemographic information of the participants. All participants indicated having a child (i.e., target child for the survey) between 10 and 17 years old ($M_{\text{age}} = 13.84$, $SD_{\text{age}} = 2.21$; 58.6% girls). As in prior research on utilizing online sampling approaches in the United States (e.g., Boas et al., 2020), participating mothers' race was predominantly White (79%), followed by Black/African American (8.3%), Hispanic/Latina (6.3%), Asian (3%), biracial or multiracial (2.3%), other races (0.7%), and Pacific Islander (0.3%). To compare the current sample's racial breakdown with that of the population in the United States, a chi-

square goodness of fit test was performed using the national racial composition (U.S. Census Bureau, 2021) as the expected distribution. Results indicated that the racial distribution in the current sample was significantly different from the census data, $\chi^2(6) = 50.09, p < .001$. Notably, in the current sample, White participants were oversampled than the national population (79% vs. 60.1%), whereas Black/African American (8.3% vs. 13.4%) and Hispanic/Latina (6.3% vs. 18.5%) were undersampled. The majority of the participants (73.1%) reported having an educational background beyond some college education. Approximately half of the sample had a full-time job (47.7%), and over half reported currently being married or being a member of an unmarried couple (66%). In terms of the family size, 79.2% had one or two children under 18 years old in their household, and 83% of the participants reported having at least two adults in the household. Over half of the participants (53%) indicated that their annual household income was below \$60,000.

Table 1*Sociodemographic Characteristics of the Participants*

Mother's Sociodemographic Information	
Age (in years): Range = 21 – 69	$M = 42.16, SD = 8.54$
Race/Ethnicity	
Asian	9 (3%)
Black/African American	25 (8.3%)
Hispanic/Latina	19 (6.3%)
Pacific Islander	1 (0.3%)
White	239 (79.1%)
Other	2 (0.7%)
Biracial or Multiracial	7 (2.3%)
Education	
Some high school or less	15 (5%)
High school diploma or GED	64 (21.2%)
Some college	81 (26.8%)
Associates	43 (14.2%)
Bachelor's	52 (17.2%)
Master's	32 (10.6%)
Doctoral or professional	13 (4.3%)
Other (vocational)	2 (0.7%)
Employment Status	
Full-time	144 (47.7%)
Part-time	32 (10.6%)
Unemployed	21 (7%)
Looking for work	8 (2.6%)

Keeping house or raising children full-time	72 (23.8%)
Retired	8 (2.6%)
Student	5 (1.7%)
Temporarily laid off, sick leave, maternity leave	4 (1.3%)
Other (e.g., disability)	8 (2.6%)
Marriage status	
Married	176 (58%)
Divorced	45 (15%)
Widowed	7 (2%)
Separated	12 (4%)
Never married	37 (12%)
A member of an unmarried couple	25 (8%)
Number of children	
1	80 (27%)
2	118 (39%)
3	61 (20%)
4 or more	42 (14%)

Family's Sociodemographic Information

Number of children under 18 in household	
0	1 (0.3%)
1	127 (42.1%)
2	112 (37.1%)
3	44 (14.6%)
4 or more	18 (5.9%)
Number of adults in household, including a respondent	
1	51 (17%)
2	188 (62%)

3	41 (14%)
4 or more	22 (7%)
Household income	
Less than \$20,000	44 (15%)
\$20,000 – \$60,000	114 (38%)
\$60,000 – \$100,000	78 (26%)
\$100,000 – \$140,000	33 (11%)
\$140,000 or above	33 (11%)

Child’s Sociodemographic Information

Age (in years): Range = 10 – 17 *M* = 13.84, *SD* = 2.21

Gender

Female	177 (58.6%)
Male	124 (41.1%)
Non-binary	1 (0.3%)

Race/Ethnicity

Asian	6 (2.0%)
Black/African American	27 (8.9%)
Hispanic/Latinx	19 (6.3%)
Native American or Alaskan Native	1 (0.3%)
White	230 (76.2%)
Biracial or Multiracial	19 (6.3%)

Grade Level

4 th – 6 th Grade	75 (25%)
7 th – 9 th Grade	98 (33%)
10 th – 12 th Grade	124 (41%)
Not in school	5 (2%)

Procedure

Upon the approval by the university's institutional review board on the study procedures, participants ($N = 320$) were recruited from the online crowdsourcing platform for research and surveys, Qualtrics online panel. Qualtrics services targeted participant recruitment from various market research panels and allows researchers to include participants who are eligible based on the inclusion and exclusion criteria. Compared to other online sampling platforms (e.g., Mechanical Turk, Facebook), Qualtrics panels in the United States have been found to be more similar to a national probability sample on several sociodemographic variables (e.g., education, income, race/ethnicity; Boas et al., 2020).

The inclusion criteria of the study required participants to a) be over 18 years old, b) identify as a mother of at least one child in early to middle adolescence (ages from 10 to 17), c) be residing in the United States, and d) be proficient in English. Eligible participants were identified and invited to take part in the study and redirected to the online survey when they agreed to participate. The email invitation stated that this study involved a one-time survey and informed that they would be compensated by Qualtrics directly upon completion of the entire data collection. It also specified the estimated time to complete the survey (10 to 15 minutes). On Qualtrics, the cost per completed survey was \$5, and the amount and type of compensation that the participant received depended on their preferred format (e.g., gift cards, airline miles, redeemable points). A soft launch ($n = 30$) was conducted to detect any quality issues in the data, and necessary changes (i.e., including a timer and additional screeners) were made to the survey before fully

launching the survey. The data collection took place in November 2021, and it spanned two days upon the full launch.

Following recommendations for collecting data via online panels (e.g., Chandler et al., 2019), several screening procedures (e.g., attention checks) and post-collection checks (e.g., checking responses to the screening questions and failures to meet the minimum completion time) were used to ensure data quality. At the beginning of the survey, participants were asked to indicate if they were a mother of at least one child between 10 to 17 years old, as well as their own and the target child's age (see Appendix A). If they responded *no* to the question about being a mother and/or if the value provided for the child's age was not between 10 and 17, the survey automatically ended. Within the survey, two attention-checking items instructing participants to select a certain response option (i.e., "For this question, choose *disagree*" and "Please respond with *agree*") were included. In addition, a timer set for 5.15 minutes was embedded in the system based on the median completion time of the questionnaire from preliminary data collection ($n = 30$). During the data collection, participants who a) failed to pass the attention checks and/or b) took less than 5.15 minutes to complete the survey were not included in the initial dataset, which contained 320 cases in total. In post-collection checks, participants who provided a) inconsistent answers for the child's age at the beginning and the end of the survey ($n = 15$) and b) the same responses for a set of items (i.e., "straight-liners"; $n = 3$) were excluded from the final dataset. Hence, in the final dataset, 302 responses were retained.

Measures

All survey items were presented to the participants in English (see Appendices B to L). The online survey was administered via Qualtrics, and the order of the items within the same part was randomized.

Sociodemographic Information

Participants reported on their sociodemographic information including their age, ethnicity, employment status, marital status, family size, and family income (see Appendices B1 and B2), as well as the target child's age, ethnicity, gender, and grade level (see Appendix B3). In addition, to assess how participants' perception of neighborhood safety, the Safety subscale from Mujahid et al.'s (2007) Neighborhood Scale was utilized (see Appendix C). This scale has three items asking how participants feel about their neighborhood area (i.e., one mile around their home) on a 5-point scale (1 = *Strongly disagree* to 5 = *Strongly agree*). A sample item includes "Violence is not a problem in my neighborhood." The mean of the three items was taken, with higher numbers indicating greater levels of perceived neighborhood safety. In the current sample, the Cronbach's alpha was .84.

Child-Based Worth

To measure domain-specific child-based worth, items were adopted from the Contingencies of Self-Worth Scale developed by Crocker and colleagues (2003), with minor modifications (see Appendices D). Participants indicated the extent to which they feel their self-worth hinges on their children's performance in certain domains, using a 7-point scale (1 = *Strongly disagree* to 7 = *Strongly agree*). As the original scale was

developed to assess contingent self-esteem based on the reporter's own performance (e.g., "My self-esteem is influenced by my academic performance"), it was modified so that the items measure how mothers' self-esteem is hinged on their children's accomplishments (e.g., "My self-esteem is influenced by my child's academic performance").

Among seven subscales in the original scale, three domains (i.e., virtue, academic competence, physical appearance) were selected and assessed in the current study. The Virtue subscale (4-item; Appendix D1) measured how mothers' self-esteem is based on their children's moral adequacy or how their children meet the ethical standards (e.g., "My self-esteem would suffer if my child did something unethical"). The Academic Competence subscale (5-item; Appendix D2) and the Physical Appearance subscale (5-item; Appendix D3) assessed how mothers' self-esteem is contingent on their children's academic performance ("I feel better about myself when I know my child is doing well academically") and physical appearance ("My sense of self-worth suffers whenever I think my child doesn't look good"), respectively. The mean of the items for each domain was taken, with higher numbers indicating higher child-based self-worth in the corresponding domain. Intercorrelations among the three measures ranged from .62 to .70, $ps < .001$. In the current sample, the Cronbach's alphas of each subscale were acceptable, .82 for Virtue, .74 for Academic Competence, and .71 for Physical Appearance, respectively.

Psychological Control

Mothers' psychologically controlling parenting behaviors over their children were assessed by eight items from an 18-item measure (see Appendix E1) used in Wang et al. (2007). The measure adopted a number of items from Barber (1996) and Silk et al. (2003), with slight modifications. Participants indicated the extent to which they use psychological control (e.g., "If my child does something I do not like, I sometimes act less friendly to her so that she knows I am disappointed") on a 5-point scale (1 = *Not at all true* to 5 = *Very true*). Because the items were created for children to report on their perceptions of their parents' psychological control, minor changes to wording were made to minimize social desirability concerns (e.g., "When my child does not behave as I wish" was changed to "When my child does something I think is wrong"; Ng et al., 2014). The mean of the eight items was taken, with higher numbers indicating higher psychologically controlling parenting. In the current sample, the Cronbach's alpha was .87.

Autonomy Support

Mothers' autonomy supportive parenting behaviors were measured by eight items from a 13-item measure (see Appendix E2) adopted from McPartland and Epstein (1977) and Steinberg et al. (1992). Participants indicated the extent to which they utilize autonomy supportive parenting behaviors on a 5-point scale (1 = *Not at all true* to 5 = *Very true*). Since the items were created as a child-report (e.g., "My parents allow me to make choices whenever possible"), it was modified into a mother-report (e.g., "I allow my child to make choices about her/him whenever possible"). The mean of the eight

items was taken, with higher numbers indicating mothers' greater autonomy supportive parenting. In the current sample, the Cronbach's alpha was .74.

Regulatory Focus

To assess mothers' regulatory focus styles, ten items from the 18-item regulatory focus questionnaire developed by Lockwood et al. (2002) were used (see Appendix F). This measure includes the Promotion Focus subscale (9 items; e.g., "I frequently imagine how I will achieve my hopes and aspirations"; Appendix F1) and the Prevention Focus subscale (9 items; e.g., "I am anxious that I will fall short of my responsibilities and obligations"; Appendix F2). Some of the items from the original measure were dropped, as they tap into regulatory focus regarding success and failure in school contexts (e.g., "I often worry that I will fail to accomplish my academic goals"). Participants indicated the extent to which they agree with each statement on a 7-point scale (1 = *Not at all true of me* to 7 = *Very true of me*). The mean of the nine items for each motivational style was taken separately, with higher numbers indicating heightened promotion-oriented and prevention-oriented regulatory focus, respectively. Two factors were positively associated, $r = .43, p < .001$. In the current sample, the Cronbach's alphas of the two subscales were .83 (Promotion) and .72 (Prevention).

Emotion Dysregulation

To assess mothers' emotion dysregulation, two subscales (i.e., Goals and Impulse) from the Difficulties in Emotion Regulation (DERS) developed by Gratz and Roemer (2004) were used (see Appendix G). Given that different brief versions of the DERS (e.g., DERS-16 by Bjureberg et al., 2016, DERS-SF by Kaufman et al., 2016) have been

found to be reliable and valid (Skutch et al., 2019), overlapping items across the brief versions were selected. Specifically, to measure difficulties engaging in goal-directed behaviors in the presence of negative emotions, four items from the Goals subscale (e.g., “When I am upset, I have difficulty thinking about anything else”; Appendix G1) were used. Additionally, four items from the Impulse subscale (e.g., “When I am upset, I lose control over my behaviors”; Appendix G2) assessed difficulties in controlling behaviors when experiencing negative emotions. Participants indicated how often each statement applies to themselves on a 5-point scale (1 = *Almost never* to 5 = *Almost always*). In the current sample, the Cronbach’s alphas were .91 (Goals) and .93 (Impulse), and the two subscales were highly correlated, $r = .66, p < .001$. Given the empirical evidence supporting the general factor of emotion dysregulation and unidimensionality of the DERS scale (e.g., Moreira et al., 2020), two subscales were collapsed, and the higher mean of this composite score indicated greater levels of difficulties in maternal emotion dysregulation. The Cronbach’s alpha of this composite scale was .93.

Perceived Threat

Seven items from the 11-item measure developed by Gurland and Grolnick (2005) were used to assess mothers’ perceived threat in the environments where their children will live in the future (see Appendix H). The original measure comprises three subscales: Worry, Scarcity, and Instability. In the current study, the Scarcity and the Instability subscales were utilized. While the Scarcity subscale (3 items; Appendix H1) measures how mothers perceive resources as limited and scarce for their children (e.g., “There aren’t enough opportunities out there for everyone”), the Instability subscale (4

items; Appendix H2) assesses how mothers perceive the world to be unpredictable and unstable (e.g., “It’s getting harder and harder all the time to make a decent living”). Participants indicated the extent to which they perceive the world as more threatening on a 6-point scale (1 = *Strongly disagree* to 6 = *Strongly agree*). The mean of the items was taken for each subscale, with higher numbers indicating greater environmental threat perceived by mothers. Two subscales were positively correlated, $r = .29, p < .001$. In the current sample, the Cronbach’s alphas of the two subscales were .70 (Scarcity) and .57 (Instability).

Cumulative Family Risk

To assess contextual factors that might be related to parenting behaviors, seven risk factors were identified and assessed. Following prior research (e.g., Evans et al., 2013; Lin & Seo, 2017), potential risk factors, such as 1) income (annual household income less than \$20,000), 2) educational attainment (high school diploma or less), 3) family size (three or more children in the household), 4) employment (not employed), 5) single parenthood (not married or not in a relationship), 6) teen parenthood (age difference between a mother and a child is under 18), and 7) neighborhood safety (average responses below 3, which is a neutral answer, *neither agree nor disagree*) were coded as “1”. The cumulative family risk index was computed by summing the seven risk factors, and the scores ranged from 0 to 6 in the current sample.

Covariates

Child Competence. A child’s competence in virtue, academic, and appearance domain was assessed by three items. Based on Sweeting et al. (2011), where children’s

self-perceptions of their status were measured, this measure asked how competent participants perceive their children (e.g., “How ethical or moral is your child compared with the rest of their year group?” for the virtue domain). Participants rated their children’s relative position in each domain using a picture of a ladder scale, with rungs ranging from 1 to 10 (e.g., “*Top = children who are most ethical, moral*” for the virtue domain; see Appendix I).

COVID-19 Stress. Given the time of the data collection (November 2021), parenting practices reported by mothers might be influenced by additional parenting stress from the impact of the COVID-19 pandemic (e.g., Wissemann et al., 2021). To statistically control for the relatively acute stressor – the impact of the COVID-19 pandemic – on parenting practices under the study, short versions of the Perceived Coronavirus Threat Questionnaire and the Coronavirus Impacts Questionnaire developed by Conway and colleagues (2020) were used (Appendix J). These scales have been found to be valid and reliable in prior research (Conway et al., 2021).

The short version of the Perceived Coronavirus Threat Questionnaire scale includes three items (e.g., “I am afraid of the coronavirus (COVID-19)”); Appendix J1), and the Cronbach’s alpha was .88 in the current sample. The short version of the Coronavirus Impacts Questionnaire has three subscales, with two items per subscale: the Financial subscale (e.g., “The Coronavirus (COVID-19) has impacted me negatively from a financial point of view”), the Resource subscale (e.g., “It has been difficult for me to get the things I need due to the Coronavirus (COVID-19)”), and the Psychological subscale (e.g., “I have become depressed because of the Coronavirus (COVID-19)”);

Appendix J2). In the current sample, the Cronbach's alphas of the three subscales were .78, .85, and .83, respectively. Participants indicated how often each statement applies to themselves on a 7-point scale (1 = *Not at all true of me* to 7 = *Very true of me*). Two questionnaires were collapsed, and the higher mean of this composite score indicated greater levels of stress related to the COVID-19 pandemic. The Cronbach's alpha of the composite measure (i.e., nine items) was .89.

Parental Psychological Availability. To measure mothers' cognitive and emotional availability to their children, three items from the 8-item Psychological Availability Scale (Danner-Vlaardingebroek et al., 2013) were used¹ (see Appendix K). This scale measures the workday spillover effect into the partner relationships but was later adapted for parent-child relationships as well. In the current study, three items (e.g., "When I spent time with my son/daughter today, I was fully available for activities with my child") were selected following Van der Kaap-Deeder et al. (2019). Participants indicated how often each statement applies to themselves on a 5-point scale (1 = *Totally disagree* to 5 = *Totally agree*). The Cronbach's alpha of this scale in the current sample was .80.

Social Desirability. To statistically control for the potential influence of self-report bias in parenting behaviors (Bornstein et al., 2015), I assessed participants' overall tendency to respond favorably. A 5-item Socially Desirable Response Set (SDRS-5; Hays et al., 1989; Appendix L) measures how respondents respond to the items in a way to

¹ This scale was originally included in this dissertation to explore its relationship with child-based worth. However, in the current sample, mothers' psychological availability did not show a statistically significant relationship with any domain of child-based worth. Given the relationship between psychological availability and autonomy support documented in the literature (Van der Kaap-Deeder et al., 2019), as well as in the current sample ($r = .23, p < .001$), this measure was included as a covariate for autonomy support.

represent themselves in a favorable light (e.g., “I am always courteous even to people who are disagreeable”) on a 5-point scale (1 = *Definitely false* to 5 = *Definitely true*). Only extreme responses (i.e., *Definitely true* or *Definitely false* for reversed items) were coded as “1”, and high scores represented participants’ tendency to present themselves favorably, with possible scores ranging from zero to five. In the current sample, approximately two-thirds of the participants (67%) gave at least one answer that reflects social desirability, which is consistent with Hays et al.’s (1989) observation. Additionally, the majority of the participants (78%) showed less than three answers indicating social desirability ($M = 1.47$, $SD = 1.44$, Median = 1.00). The Cronbach’s alpha for this scale was .66.

Analytic Plan

To address the research questions, four sets of analyses were conducted. First, as a preliminary analysis, descriptive statistics were used to summarize the data, and a correlation analysis was conducted to examine covariates. Second, to investigate whether mothers based their self-worth on various domains in child development to different extents, within-person differences in three different domains (i.e., virtue, academic competence, physical appearance) were tested in a repeated-measures analysis of variance (ANOVA). Third, to test the main hypotheses of the study, the implications of multiple domains of child-based worth for parenting behaviors (i.e., psychological control and autonomy support) were examined. In this set of analyses, I utilized three analytic approaches to evaluate the unique and joint contribution of multiple child-based worth domains in path analysis and the relative importance of each domain. Lastly, to

examine whether the factors representing internal and external pressure modulated the link between child-based worth and parenting practices, I explored the moderation effects in a series of path models.

Given that a series of regression models were evaluated, I considered using the Bonferroni correction (i.e., dividing the alpha level by the total number of tests conducted) to control the inflated Type 1 error rate (Bland & Altman, 1995). Although widely used when performing multiple null hypothesis significance tests, this practice has raised many questions and debates as well, mainly because alpha adjustment can increase the chance of Type 2 error (e.g., Perneger, 1998). Furthermore, researchers argue that the Bonferroni correction is not necessary nor appropriate when multiple individual hypotheses are being investigated without a single joint null hypothesis (Armstrong, 2014; Rubin, 2021). Since this research aimed to test multiple individual hypotheses to shed light on specific domains of child-based worth and the moderators, rather than testing a joint null hypothesis, the Bonferroni correction was not employed in the subsequent analyses.

CHAPTER 3

Results

This chapter is divided into four subsections. First, I present findings from preliminary analyses. Handling of missingness and descriptive statistics including bivariate correlations among the study variables and covariates are reported in this subsection. In the remaining three sections, I report findings for each research question: mean level differences in the domains of child-based worth, implications of child-based worth domains for parenting practices, and the moderation analyses.

Preliminary Analyses

Preliminary analyses (i.e., missingness, descriptive statistics) and a test of covariates using a correlation analysis were performed. All analyses in this section were performed in IBM SPSS Statistics 27.0.

Missingness

Among the 302 participants, 92% had complete data on all study variables at the item level. To minimize missing data, the “request response” feature in Qualtrics (i.e., reminding the respondent that there is a skipped question before moving to the next page) was activated. While 25 participants (8%) had one or more missing items in the questionnaire, no participant missed more than five items (4% of the entire survey). Little’s (1988) MCAR test indicated that the pattern of missingness is completely random, $\chi^2(980) = 1040.08, p = .089$. Hence, missingness in the data was not related to observed or unobserved data (Little & Rubin, 1989). Furthermore, in evaluating the main hypotheses, path analyses were conducted in Mplus 7.31 (Muthén & Muthén, 1998–

2012), which utilizes full information maximum likelihood (FIML). In addressing missing data, FIML produces less biased estimates, compared to traditional missingness approaches, such as listwise deletion or mean imputation (Graham, 2009).

Descriptive Statistics

Descriptive statistics and Cronbach's alpha of each study variable, as well as bivariate correlations among the study variables, are presented in Table 2. For all variables under study, no violation of the normality assumptions was evident. Psychological control and autonomy support were negatively correlated, $r = -.13, p = .026$. Psychological control was positively related to the three domains of child-based worth, $r_s > .48, p_s < .001$, while autonomy support showed a significant relationship only with child-based worth in physical appearance, $r = -.15, p = .010$. For both prevention focus and emotion dysregulation, there were positive relationships with psychological control, $r_s > .37, p_s < .001$, but not with autonomy support, $r_s < .03, p_s > .648$. Promotion focus was positively correlated with both types of parenting practices, $r_s > .20, p < .001$. Perceived scarcity was positively associated with psychological control, $r = .34, p < .001$, and negatively with autonomy support, $r = -.13, p = .010$. However, perceived instability was not significantly correlated with either parenting practice, $r_s < .08, p_s > .145$. The cumulative family risk was negatively associated with both parenting practices, $r_s < -.15, p_s < .010$.

Table 2*Bivariate Correlations Among the Main Study Variables*

	1	2	3	4	5	6	7	8	9	10	11
1. Psychological Control	–										
2. Autonomy Support	-.13*	–									
3. CBW Virtue	.59***	.00	–								
4. CBW Academic	.48***	-.06	.70***	–							
5. CBW Appearance	.57***	-.15**	.62**	.66***	–						
6. Prevention Focus	.42***	.03	.45***	.37***	.33***	–					
7. Promotion Focus	.25***	.20***	.35***	.39***	.28***	.43***	–				
8. Emotion Dysregulation	.37***	-.00	.37***	.21***	.30***	.49***	.13*	–			
9. Scarcity	.34***	-.15**	.32***	.24***	.26***	.32***	.15*	.27***	–		
10. Instability	-.05	.08	.04	-.02	-.07	.23***	.11	.19**	.29***	–	
11. Family Risk Index	-.15*	-.20**	-.24***	-.02	-.06	.04	-.03	-.03	-.01	.21***	–
Mean	2.44	4.10	3.61	4.02	2.99	4.62	5.30	2.26	3.63	4.66	1.67
Standard Deviation	0.85	0.48	1.33	1.21	1.16	1.26	1.19	1.01	1.15	0.89	1.45
Skewness	0.81	-0.36	0.15	-0.23	0.27	-0.18	-0.78	0.82	-0.15	-0.52	0.73
Kurtosis	0.11	0.14	-0.69	-0.16	-0.56	-0.14	0.80	-0.29	-0.45	-0.08	-0.05
Cronbach's alpha	0.87	0.74	0.82	0.74	0.71	0.72	0.83	0.93	0.70	0.57	–

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

Covariates

Potential covariate variable sets included sociodemographic variables (i.e., mothers' age, race, occupational status, and socioeconomic status, and children's age, race, gender, the number of siblings, perceived child competence), social desirability, COVID-19 stress, and psychological availability. To examine whether the independent and dependent variables were related to these potential covariates, a correlation analysis was performed. Table 3 shows the results from this analysis. All covariate variables associated with parenting practices were first entered in the baseline models examining the main research questions (e.g., a model where each child-based worth domain predicts parenting practices) as predictors of parenting practices. In the subsequent analyses, covariates that were no longer predictive of parenting behaviors in the baseline models were dropped. Specifically, mothers' age, income, and COVID-19 stress were included to predict psychological control, and children's age, income, mothers' race (White vs. non-White), psychological availability, and social desirability were specified to predict autonomy support.

Table 3*Bivariate Correlations with Covariates*

	Psychological Control	Autonomy Support	CBW Virtue	CBW Academic	CBW Appearance
Mother					
Race ¹	-.02	.14*	.04	-.07	-.06
Age	-.18**	-.05	-.12*	-.08	-.12*
Education ²	.21***	.11	.26***	.12*	.12*
Employment ³	.21***	.07	.22***	.12*	.18**
Marital Status ⁴	.16**	.17**	.21**	.03	.06
Social Desirability	-.17**	.19**	-.18**	-.08	-.16**
COVID-19 Stress	.38***	-.07	.34***	.29***	.28***
Psychological Availability	.04	.23***	-.08	-.04	-.06
Family					
Number of Children	-.05	.08	-.10	-.08	-.09
Number of Children in a Household	.10	-.02	.02	.00	.06
Number of Adults in a Household	-.02	-.01	-.05	-.04	-.06
Income	.30**	.14*	.33**	.14*	.17**
Neighborhood Safety	.06	.17**	.15**	.02	-.04
Child					

Race ¹	.00	.13*	.06	-.08	-.05
Age	-.01	.17*	.05	.04	.03
Gender ⁵	.03	-.06	-.01	-.01	.05
Child's Competence in Virtue	-.02	.17**	-.04	.03	-.01
Child's Competence in Academic	.05	.11*	.03	.04	.10
Child's Competence in Appearance	.11	.13*	-.01	.05	.07

Note. CBW = Child-based worth

¹ Non-White = 0, White = 1

² High school or less = 1, Some college = 2, Associate degree = 3, Bachelor's degree = 4, Post-graduate degree (i.e., Master's degree or more) = 5

³ Currently not employed = 0, Employed = 1

⁴ Currently not in marriage or relationship = 0, Married or a member of an unmarried couple = 1

⁵ Male = 0, Female = 1; non-binary category was not included in this analysis due to small sample size ($n = 1$)

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

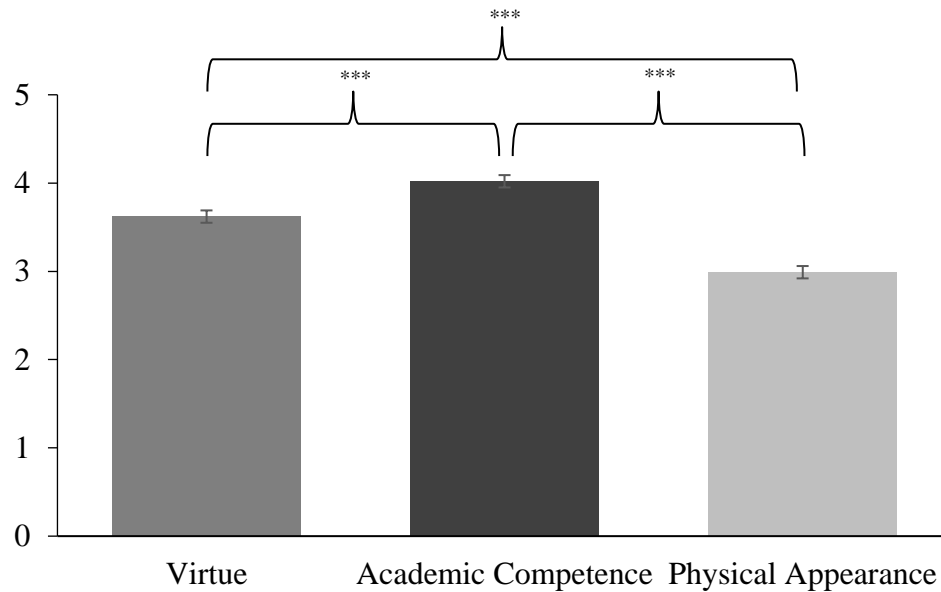
Within-Person Differences in Child-Based Worth Domains

To investigate within-person differences in the three different domains of child-based worth (i.e., virtue, academic competence, physical appearance), a repeated-measures ANOVA was performed. The analysis was conducted in IBM SPSS Statistics 27.0, and covariates related to child-based worth domains (i.e., mothers' age, educational attainment, employment status, marital status, social desirability, and income) were included. Mauchly's test of sphericity was significant, $\chi^2(2) = 8.64, p = .013$, suggesting a violation of the assumption of sphericity. As the estimated sphericity (ϵ) was over 0.75, I used the Huynh-Feldt correction (Girden, 1992).

Findings revealed statistically significant within-person differences across the three domains of child-based worth, $F(2, 584.88) = 4.58, p = .011$. Consistent with hypothesis, Bonferroni-corrected pairwise comparisons showed that mothers reported the highest levels of child-based worth in the academic competence domain ($M = 4.02, SE = 0.07$), followed by virtue ($M = 3.62, SE = 0.07$) and physical appearance ($M = 2.99, SE = 0.07$), $ps < .001$ (see Figure 2).

Figure 2

Within-Person Differences in Child-Based Worth Domains



Note. Error bars denote standard error of the mean.

Associations Between Child-Based Worth Domains and Parenting Practices

To investigate if various domains of child-based worth predicted parenting practices, three analytic approaches were utilized to test the unique and joint contribution of multiple child-based worth domains. First, to examine the unique implications of each domain of child-based worth for parenting practices, three separate models (i.e., virtue, academic competence, physical appearance) were evaluated in path models. In each model, a single indicator of each domain of child-based worth was specified to predict psychological control and autonomy support. This set of analyses informs whether and how each domain of child-based worth explains variations in parenting practices. Second, a single path model was used to examine the joint contribution of different domains of

child-based worth, with all three domains specified to predict psychological control and autonomy support. This comprehensive model informs how each domain of child-based worth contributes to parenting practices while controlling for the other two domains. Lastly, to directly evaluate the relative importance of the three domains of child-based worth, I used a relative weight analysis (Johnson, 2000). When multiple predictors are expected to be correlated, this technique is useful in determining the relative contribution of predictors and in interpreting the relative importance of predictors, as it produces more reliable coefficients than multiple regression (Tonidandel et al., 2009). While the first two approaches were conducted in a traditional multiple regression framework, the third approach was expected to provide a more reliable interpretation of the coefficients, in the case of multicollinearity among the domains of child-based self-worth.

The first two sets of analysis were performed in path analysis using Mplus 7.31 (Muthén & Muthén, 1998–2012). In Mplus, the model fit was evaluated based on the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the Root-Mean-Square Error of Approximation (RMSEA) with associated 90% confidence intervals (CI), and the Standardized Root-Mean-Square Residual (SRMR). Following prior recommendations (e.g., Hu & Bentler, 1999), CFI and TLI values above .90 and RMSEA and SRMR values below .08 indicate acceptable fit, suggesting that the data fit the model well. The third analysis was conducted in RWA-Web, a web-based statistical tool (Tonidandel & LeBreton, 2015). Covariates were included in every model in the three approaches.

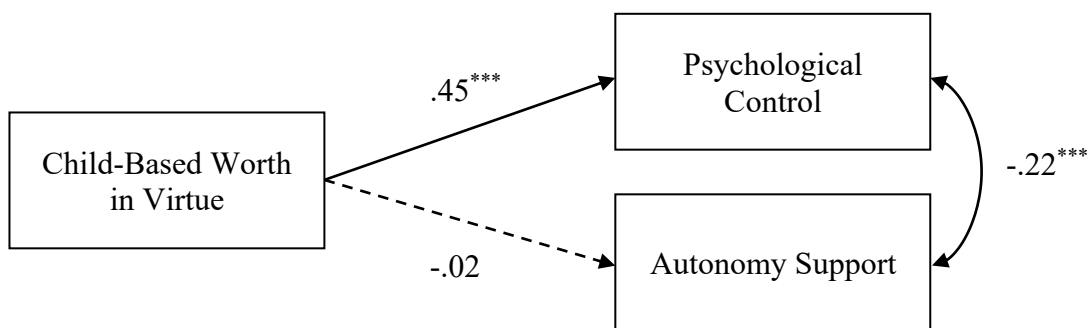
Unique Implications of Each Domain

To examine the unique implications of each domain of child-based worth in parenting practices, three separate path models were evaluated. In each model, a single domain of child-based worth (i.e., virtue, academic competence, physical appearance) was specified to predict psychological control and autonomy support, in addition to covariates.

For child-based worth in the virtue domain, the model fit was good, $\chi^2(6) = 12.64$, $p = .049$, CFI = .97, TLI = .91, RMSEA = 0.06 (90% CI: 0.00, 0.11), SRMR = .02. While child-based worth in virtue was positively associated with psychological control ($\gamma = .45$, $p < .001$), it did not predict autonomy support ($\gamma = -.02$, $p = .800$) above and beyond the effects of covariates (see Figure 3).

Figure 3

Associations Between Child-Based Worth in Virtue and Parenting Practices

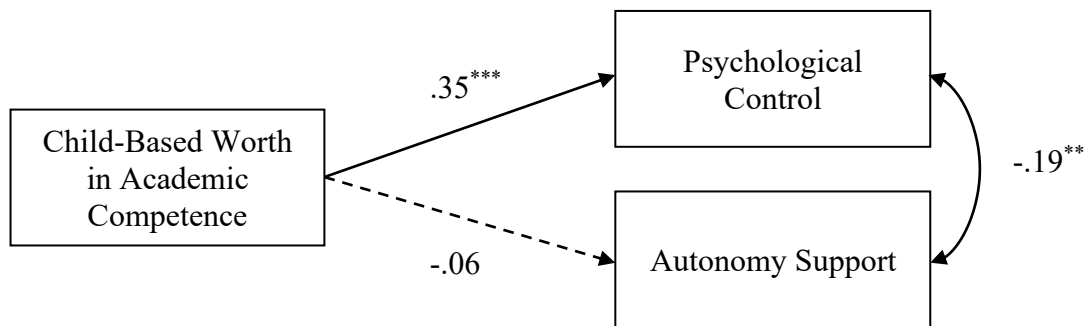


Note. Standardized estimates are reported. Solid lines represent significant coefficients, and a dotted line represents a non-significant coefficient. *** $p < .001$.

For child-based worth in the academic competence domain, the model fit was good, $\chi^2(6) = 11.13, p = .084, CFI = .97, TLI = .93, RMSEA = 0.05$ (90% CI: 0.00, 0.10), SRMR = .02. While child-based worth in academic competence was positively associated with psychological control ($\gamma = .35, p < .001$), it did not predict autonomy support ($\gamma = -.06, p = .256$) above and beyond the effects of covariates (see Figure 4).

Figure 4

Associations Between Child-Based Worth in Academic Competence and Parenting Practices

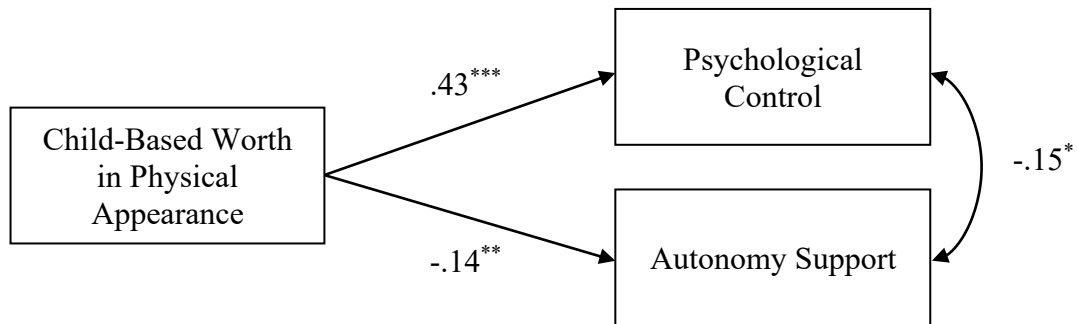


Note. Standardized estimates are reported. Solid lines represent significant coefficients, and a dotted line represents a non-significant coefficient. ** $p < .01$, *** $p < .001$.

For child-based worth in the physical appearance domain, the model fit was good, $\chi^2(6) = 11.42, p = .076, CFI = .98, TLI = .93, RMSEA = 0.06$ (90% CI: 0.00, 0.10), SRMR = .02. As shown in Figure 5, child-based worth in physical appearance was positively associated with psychological control ($\gamma = .43, p < .001$) and negatively with autonomy support ($\gamma = -.14, p = .008$).

Figure 5

Associations Between Child-Based Worth in Physical Appearance and Parenting Practices



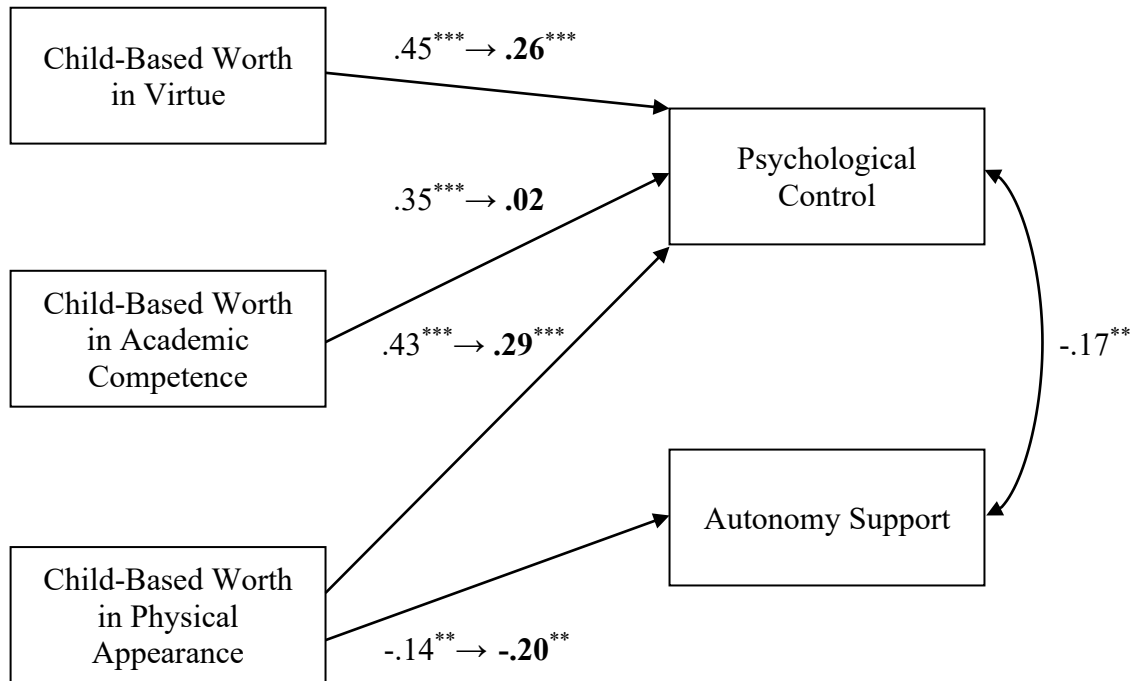
Note. Standardized estimates are reported. All coefficients were significant. * $p < .05$, ** $p < .01$, *** $p < .001$.

Joint Contribution of the Three Domains

To investigate how each domain of child-based worth contributes to parenting practices while controlling for the two other domains, a single path model was used. All three domains were specified to predict psychological control and autonomy support, with covariates accounted for. The model fit was good, $\chi^2(6) = 12.13, p = .059, CFI = .98, TLI = .91, RMSEA = 0.06$ (90% CI: 0.00, 0.11), SRMR = .02. As presented in Figure 6, findings from this model were largely consistent with those from the three separate models, despite the differential magnitudes of associations. Of note, the path from child-based worth in academic competence to psychological control was no longer significant in this model, $\gamma = .02, p = .770$.

Figure 6

Associations Between Child-Based Worth Domains and Parenting Practices



Note. Standardized estimates are reported. Coefficients in regular fonts indicate path coefficients from the separate models, and coefficients in bold indicate those from the joint model. Nonsignificant paths are omitted for clarity. ** $p < .01$, *** $p < .001$.

Relative Importance of Three Domains in Parenting Behaviors

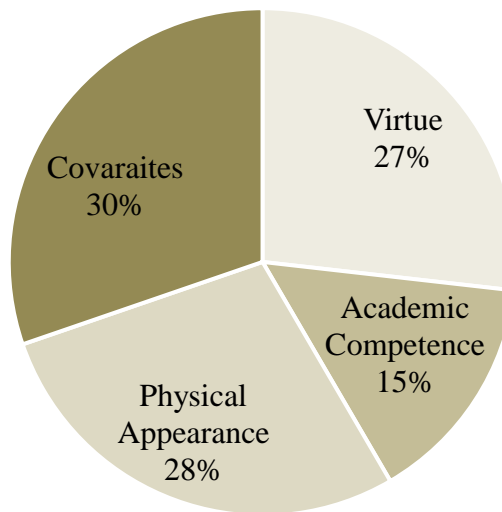
To directly evaluate the relative importance of the three domains of child-based worth in parenting practices, a relative weight analysis (Johnson, 2000) was used. Given the high interrelationships among the three domains of child-based worth ($r_s > .62$), I supplemented the traditional regression models with a relative weight analysis (RWA) in RWA-Web (Johnson, 2000; Tonidandel & LeBreton, 2015). In RWA, importance

weights are computed by transforming the predictors into orthogonal variables and regressing the dependent variable on the new set of orthogonal variables (Johnson, 2000). This procedure yields the relative weights (ϵ), which can be then rescaled as a percentage of predicted variance from each predictor (Tonidandel et al., 2009). For this procedure, bootstrapping was used with 10,000 replications, as recommended by Tonidandel and colleagues (2009). The statistical significance of the predictor is determined based on the 95% bootstrapped confidence interval (CI), such that if the CI around a relative weight does not include zero, the predictor is significantly associated with the outcome. RWA-Web also produces CI around the differences between the relative weights to evaluate if the relative contribution of the predictors differs from each other. If the CI does not include zero, the relative weight of the predictor variable significantly differs from a reference variable (Tonidandel et al., 2009; Tonidandel & LeBreton, 2015).

To predict psychological control, the three domains of child-based worth and covariates (i.e., mothers' age, income, and COVID-19 stress) were included as predictors. The total R^2 was 0.48, and all predictors in the model were statistically significant. As illustrated in Figure 7, of the 48% of the variance in psychological control explained by the predictors in the model, child-based worth in physical appearance explained the largest proportion (28%), followed by child-based worth in virtue (27%) and academic competence (15%). Comparisons of the predictors revealed that the contribution of child-based worth in virtue was different from child-based worth in academic competence (95% CI: -0.11, -0.01), but not significantly different from child-based worth in physical appearance (95% CI: -0.06, 0.08).

Figure 7

Relative Importance of Child-Based Worth Domains in Predicting Psychological Control

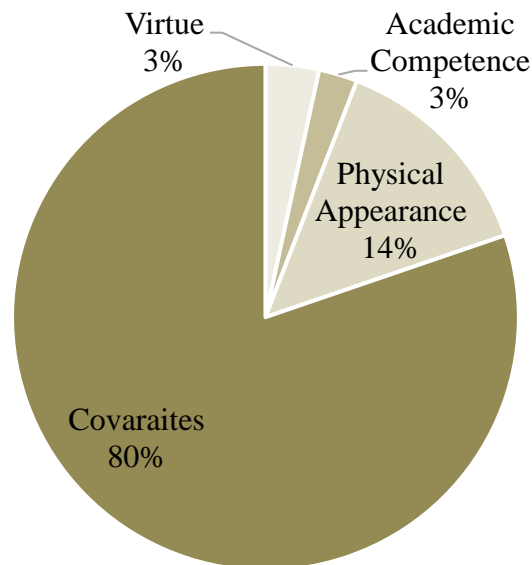


To predict autonomy support, the three domains of child-based worth and covariates (i.e., children's age, income, mothers' race (White vs. non-White), psychological availability, and social desirability) were included. The total R^2 was 0.16, and all predictors in the model were significant except child-based worth in virtue and academic competence, and mothers' race. As shown in Figure 8, of the 16% of the variance in autonomy support accounted for by the predictors in the model, the majority of the explained variance was derived from covariates (80%). For the remaining portion of the explained variance, child-based worth in appearance explained the largest proportion (14%), and child-based worth in virtue and academic competence only accounted for 3% and 2%, respectively. Comparisons of the predictors indicated that the contribution of child-based worth in virtue was not significantly different from that of

child-based worth in physical appearance (95% CI: -0.00, 0.05), or academic competence (95% CI: -0.02, 0.01).

Figure 8

Relative Importance of Child-Based Worth Domains in Predicting Autonomy Support



Analysis of Moderators: Internal Pressure and External Pressure

To examine whether the individual and contextual factors moderate the links between child-based worth and parenting practices, moderation effects were tested using a series of path models. To achieve parsimony and avoid the pitfalls of under-identified models, each moderator was examined in separate models. In each model, a moderator (e.g., prevention focus) was specified to interact with the three domains of child-based worth to predict psychological control and autonomy support. Specifically, three interaction terms (e.g., cross products of prevention focus and each domain of child-based worth) were created as manifest variables and included as predictors, in addition to

all independent variables (i.e., domains of child-based worth), moderators, and covariates².

Prior to creating the interaction terms, independent variables (i.e., child-based worth) and moderators were mean-centered to enhance the interpretability of coefficients. These continuous variables were centered around their grand means, given that the units of analysis were assumed to be at the same level and independent observations, hence not nested data (Enders & Tofighi, 2007; Nezlek, 2008). When the interaction effect was statistically significant, simple slopes were computed and plotted in Jeremy Dawson's Excel macros (Dawson, n.d.). Simple slope analyses were performed at low (1 standard deviation below the mean) and high (1 standard deviation above the mean) levels of the moderator (Aiken & West, 1991). Table 4 shows the summary of findings from the interaction analyses.

² All models were replicated in traditional linear regression models using IBM SPSS Statistics 27.0 to compute collinearity diagnostics. Results showed that there was no serious multicollinearity, as variance inflation factor (VIF) did not exceed 10 and tolerance was above 0.1 (Marcoulides & Raykov, 2019), VIF < 5.87, tolerance > 0.17 in predicting psychological control; VIF < 5.78, tolerance > 0.17 in predicting autonomy support.

Table 4*Summary of the Interaction Analyses*

		On Psychological Control			On Autonomy Support		
		Virtue	Academic	Physical	Virtue	Academic	Physical
Individual Characteristics	Prevention Focus	–	–	High: + Low: <i>ns</i>	–	–	–
	Promotion Focus	High: + Low: <i>ns</i>	–	–	–	–	–
	Emotion Dysregulation	High: + Low: <i>ns</i>	–	–	–	–	–
Contextual Characteristics	Perceived Scarcity	–	–	–	–	–	–
	Perceived Instability	–	–	–	–	High: <i>ns</i> Low: <i>ns</i>	High: <i>ns</i> Low: –
	Family Risks	High: – Low: +	High: <i>ns</i> Low: <i>ns</i>	–	–	–	–

Note. + signs indicate simple slopes in the positive direction, and – signs denote those in the negative direction.

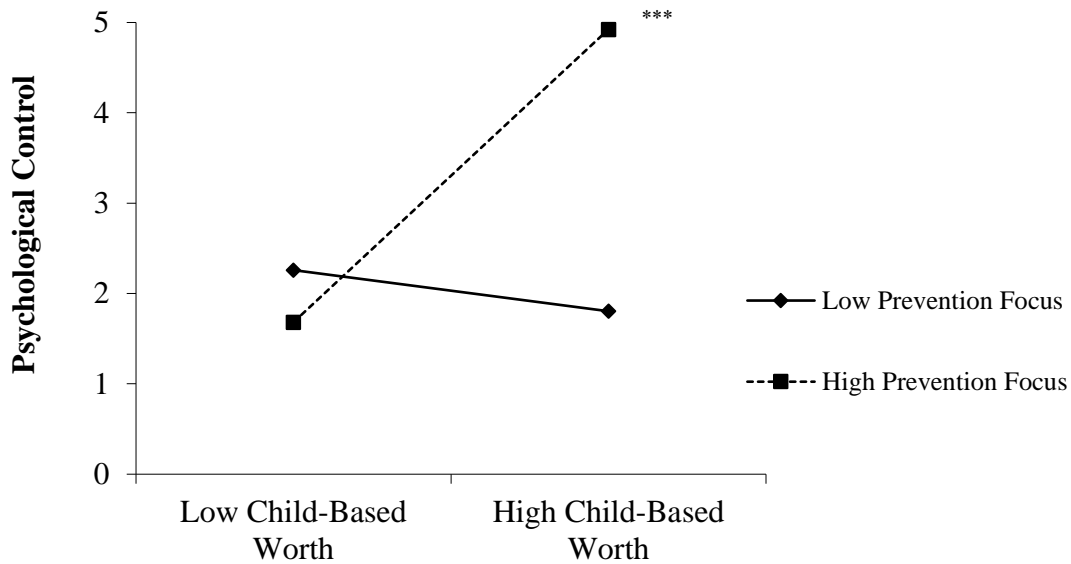
Moderating Role of Mother's Individual Characteristics

Prevention Focus. When prevention focus was included as a moderator³, the model fit was good, $\chi^2(6) = 10.18, p = .117, CFI = .98, TLI = .92, RMSEA = 0.05$ (90% CI: 0.00, 0.10), SRMR = .01. For psychological control, there was a significant two-way interaction between child-based worth in physical appearance and prevention focus, $\gamma = .14, p = .017$. As shown in Figure 9, child-based self-worth in physical appearance was positively related to psychological control for mothers with a high prevention focus, $t = 4.12, p < .001$, but not those with a low prevention focus, $t = -0.52, p = .601$. The main effect of child-based worth in virtue was also significant in the positive direction, $\gamma = .22, p = .001$, as well as prevention focus, $\gamma = .12, p = .025$. In predicting autonomy support, no significant two-way interaction effect was found, $ps > .411$. The main effect of child-based worth in physical appearance was significant in the negative direction, $\gamma = -.22, p = .003$, and the main effect of prevention focus was not significant, $\gamma = .10, p = .105$.

³ Based on the literature (e.g., Lockwood et al., 2002), I also computed a difference score between prevention focus and promotion focus for each individual and used this variable as a moderator. Using a multigroup analysis in the structural equation modeling (SEM) framework, I found that more promotion-focused individuals (i.e., difference score above zero; $n = 203$) and more prevention-focused individuals (i.e., difference score at or below zero; $n = 99$) did not show any differences in the path coefficients. Thus, the moderating role of the difference between prevention and promotion focus on the link between child-based worth and parenting practices was not evident.

Figure 9

Interaction Between Child-Based Worth in Physical Appearance and Prevention Focus on Psychological Control



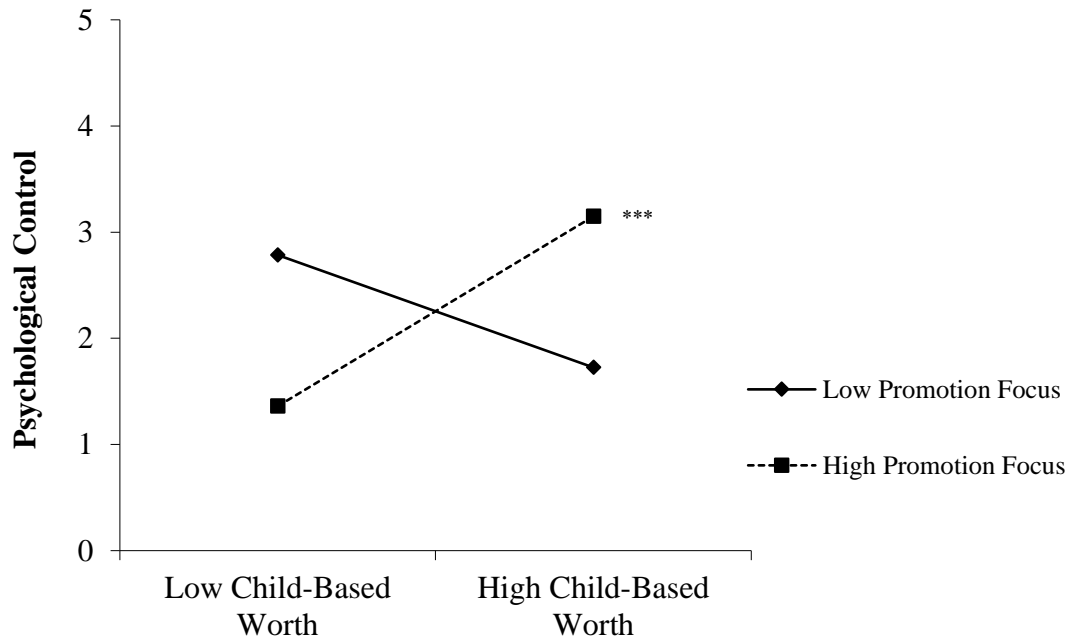
Note. *** $p < .001$.

Promotion Focus. When promotion focus was specified as a moderator, the model fit was good, $\chi^2(6) = 13.91, p = .031, CFI = .97, TLI = .86, RMSEA = 0.07$ (90% CI: 0.02, 0.11), SRMR = .01. For psychological control, there was a significant two-way interaction between child-based worth in virtue and promotion focus, $\gamma = .14, p = .044$. Similar to the findings for prevention focus, child-based self-worth in virtue was positively related to psychological control for mothers with a high promotion focus, $t = 4.15, p < .001$, but not those with a low promotion focus, $t = -1.05, p = .296$ (see Figure 10). The main effect of child-based worth in physical appearance was also significant in the positive direction, $\gamma = .29, p < .001$. In predicting autonomy support, no significant

two-way interaction effect was found, $ps > .153$. The main effect of child-based worth in physical appearance was significant in the negative direction, $\gamma = -.24, p = .001$, and the positive association between promotion focus and autonomy support was significant, $\gamma = .28, p < .001$.

Figure 10

Interaction Between Child-Based Worth in Virtue and Promotion Focus on Psychological Control



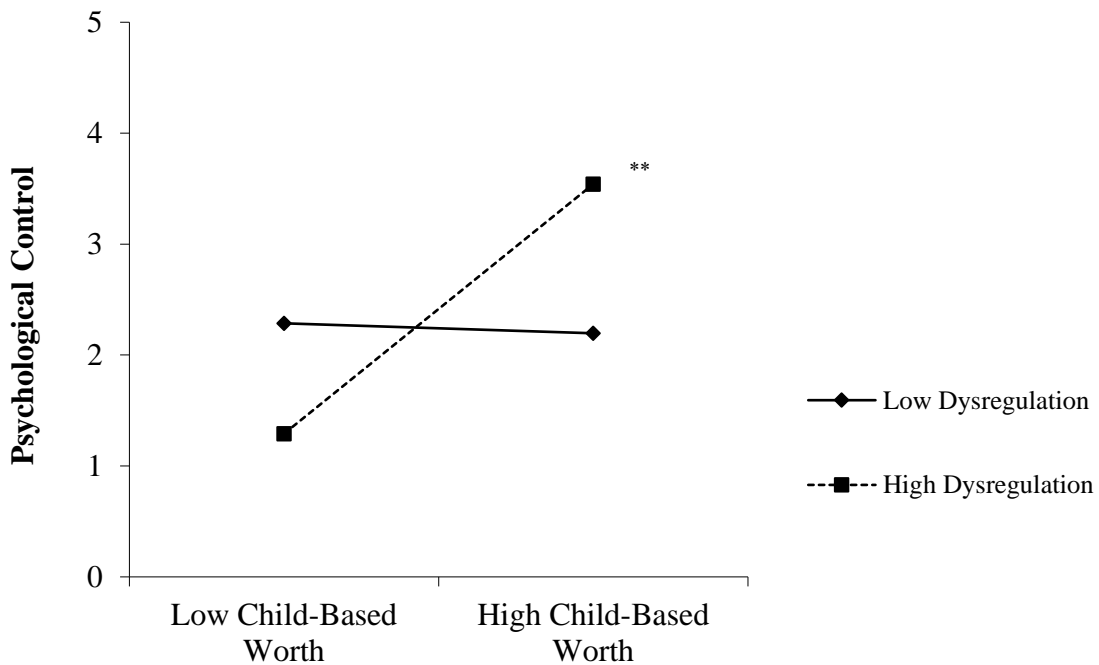
Note. *** $p < .001$.

Emotion Dysregulation. When maternal emotion dysregulation was specified as a moderator, the model fit was good, $\chi^2(6) = 11.34, p = .078, CFI = .98, TLI = .90, RMSEA = 0.05$ (90% CI: 0.00, 0.10), $SRMR = .01$. For psychological control, the two-way interaction between child-based worth in virtue and emotion dysregulation was

significant, $\gamma = .14, p = .022$. As presented in Figure 11, child-based self-worth in virtue was positively related to psychological control for mothers with high emotion dysregulation, $t = 2.92, p = .004$, but not those with low emotion dysregulation, $t = -0.16, p = .873$. The main effect of child-based worth in physical appearance was significant in the positive direction, $\gamma = .27, p < .001$. In predicting autonomy support, no significant two-way interaction effect was found, $ps > .334$. The main effect of child-based worth in physical appearance was significant in the negative direction, $\gamma = -.21, p = .004$.

Figure 11

Interaction Between Child-Based Worth in Virtue and Emotion Dysregulation on Psychological Control



Note. ** $p < .01$.

Moderating Role of Contextual Factors

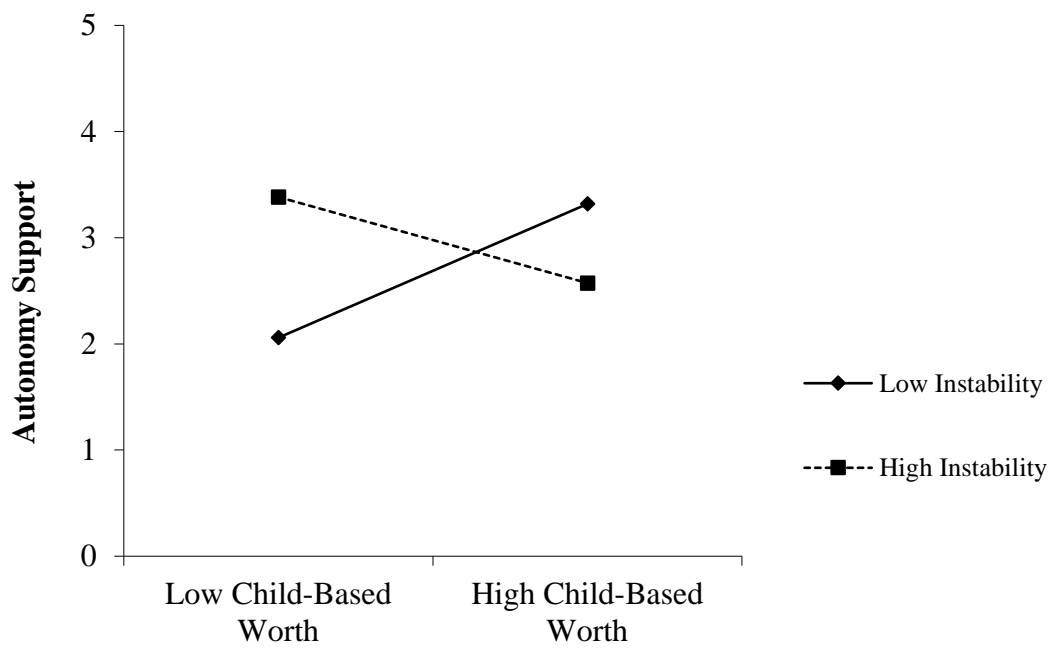
Perceived Scarcity. When perceived scarcity in resources was included as a moderator, the model fit was good, $\chi^2(6) = 13.33, p = .038, CFI = .97, TLI = .86,$ RMSEA = 0.06 (90% CI: 0.01, 0.11), SRMR = .01. For psychological control, there was no significant two-way interaction, $ps > .071$. The main effect of child-based worth in physical appearance was significant in the positive direction, $\gamma = .27, p < .001$, as well as in virtue, $\gamma = .21, p = .001$. There was a main effect of perceived scarcity as well, $\gamma = .11, p = .011$. In predicting autonomy support, no significant two-way interaction effect was found either, $ps > .342$. The main effect of child-based worth in virtue was in the positive direction, $\gamma = .17, p = .046$, while this effect was in the reversed direction for child-based worth in physical appearance, $\gamma = -.19, p = .010$. The main effect of perceived scarcity on autonomy support was in the negative direction, $\gamma = -.14, p = .009$.

Perceived Instability. When perceived instability of child's future was specified as a moderator, the model fit was good, $\chi^2(6) = 13.40, p = .037, CFI = .97, TLI = .86,$ RMSEA = 0.06 (90% CI: 0.02, 0.11), SRMR = .01. For psychological control, there was no significant two-way interaction, $ps > .156$. The main effect of child-based worth in physical appearance was significant in the positive direction, $\gamma = .30, p < .001$, as well as in virtue, $\gamma = .27, p < .001$. In predicting autonomy support, perceived instability interacted with child-based worth in academic competence, $\gamma = -.16, p = .040$, and physical appearance, $\gamma = .15, p = .035$. As presented in Figure 12, the conditional effect of child-based worth in academic competence on autonomy support was in the positive direction, but not significant in the high instability group, $t = 1.92, p = .055$. In the low

instability group, the effect of child-based worth in academic competence was in the negative direction, but not significant, $t = -1.89, p = .060$.

Figure 12

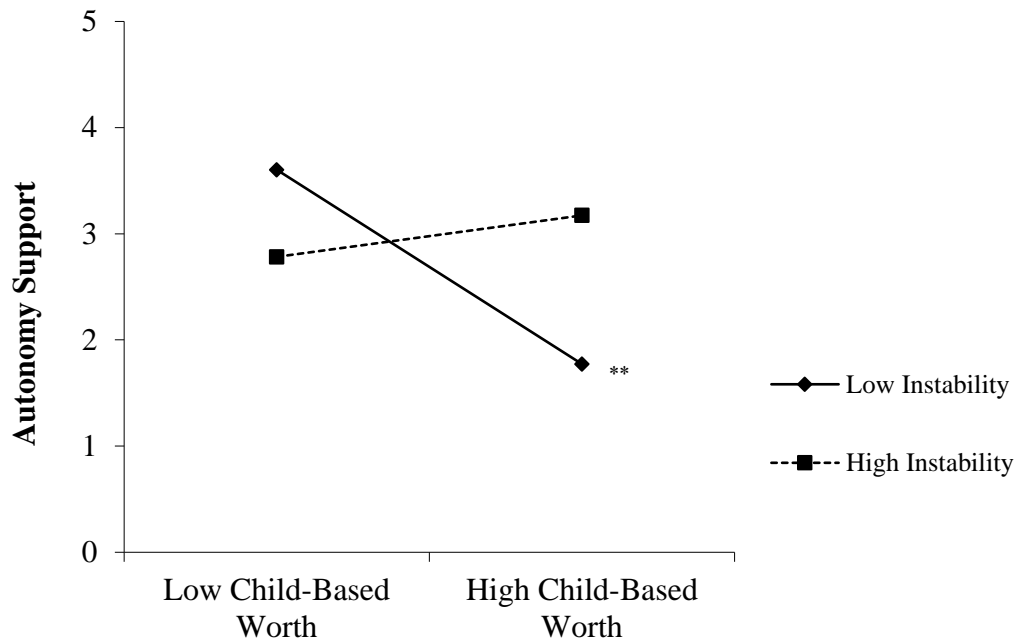
Interaction Between Child-Based Worth in Academic Competence and Perceived Instability on Autonomy Support



For child-based worth in physical appearance, its conditional effect on autonomy support was significant in the negative direction for mothers who perceived low instability, $t = -2.70, p = .007$. However, this was not the case for those with high perceived instability, $t = 0.89, p = .376$ (see Figure 13).

Figure 13

Interaction Between Child-Based Worth in Physical Appearance and Perceived Instability on Autonomy Support



Note. ** $p < .01$.

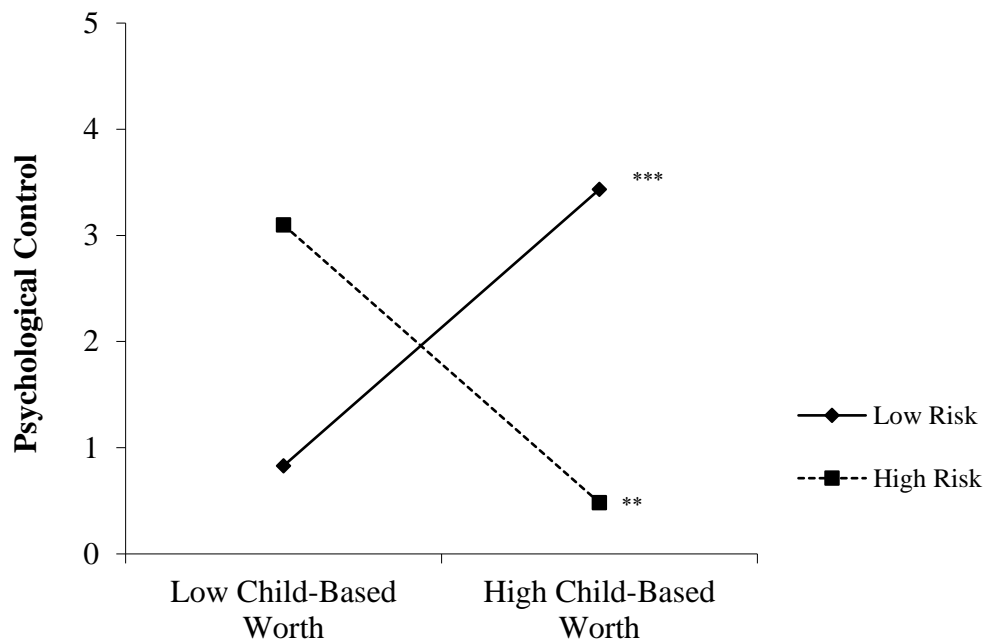
Cumulative Family Risk. When cumulative family risk was included as a moderator⁴, some of the covariates (i.e., age of mothers and children and income) were excluded, due to their overlaps with the computation of the cumulative family risk index. This model showed a good fit, $\chi^2(4) = 7.84, p = .098, CFI = 0.99, TLI = 0.91, RMSEA =$

⁴ In probing the moderating role of cumulative family risk, I supplemented this analysis with a multigroup analysis in the SEM framework. A subset of participants with lower risk (i.e., reporting zero or one risk factor; $n = 153$) differed in three coefficients from those with higher risk (i.e., reporting two to six risk factors; $n = 149$). Specifically, the implication of the virtue domain for psychological control was in the positive direction in the lower risk group, $\gamma = .49, p < .001$, whereas this path was nonsignificant in the higher risk group, $\gamma = .07, p = .464$. Child-based worth in the academic domain also interacted with group status. However, substantiating the findings from the traditional regression model, regression coefficients were nonsignificant in both groups, $\gamma s < .15, ps > .119$. Interestingly, the correlation between two types of parenting practices differed between the risk groups, such that it was nonsignificant in the lower risk group, $r = .00, p = .996$, but in the negative direction among the higher risk group, $r = -.37, p < .001$.

0.06 (90% CI: 0.00, 0.12), SRMR = .01. For psychological control, the two-way interaction between child-based worth in virtue and cumulative family risk was significant, $\gamma = -.44, p < .001$. As presented in Figure 14, child-based self-worth in virtue was positively related to psychological control for those with low scores on cumulative family risk, $t = 6.85, p < .001$, but negatively for those with high family risk, $t = -3.19, p = .002$.

Figure 14

Interaction Between Child-Based Worth in Virtue and Cumulative Family Risk on Psychological Control



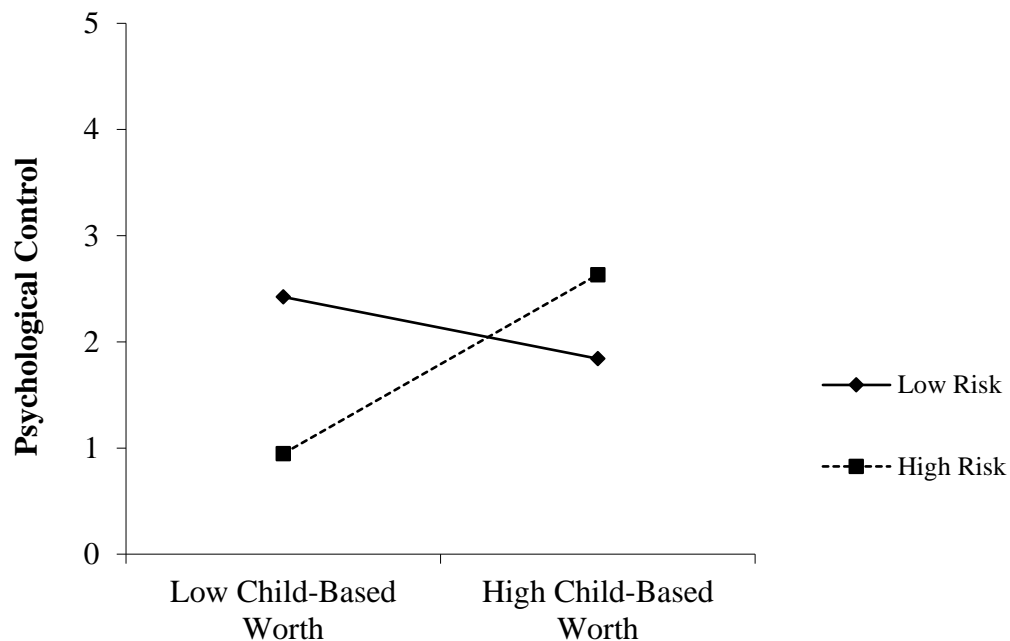
Note. ** $p < .01$, *** $p < .001$.

The two-way interaction between child-based worth in academic competence and cumulative family risk was also significant in predicting psychological control, $\gamma = .19, p$

= .047. As presented in Figure 15, for those with high family risk, the relationship between child-based worth in academic competence and psychological control was in the positive direction, although this association was only marginally significant, $t = 1.92, p = .056$. Conversely, for those with low family risk, such a relationship trended in the negative direction and was not significant, $t = -1.44, p = .152$. Child-based worth in physical appearance was also positively associated with psychological control, $\gamma = .30, p = .003$. In predicting autonomy support, no significant two-way interaction effect was found, $ps > .149$. The main effect of cumulative family risk was significant, $\gamma = -.20, p < .001$.

Figure 15

Interaction Between Child-Based Worth in Academic Competence and Cumulative Family Risk on Psychological Control



CHAPTER 4

Discussion

The main goal of this dissertation was to investigate the relations between child-based worth and parenting practices of mothers of early to middle adolescents in the United States. Departing from a primary focus on domain-general child-based worth and psychological control in the extant literature, the current study utilized a domain-specific model of child-based worth to examine how multiple domains of child-based worth are linked to psychologically controlling and autonomy supportive behaviors. This study also explored if the associations between child-based worth dimensions and parenting depended on specific circumstances (i.e., internal and external pressure). Findings indicated that, among the three domains under study, mothers based their self-worth on the academic domain the most. Child-based worth in the physical appearance domain had the strongest associations with both psychological control and autonomy support. Hypotheses for the interplay between child-based worth and internal and external pressure were partially supported. In this chapter, findings for each research question are considered, followed by a discussion of the study limitations, future directions, and implications.

Domain-Specificity of Child-Based Worth

The first aim of this dissertation was to examine if mothers base their own self-esteem on various domains in child development to different extents. Given the growing importance of academic achievement and the availability of evaluative information on children's academic performance during adolescence (Eccles & Midgley, 1989; Hoover-

Dempsey & Sandler, 1997), I expected that mothers would show the highest levels of child-based worth in academics than the other two domains. Results supported this hypothesis, such that mothers showed the highest level of child-based worth in the academic domain, followed by virtue and physical appearance. In modern industrialized societies, education is often viewed as a means to a successful life, and parents believe that they share responsibilities in their children's educational trajectories (Bullock & Limbert, 2003; Ule et al., 2015). Furthermore, during adolescence, given the structure of the education setting in the United States, children's schoolwork starts to be accompanied by heightened competition and evaluation (Eccles et al., 1993). Reflecting the emphasis on parents' involvement in children's academic success (Hoover-Dempsey & Sandler, 1997) and the heightened salience of academic achievement in the educational environment (Eccles & Midgley, 1989), adolescents' academic performance may bear the greatest importance to mothers' self-worth. As contingent self-esteem guides individuals to invest their endeavor in achieving the goals in the domains where one's self-worth is at stake (Crocker et al., 2006), this finding may explain why many parents invest time and resources in their children's education.

Although the prevalence of child-based worth in virtue and physical appearance was lower than in the academic domain, the extant research also informs that these two domains may hold significance for parents when their children are in adolescence. For example, following children's misbehaviors, parents can experience vicarious guilt or shame (Scarnier et al., 2009). Notably, researchers argue that whereas younger children's misdeeds may induce parental guilt, adolescents' misdeeds may induce parental shame,

which stems from a threat to self-image (Scarnier et al., 2009). Likewise, parents' concern over children's appearance can rise as children transition into adolescence (Striegel-Moore & Kearney-Cooke, 1994). This is reflected in increases in parent-child conversations around the child's weight or body size as children get older (Winkler et al., 2018). Between virtue and physical appearance, results suggested that compared to physical appearance, mothers' self-worth was hinged on children's virtue to a greater extent. Such a difference in the extent of child-based worth in virtue vs. physical appearance may be pertinent to the differential beliefs about these two domains. In the domain-specific model within the social domain theory (Smetana, 1999), parent-adolescent dyads hold differential beliefs about the legitimacy of parental control, depending on the domain or areas of conduct (Hasebe et al., 2004; Smetana & Daddis, 2002). For example, parents and adolescents tend to believe that personal domain (e.g., physical appearance, extracurricular activities) is not within the jurisdiction of parental control and authority, whereas morality (e.g., lying, helping) or social convention (e.g., family or religious rituals) realms are relatively subject to parents' regulations (Smetana & Daddis, 2002; Sorkhabi & Middaugh, 2019). Theorists also maintain that although the boundaries of this legitimacy of parental authority vary depending on culture and developmental stages, in general, these personal issues are deemed essential in fostering a sense of personal identity and individuality in adolescents (Nucci, 1996; Hasebe et al., 2004; for a review, see also Nucci et al., 1996; Smetana & Rote, 2019). Herein, each domain of child development may involve distinct beliefs with regard to how much parents' own self-concepts overlap with their children's. Findings are in line with the

note that parents deem physical appearance as a personal issue of their children, whereas morality and virtue as under parents' authority or socialization, thereby viewing this domain as closely pertinent to their self-concept. Oftentimes, parents are seen as responsible for children's wrongdoings (Scarnier et al., 2009), thus children's moral behaviors may be a source of evaluation as successful parents or social agents. Mirroring the differential views that the physical appearance domain is rather personal, and the virtue domain is under the influence of parental socialization, it may have been easier for mothers to uphold self-worth based on the child's virtue (vs. physical appearance). It is also possible that children's physical appearance may bear importance for parents in earlier stages of parenthood (e.g., during infancy; Langlois et al., 1995; see Franklin & Volk, 2018 for a review), while other domains of child outcomes (e.g., virtue) become a source of parental self-esteem as children age.

While a few researchers have attempted to elucidate the underlying dimensions of child-based worth based on valence (i.e., success vs. failure; Busquets et al., 2022), no study to date has examined child-based worth based on child outcome domains. Prior research on domain-general child-based worth has significantly deepened our understanding of the antecedents of parenting behaviors, such as psychological control. A noteworthy gap in the extant literature is that even though many researchers have utilized a domain-specific approach to parenting practices, they assessed child-based worth in a domain-general fashion (e.g., the relationship between global child-based worth and academic conditional regard; Otterpohl et al., 2020). Joining a small body of research on child-based worth, the findings from this study shed new light on this phenomenon with a

domain-specific approach aligned with the original contingencies of self-worth theory. Evidence from the current research that mothers based their self-worth on child outcome domains to different degrees also points to other useful directions for future research. One potential merit of this domain-specific approach is that it enables an investigation of multiple domains of child-based worth using the within-person approach, such as identifying different profiles of the multiple domains of child-based worth. For example, mothers who have high child-based worth in all domains may be those who have high perfectionism toward their children, which is linked to heightened psychological control (Soenens et al., 2006).

The Role of Child-Based Worth in Parenting Practices

The second aim of this study was to investigate the role of specific domains of child-based worth in predicting psychological control and autonomy support. I hypothesized that while all domains of child-based worth would be associated with more psychological control and less autonomy support, the magnitude of the associations would be the strongest for more external contingencies, such as physical appearance, compared to more internal contingencies, such as virtue. To test this idea, I used three different statistical approaches, and hypotheses were partially supported.

In separate models where child-based worth in the three domains predicted parenting practices, all domains showed positive relationships with psychological control, while only child-based worth in physical appearance predicted autonomy support. When tested simultaneously in the same model, the findings based on evaluations from the separate models were largely replicated. However, one exception was found for the

relationship between child-based worth in the academic domain and psychological control, which became nonsignificant. In RWA where the relative importance of the three domains was directly evaluated, the findings indicated that the contribution of child-based worth in the academic domain was weaker in predicting psychological control, compared to the other two domains. Furthermore, in predicting autonomy support, the relative weight of child-based worth in the physical appearance domain was the largest, while child-based worth in virtue and academic domain did not explain much variance in autonomy support. It is also noteworthy that child-based worth dimensions and covariates in the study explained a much larger portion of variances for psychological control than for autonomy support (48% vs. 16%).

In the current study, the most external domain in the study, child-based worth in physical appearance, predicted not only more psychological control but also less autonomy support. In other words, this domain may deplete parents' psychological resources to utilize autonomy supportive parenting, in addition to driving them to employ more controlling behaviors. This finding is in line with prior research suggesting that pursuing more external contingencies (e.g., physical appearance) is linked to suboptimal psychosocial functioning (Crocker et al., 2003, 2004). Given that it entails the most direct social recognition and visibility than other external domains (e.g., financial success or prestige; Soenens et al., 2015), the physical appearance domain may play a salient role in the dynamic of parental values and parents' choice of actions. Alternatively, the prominent role of child-based worth in physical appearance in parenting behaviors may be due to other parental beliefs pertinent to physical appearance. For example, compared

to virtue and academic competence that can be cultivated through socialization or one's endeavors, physical appearance may be seen as a fixed quality of a child. In the case of children's failure in this domain, such a view may prompt negative emotions (e.g., shame; Scarnier et al., 2009) or dampened sense of control, which is related to heightened psychological control (e.g., Mills et al., 2007). Nonetheless, a direct examination of beliefs of stability or flexibility, such as genetic essentialism (Peetz et al., 2021), tied to each domain is warranted to verify this view.

It should be also noted that although conceptualized as the most internal contingent self-esteem, the virtue domain was positively associated with psychological control. One important question is whether the domains of child-based worth span from internal to external, as they do in one's own contingencies of self-worth. In other words, is a child's success and failure in the virtue domain construed as truly "internal"? While one's own moral development can be fairly intrinsic (i.e., a judgment of self-worth is made by oneself), when a child's virtue becomes a source of evaluation and status, it might no longer be intrinsic but heavily dependent on the success of another individual (i.e., child). In addition, one can earn social status or reputation from virtue (Bai et al., 2020), and since morality is central to one's self-concept, a threat to one's moral self (e.g., upward social comparison in the moral domain) may be particularly threatening to the self (Fleischmann et al., 2021). As such, child-based worth itself may be inherently *external* to mothers' self-esteem, as it implies that an individual's self-evaluation is judged by external events (i.e., success or failure of children; Crocker & Wolfe, 2001). In this vein, the virtue domain may function as an external form of regulation for mothers

who are vested in ensuring the morality of their children. Prior research on moral socialization also postulates that given shared identity and interdependence in the parent-child relationship, parents may feel shame or guilt following children's wrongdoings (Scarnier et al., 2009). Child-based worth in the virtue domain may signify that a child's moral behaviors and deeds are deemed as a reflection of their reputation and social image (Chekroun & Nugier, 2011; Scarnier et al., 2009). Thus, heightened attention to a child's moral transgression or basing their self-worth on a child's morality may predispose parents to adopt controlling parenting behaviors, as they can be a source of vicarious shame and guilt (Lickel et al., 2005). Another noteworthy finding is that child-based worth in virtue was positively associated with autonomy support in the model where the moderating role of perceived scarcity was examined. Such an association emerged only when the perception of scarcity was included as a moderator in the model. This finding suggests that when this type of environmental pressure is accounted for, child-based worth in the virtue domain may be conducive to autonomy support.

Unexpectedly, the association between child-based worth in the academic domain and psychological control became nonsignificant when the other two domains were included in the statistical model. Likewise, when relative weights were examined to capture the totality of child-based worth, the domain of academic competence showed an association with psychological control to a lesser degree than the other domains. Given that prior research has generally utilized a domain-general measure of child-based worth (e.g., Wuyts et al., 2015a), with a few items focusing on academic context (e.g., Ng et al., 2014), in relation to controlling parenting behaviors, such an inconsistency is striking.

One possibility is that the links between child-based worth and parenting behaviors documented in the extant literature may mainly have been driven by other domains of child-based worth (e.g., physical appearance). It is also possible, however, that in prior research, parents had academic performance in mind when asked about a tendency of child-based worth in general. In turn, parents' reports on child-based worth in academic competence may have shown associations with controlling parenting behaviors, because parenting behaviors specific to the academic domain were measured (e.g., academic conditional regard; Otterpohl et al., 2020). Alternatively, this may be due to the differential attributes of the domains of child-based worth assessed in the study. That is, the appraisal of academic performance is often based on social comparison or norms (Xing et al., 2022), whereas the domains of virtue and physical appearance involve more subjective evaluation. Evidence on social comparison also indicates that in the ability domain (e.g., academic performance), the context of comparison (e.g., relevance and closeness of the target) may make the comparison more or less threatening, whereas it matters less for the opinion domain (i.e., morality; Fleischmann et al., 2021). In the current study, the items for child-based worth in academic competence tapped into rather a holistic judgment (e.g., boost in self-worth when their child is "doing well academically"). For virtue and physical appearance, perhaps generic descriptions of children's characteristics or behaviors (e.g., "looking good or pretty" or "doing something wrong") are sufficient to tap into a tendency of mothers' ego-involvement. On the other hand, for child-based worth in the academic domain, more objective reference points or norms and relevant contexts (e.g., passing the exam) to judge children's

accomplishments may be needed to estimate a sense of urgency that may incur certain parenting behaviors. This issue warrants further investigation of what entails and constitutes achievement or success for each domain.

An intriguing observation from the current work is that child-based worth explained a greater portion of the variance in controlling (vs. autonomy supportive) behaviors. With the exception of the physical appearance domain, dimensions of child-based worth did not relate to autonomy support. This finding may indicate that while other factors (e.g., psychological availability) may be conducive to autonomy support, child-based worth can be one of the factors closely tied to controlling parenting behaviors. The differential findings across the two types of parenting behaviors further corroborate the view that psychological control and autonomy support are two distinct rather than two opposite dimensions of parenting practices (Silk et al., 2003). Based on self-determination theory regarding basic psychological needs (Deci & Ryan, 2000), researchers have argued that need frustration predicts psychological control, whereas need satisfaction predicts autonomy support (Soenens & Vansteenkiste, 2010). Extant evidence also supports distinctive mechanisms or pathways to psychologically controlling vs. autonomy supportive parenting behaviors, presenting the associations between need frustration or stress and psychological control and between need satisfaction or psychological availability and autonomy support (e.g., Costa et al., 2019; Mabbe et al., 2018; Van der Kaap-Deeder, 2019). Of note, the pressure may elicit psychological control, but the lack of pressure does not guarantee autonomy supportive parenting (Costa et al., 2019; Mabbe et al., 2018). As such, it is likely that although the

presence of child-based worth may instigate psychological control, low levels of child-based worth may not be a sufficient condition for autonomy support to occur. Altogether, findings from the current research underscore the importance and value of considering multiple domains of child-based worth in relation to different parenting practices.

The Interplay Between Child-Based Worth and Sources of Pressure

Lastly, this dissertation sought to explore the moderating role of individual and contextual characteristics in the associations between child-based worth and parenting behaviors. Overall, I anticipated that for mothers who have individual characteristics related to internal pressure (e.g., prevention focus), or who perceive higher levels of environmental threat, the link between child-based worth and less desirable parenting behaviors would be intensified. In predicting psychological control, several significant two-way interactions between child-based worth dimensions and individual factors were found. However, in predicting autonomy support, there was only one significant two-way interaction effect. Beyond individual characteristics, I did not find sufficient evidence for the role of contextual factors in this link. Together, these findings indicate that some individual characteristics may strengthen the links between child-based worth and psychological control in mothers.

Individual Characteristics

Internal pressure derived from parents' personality characteristics (Grolnick & Apostoleris, 2002) can pose an additional risk that may reinforce the association between child-based worth and parenting – particularly in increasing the tendency for parents to engage in controlling practices. In this set of interaction analyses, regulatory focus and

emotion dysregulation were included to interact with child-based worth dimensions to predict psychological control and autonomy support. Findings indicated that in predicting psychological control, three interaction patterns emerged: between prevention focus and the physical appearance domain, between promotion focus and the virtue domain, and between emotion dysregulation and the virtue domain.

Regulatory Focus. For regulatory focus, a positive link between child-based worth in the physical domain and psychological control was evident among mothers who reported greater levels of prevention focus. With a high prevention focus, an individual is driven toward minimizing the negative outcomes, such as mistakes and failure (Crowe & Higgins, 1997). Prior research has shown that when parents are oriented toward preventing failure or fear failure, they are more likely to adopt controlling parenting practices (Elliot & Thrash, 2004; Rousseau & Scharf, 2017). In addition, when an individual has a high motivation to avoid losing self-esteem, they may be more vigilant for failure in the domains where their self-esteem is hinged (Crocker & Park, 2004). The interaction finding from the current study underscores the role of child-based worth in the relationship between prevention focus and controlling parenting practices. That is, mothers with higher levels of child-based worth in physical appearance may be more prone to endorsing controlling parenting practices, especially when they have heightened concerns over minimizing pitfalls. Such an interaction was evident in the physical appearance domain of child-based worth, presumably as this domain represents the most external domain on the contingencies of self-worth continuum (Crocker & Wolfe, 2001), which may take the most toll on one's psychological adjustment (e.g., Crocker et al.,

2004). As outcomes for such external domains are easily visible, external values and goals may be more closely tied to a boost of maternal self-worth from their child (Soenens et al., 2015). Such visibility and saliency, coupled with an ease of detecting a threat to their self-image, may spur the experience of need frustration more often, leading to more psychological control (e.g., Mabbe et al., 2018). In addition, mothers who based their self-worth on a child's appearance may also be those who pursue extrinsic goals themselves, which is linked to a view that the world is a competitive place (Duriez et al., 2007). Such a worldview of external pressure activated by the pursuit of external child-based worth may have motivated mothers to utilize more controlling parenting behaviors when combined with another internal pressure, prevention focus.

Findings for prevention focus, however, should be interpreted in light of the interaction between promotion focus and child-based worth in virtue. Although I did not have a specific a priori hypothesis for promotion focus, child-based worth in virtue predicted higher psychological control for mothers with a high promotion focus, whereas this was not the case for those with a low promotion focus. Since virtue represents the most internal domain of child-based worth in the current study (Crocker & Wolfe, 2001) and promotion focus should predict lower levels of controlling parenting (Rousseau & Scharf, 2018), this finding is surprising at first blush. However, as promotion focus can catalyze the pursuit of self-esteem goals (Leonardelli et al., 2007), mothers with a high promotion focus and child-based worth in the virtue domain may strive to ensure that their child achieves high moral standards, which could, in turn, enhance their self-evaluation. This finding echoes Assor and colleagues' (2009) research which found that

neither type of self-worth motivation (i.e., striving to avoid self-worth loss vs. to attain self-worth) benefitted the performance outcomes of children and adolescents. Evidence also suggests that one's virtue may not entirely internal – one's morality can be a source of social status and reputation (Bai et al., 2020) and other's morality can affect one's self-image (Peetz et al., 2021), particularly when the agent of the moral or immoral action is the close one. Therefore, perhaps some mothers may emphasize “achieving morality” and such tendency may be linked to psychological control, as reflected in their attempts to ensure their children comply with the high moral standards that they set for their children.

Emotion Dysregulation. Results also showed that mothers' emotional dysregulation can function as an additional risk factor for psychologically controlling behaviors when combined with child-based worth in the virtue domain. Parents who have high emotion dysregulation are more susceptible to being overwhelmed by negative emotions, and this self-absorption in their emotional experiences may undermine their sensitivity to the child's needs (Aunola et al., 2017; Dix, 1991). As such, maternal emotion dysregulation is associated with suboptimal parenting, such as psychological control (Brenning et al., 2020). Findings from this study indicated that mothers were more likely to use psychological control when their child-based worth was accompanied by an inability to manage their negative emotions. It also mirrors Steffgen and colleagues' (2022) work indicating the moderating role of emotion dysregulation in the link between child-based worth and conditional negative regard. In their research, in the presence of children's failure, emotional regulation skills buffered against parents' impulse for using quick and easy parenting tactics that can be intrusive (Steffgen et al.,

2022). Interestingly, in the current study, the exacerbating role of emotion dysregulation in the association between child-based worth and psychological control was found only in the virtue domain. In the moral socialization domain, it is perhaps likely for social agents (e.g., parents) to experience vicarious moral emotions (i.e., shame and guilt), in part because they are considered responsible for a child's moral behaviors (Lickel et al., 2005; Scarnier et al., 2009). While other types of moral discipline (e.g., inductive reasoning) are more effective in fostering children's morality in the long run (vs. love withdrawal; Patrick & Gibbs, 2012), controlling parenting can induce the desired behaviors faster (Grolnick et al., 2007). Although speculative, parents with high emotion dysregulation whose self-worth is at stake in a child's morality may be prone to feel the urge to resolve their negative emotions (e.g., shame) via parenting strategies that can quickly correct children's behaviors, despite the long-term cost pertinent to such parenting behaviors.

Extending prior research documenting the relationship between child-based worth and psychological control, the current study sheds light on how mothers' individual characteristics related to internal pressure work in concert in predicting their parenting behaviors. Of note, particular child-based worth dimensions interacted with each motivational factor to predict psychological control. Altogether, these findings raise a possibility that the implications of child-based worth for parenting practices may not be straightforward and the differential interaction patterns may not be simply attributed to the continuum of contingencies (i.e., from internal to external). Park and Crocker (2005) note that what drives one's actions in interpersonal contexts is which particular domain matters to them, rather than whether they have internal vs. external contingencies. The

current study also implies that the unique significance and implications of each domain on mothers should be considered, beyond the distinction between internal vs. external domains in the investigation of the contributions of contingencies of self-worth in interpersonal relationships.

Contextual Characteristics

External pressure including environmental stressors has been found to exacerbate the role of child-based worth in predicting more controlling behaviors among parents (e.g., Grolnick et al., 2007). To capture both subjective and objective makers of contextual characteristics, perception of the environmental threat and cumulative family risk were specified as potential moderators in the associations between child-based worth dimensions and parenting behaviors (i.e., psychological control and autonomy support). Findings revealed two interaction patterns that enable the meaningful interpretations (i.e., at least one simple slope being significant): between perceived instability and the physical appearance domain in predicting autonomy support, and between cumulative family risk and the virtue domain in predicting psychological control.

Perceived Environmental Threat. For perceived environmental threat, I did not find consistent findings across the child-based worth dimensions. Contrary to expectations, no significant interaction between child-based worth and perceived scarcity emerged in predicting parenting behaviors. Nonetheless, the main effect of perceived scarcity on psychological control was in the expected direction, such that perceived scarcity predicted more psychological control and less autonomy support. Corroborating with the extant literature, findings from this research suggest that the perception of

resource limitations can heighten parents' tendency to use controlling parenting (Gurland & Grolnick, 2005). However, as there was no evidence of the interplay between perceived scarcity and child-based worth domains, this facet of environmental threat did not seem to pose additional risk.

For perceived instability, there was a negative relationship between child-based worth in physical appearance and autonomy support among mothers who perceived low instability. In other words, basing one's self-worth on a child's appearance predicted less autonomy support when mothers perceived the world to be more stable. Notably, child-based worth in physical appearance was not related to autonomy support for those who perceived more instability in the environment. These findings appear counterintuitive, as the literature indicates that an unpredictable environment or perception of environmental threat can negatively affect parenting behaviors (Robichaud et al., 2020; Zhang et al., 2021) and a sense of uncertainty engenders a more authoritarian attitude (McGregor et al., 2001). As this subscale captures the subjective prospect of the future in terms of sustainability and a possibility of change, those who reported low on these items may be holding an optimistic – or perhaps unrealistically optimistic – outlook of their child's future. Given that the optimistic biases or underestimation of risk can reduce adaptive behaviors, such as health-promoting behaviors (Drouin et al., 2019; McKay & Dennett, 2009), such a view may have dissuaded mothers from using autonomy support. Caution is needed in interpreting this finding, however, as the perceived instability scale showed low internal consistency and there were no other significant interaction patterns in predicting autonomy support.

Cumulative Family Risk. For mothers who had higher family risk, the association between child-based worth in virtue and psychological control was in the negative direction. On the contrary, this relationship was in the positive direction in the low family risk group. In other words, whereas child-based worth in virtue was a risk factor for psychological control for the low family risk group, it showed a buffering effect in the high family risk group. This is an unexpected finding, as prior research has shown that cumulative family risk provides a context conducive to suboptimal parenting, such as more controlling and less autonomy supportive or nurturing behaviors (e.g., Harvey et al., 2016; Trentacosta et al., 2008). One possibility is that the disproportionate impact of the COVID-19 pandemic and the resulting changes in the dynamics of mother-child dyads affected mothers differently across the groups. For example, the amount of time spent with children may have differed between high vs. low family risk groups, given that levels of educational attainment or income have influenced parents' capacity to work from home following social distancing measures (e.g., Weill et al., 2020; Zamarro & Prados, 2021). As such, mothers from the lower risk group may have had more opportunities to observe their children's misbehaviors at home, thereby increasing the likelihood of utilizing more controlling behaviors. Another possibility is that there might be other family risk factors that were not captured in the cumulative family risk index used in this study. Some researchers advocate the use of multiple risk metrics (e.g., including continuous risk factors instead of binary, accounting for age at or duration of exposure to risk; Burchinal et al., 2008; Evans et al., 2013) to better understand family risk. Although the nature of the survey items in the current data only allowed the

computation of the family risk index using a traditional method, future work could consider alternative conceptualization and techniques in assessing family risk.

Notably, in the current study, a supplementary analysis showed that the correlation between psychological control and autonomy support differed between high vs. low family risk groups. Specifically, for mothers reporting lower risk factors, psychological control and autonomy support were not significantly related. However, among the higher risk group, this relationship was in the negative trend, as found in prior research (e.g., Costa et al., 2019). Albeit beyond the scope of the current investigation, this finding suggests that psychological control and autonomy support may be more or less discernible depending on the levels of family risk.

Extant literature has emphasized the role of environmental risk, either subjectively judged or objectively assessed, in predicting more controlling and less autonomy supportive behaviors (e.g., Harvey et al., 2016; Robichaud et al., 2020), given the sense of urgency stemming from the contextual pressure (Grolnick et al., 2007). However, the current study did not find strong evidence to substantiate this argument. Rather, the moderating roles of perceived instability and cumulative family risk in predicting parenting behaviors were in the opposite direction from the expectation. These counterintuitive findings suggest that the role of external pressure in conjunction with child-based worth may be more complex than hypothesized and that possibly other cognition (e.g., unrealistic optimism) may be at play. Additionally, the differential correlation between psychological control and autonomy support between higher vs. lower risk groups found in the supplementary analyses points out that research attention

may be needed to unravel the manifestation of parenting behaviors depending on the family risk status.

Limitations and Future Directions

The present study has some limitations that should be noted. First, the sample in the current study does not represent the population in the United States. Given the nature of the data collection methodology (i.e., online survey, nonprobability sample), the participants were limited to those who have access to the Internet, and the findings from this study cannot be generalized to the general population. Importantly, the current study took place amid the COVID-19 pandemic. Although the perceived impact of the COVID-19 pandemic was statistically controlled for in the analyses, the levels of the perceived threat and controlling parenting might have been different from the times when no such public health crisis existed (Wissemann et al., 2021). It is also possible that for some mothers, their attention to children's performance or achievement was attenuated, as concerns for health and financial condition were heightened and prioritized. One related concern is that the COVID-19 pandemic has disproportionately impacted parents depending on their socioeconomic status (e.g., income, educational attainment), putting more contextual pressure and burdens on some mothers than others (e.g., Kerr et al., 2021; Zamarro & Prados, 2021). Future research directly unpacking the influence of the COVID-19 pandemic on parenting (e.g., time spent with children) and the perception of contextual pressure would be informative.

Second, due to the overrepresentation of Whites, the current study was underpowered to examine the research questions by different racial or ethnic groups that

may reflect diverse cultural values surrounding parenting (García Coll et al., 1996; Le et al., 2008). Prior research on child-based worth has indicated that child-based worth is more prevalent among Asian parents (e.g., Ng et al., 2014; Wuyts et al., 2015a). Furthermore, Busquets and colleagues (2022) maintain that child-based worth may interplay with cultural variables, such as “face culture” in Asian culture or *familismo* and *respeto* in Latinx culture. Other important parental beliefs pertaining to a child’s achievement and failure warranting further investigation may differ across the cultural contexts. For example, Chiang et al. (2000) found that American mothers attributed toddlers’ positive behaviors to internal dispositions and negative behaviors to external factors, while Taiwanese mothers displayed the inverse patterns. Such a set of beliefs regarding the etiology and malleability of children’s competence, which may be systematically different across the cultures (Chao, 1996) may play a role in the link between child-based worth and parenting practices. In addition, Ng and colleagues’ (2013) work demonstrated that mothers in Hong Kong (vs. in the United States) held a belief that children’s learning is reflective of their morality, suggesting that they view academics and morality as intertwined. Future research would benefit from intersecting the domains of child-based worth and diverse cultural beliefs regarding parenting and children’s life domains.

Third, the current study assessed general parenting behaviors and did not measure domain-specific parenting behaviors. Based on social domain theory (Nucci, 1996; Smetana, 1999), a domain-specific approach to parenting behaviors is particularly crucial in relation to controlling parenting, as children’s interpretation of parental control differs

depending on the domains. For example, parental control over the personal domain (e.g., friendship) is viewed as more intrusive than the prudential domain (e.g., alcohol use) by adolescents (Kakihara & Tilton-Weaver, 2009). Relatedly, Soenens et al. (2010) distinguish between using psychological control for achievement-oriented (i.e., using psychological control in the achievement and performance domain) and dependency-oriented (i.e., using it in the parent-child closeness domain) purposes. Researchers also posit that compared to psychological control, a global tendency, a concept of conditional positive vs. negative regard involves more domain-specific parenting practices that are contingent on children's behaviors (Assor & Tal, 2012). In this vein, Roth and colleagues (2009) investigated parenting practices (i.e., conditional positive regard, conditional negative regard, and autonomy support) in two different domains: emotion regulation and academics. Similarly, there is an existing measure for parents' conditional regard based on their children's appearance (Helfert & Warschburger, 2011). As such, the relationship between child-based worth and parenting practices may display more nuanced patterns if psychological control and autonomy support were assessed in a domain-specific fashion.

The fourth limitation pertains to the design of the study. Given the cross-sectional design, I was not able to examine if and how each domain of child-based worth changes across time or developmental stages of a child. Of note, Ng and colleagues (2014) speculate that child-based worth is a stable tendency, which is established early in parenthood. Yet, extant literature also points out the unstable nature of contingent self-esteem, such that after experiencing failure or a threat to their self-esteem, individuals tend to reduce contingent self-esteem as self-protection (Buckingham et al., 2019).

Moreover, Steffgen et al. (2022) highlight the role of dynamic emotional reactions contingent on a child's performance in investigating the relationship between child-based worth and parenting. Future longitudinal or experimental research investigating the dynamic moment-to-moment changes and reciprocal associations between child-based worth and child's performance events would be informative. In the current study, a child's age was not correlated with all three domains of child-based worth, presumably due to limited variability in age. Still, questions remain regarding when parents start to base their self-esteem on children's achievement, given the early onset of psychological control (Brenning et al., 2020). Additionally, beyond adolescence, perhaps some parents may continue to base their self-esteem on life domains of their children (e.g., grades in college, job status). It is also possible that such a tendency may be predictive of other forms of parenting behaviors toward their adult child, such as helicopter parenting (i.e., over-involvement and control out of concern for the child's wellbeing and success; Padilla-Walker & Nelson, 2012). As such, future research would benefit from a cross-sectional study with a wider array of ages to promote an understanding of child-based worth across the developmental stages.

Lastly, the current study is limited in that only mothers' self-report measures were used. Although this study included a social desirability measure to assess potential self-report bias, future work utilizing multiple informants including observational assessment in measuring parenting practices would be helpful. Furthermore, as suggested by Ng and colleagues (2019), a novel methodology, such as implicit measure, may be useful in tapping into child-based worth. Another unexplored question is whether a child can

perceive their parents' child-based worth. If so, what kind of implications does the awareness of child-based worth confer on a child's adjustment? Although child-based worth may not be readily accessible by others (Ng et al., 2013), children might perceive it by being exposed to parents' contingent responses (Ng et al., 2019) or emotional reactions to their success or failure, such as pride and shame. Additionally, extant literature suggests that children's perception of parental cognition and beliefs or conditional regard may exert an influence on child outcomes (e.g., Assor & Tal, 2012; Damian et al., 2013). Hence, one fruitful avenue of inquiry would be to examine child perceptions of parental child-based worth and its impacts on the child's own psychological functioning, such as contingent self-esteem (e.g., Otterpohl et al., 2020) and goal orientations (e.g., Soenens et al., 2015).

Significance of the Current Research

Theoretical Significance

In conceptualizing child-based worth, the present work adopted the approach by Crocker and colleagues' that posits multiple domains of contingent self-esteem (Crocker & Wolfe, 2001). In line with social domain theory (Nucci, 1996; Smetana, 1999), this research expanded extant knowledge of child-based worth across multiple domains of child outcomes. Extending the limited empirical research on child-based worth, the current study revealed that various child outcomes could be sources of mothers' self-worth, beyond academic performance. Of note, although the pursuit of virtue contingent self-esteem has been found to relate to individuals' better socioemotional functioning in prior research (Crocker, 2002), evidence from this dissertation showed that this domain

predicted maternal use of psychological control. Findings imply that the implications of child-based worth domains for parents may differ from those of individuals' contingent self-esteem based on the internal vs. external continuum. As such, beyond the internal vs. external distinction across the domains of child-based worth, other sets of beliefs regarding specific domains, such as the legitimacy of parental control, malleability of competence, and sense of parental responsibility, may matter regarding their effect on parenting. Another novel contribution of the current work lies in its focus on both psychological control and autonomy support, two dimensions of parenting of particular importance during adolescence. Adding evidence that distinct pathways to two types of parenting may exist (e.g., Van der Kaap-Deeder, 2019), the current work indicates that child-based worth predicts psychological control more consistently, presumably because this construct is related to the frustration of basic psychological needs (Grolnick, 2003; Soenens & Vansteenkiste, 2010). Although some of the findings for the moderating factors were counterintuitive, collectively, they provide inroads to future research on the relationship between child-based worth and factors representing pressure within the family and surrounding the family.

Practical Significance

Given that child-based worth is cognition that might be modified, knowledge from this study may be utilized for intervention to buffer against belief systems that can engender maladaptive parenting. For example, it may be helpful to raise parents' awareness of the pathways from the domains of child-based worth to controlling parenting. Based on the current findings, such an intervention may help parents identify

the various motivating factors (e.g., gaining self-image from children's physical appearance) underlying their parenting behaviors. One fruitful avenue for programming intervention is to cultivate emotional regulation skills. Findings from the current study, along with prior research (e.g., Steffgen et al., 2022), suggest that emotional regulation may buffer against parents' urge to correct children's undesired behaviors in a controlling manner when their self-worth is hinged on their children. Beyond parenting practices, research has shown that child-based worth may be related to mental health problems including clinical symptoms, such as a tendency to relentlessly seek children's flaws (Levy et al., 2020) or distorted perception of their flaws (e.g., body dysmorphic disorder by proxy; Greenberg et al., 2016). Such a form of cognition is, of course, an extreme case, but it speaks to the significant implications of child-based worth on parents' mental health and the potential value of intervention related to a malfunctioning form of intensive parenthood. It may be helpful to disseminate the findings from extant literature highlighting that pursuing mothers' self-worth based on their children's accomplishments may have a detrimental effect on parent-child adjustment in the long run.

Conclusion

This dissertation investigated the associations between child-based worth domains and two types of parenting practices: psychological control and autonomy support. Findings indicated that although mothers based their self-worth on children's academic competence the most, the predictive power of this domain was not greater than the other domains. Supporting the notion that the more external domains of contingencies of self-worth take a toll on one's wellbeing and interpersonal relationships, child-based worth on

physical appearance showed the strongest and most consistent relationships to more psychological control and less autonomy support. Results from the interaction analyses showed that some of the mothers' individual characteristics that may pose additional pressure to their self-worth, such as prevention focus and emotion dysregulation, magnified the associations between child-based worth and psychological control. Taken together, the current study highlights the value of examination of domain-specific child-based worth in unraveling the parental beliefs and cognitions contributing to parenting practices.

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Appendix A. Screening Items and Instructions

1. What is your age? (in years)
2. Are you a mother of at least one child between 10 to 17 years old?
 - a. *Yes*
 - b. *No*
3. Now, think about your child and answer the following question. *If you have more than one child, choose one of them who is between 10 to 17 years old.*

How old is this target child?

For the rest of the survey, think about the target child (i.e., whose age you provided in the prior question) when answering the questions.

Appendix B. Sociodemographic Information

Part 6-1. About Yourself

Appendix B1: Mother's Sociodemographic Information

1. What is your highest level of education?
 - Less than high school
 - Some high school
 - High school diploma or GED
 - Some college
 - Associates degree (junior college)
 - Bachelor's degree
 - Master's degree
 - Professional degree beyond a bachelor's degree (e.g., MD, JD)
 - Doctoral degree (e.g., PhD, EdD)
 - Other (please specify): _____
2. Which of the following best describes your current main daily activities and/or responsibilities?
 - Working full time
 - Working part-time
 - Unemployed
 - Looking for work
 - Keeping house or raising children full-time
 - Retired
 - Student
 - Only temporarily laid off, sick leave, or maternity leave
 - Other (please specify): _____
3. Which of the following best describes your marital status?
 - Married
 - Divorced

- Widowed
 - Separated
 - Never married
 - A member of an unmarried couple
4. How many children do you have?
- 1
 - 2
 - 3
 - 4
 - More than 4 (please enter the number):
5. Which categories best describe your ethnicity/race? (Select as many as apply)
- Asian
 - Black or African American or African
 - Hispanic or Latinx
 - Native American or Alaska Native
 - Pacific Islander
 - White or Caucasian
 - Some other race (please specify):

Appendix B2: Family's Sociodemographic Information

1. How many *adults* live in your household, including you?
- 1
 - 2
 - 3
 - 4
 - More than 4 (please enter the number):
2. How many *children (under the age of 18)* live in your household?
- 1
 - 2

- 3
 - 4
 - More than 4 (please enter the number):
3. What is the gross income of your household?
- \$0-9,999
 - \$10,000-19,999
 - \$20,000-39,999
 - \$40,000-59,999
 - \$60,000-79,999
 - \$80,000-99,999
 - \$100,000-119,999
 - \$120,000-139,999
 - \$140,000-159,999
 - \$160,000 or above

Part 6-2. About Your Child (i.e., target child)

Appendix B3: Child's Sociodemographic Information

1. What is your child's age?
- 10
 - 11
 - 12
 - 13
 - 14
 - 15
 - 16
 - 17
2. What is your child's grade level in school?
- 4th grade
 - 5th grade

- 6th grade
 - 7th grade
 - 8th grade
 - 9th grade
 - 10th grade
 - 11th grade
 - Other (please specify):
3. What is your child's gender?
- Female
 - Male
 - Other (please specify):
4. Which categories best describe your child's ethnicity/race? (Select as many as apply)
- Asian
 - Black or African American or African
 - Hispanic or Latinx
 - Native American or Alaska Native
 - Pacific Islander
 - White or Caucasian
 - Some other race (please specify):

Appendix C. Neighborhood Safety Scale

Part 6-1. About Yourself

Prompt: Now please tell us about how you feel about your neighborhood area (about 1 mile around your home).

Scale:

1 = *Strongly disagree*

2 = *Disagree*

3 = *Neither agree nor disagree*

4 = *Agree*

5 = *Strongly agree*

1. I feel safe walking in my neighborhood, day or night.
2. Violence is not a problem in my neighborhood.
3. My neighborhood is safe from crime.

Appendix D. Child-Based Worth Scale

Part 2. My Views About My Child

Prompt: To what extent do you agree with the following statements?

Scale:

1 = *Strongly disagree*

2 = *Disagree*

3 = *Somewhat disagree*

4 = *Neutral*

5 = *Somewhat agree*

6 = *Agree*

7 = *Strongly agree*

Appendix D1: Child-Based Worth in Virtue

1. My child doing something I know is wrong makes me lose my self-respect.
2. Whenever my child follows my moral principles, my sense of self-respect gets a boost.
3. I couldn't respect myself if my child didn't live up to a moral code.
4. My self-esteem would suffer if my child did something unethical.
5. My self-esteem depends on whether or not my child follows moral/ethical principles.

Appendix D2: Child-Based Worth in Academic Competence

1. My opinion about myself isn't tied to how well my child does in school.
[Reversed]
2. My child doing well in school gives me a sense of self-respect.
3. I feel better about myself when I know my child is doing well academically.
4. My self-esteem is influenced by my child's academic performance.
5. I feel bad about myself whenever my child's academic performance is lacking.

Appendix D3: Child-Based Worth in Physical Appearance

1. When I think my child looks good or pretty, I feel good about myself.
2. My self-esteem is unrelated to how I feel about my child's physical appearance.
[Reversed]
3. My self-esteem is influenced by how good looking I think my child's face or facial features are.
4. My sense of self-worth suffers whenever I think my child doesn't look good.
5. My self-esteem does not depend on whether or not I feel my child to be good looking or pretty. [Reversed]

Appendix E. Parenting Practices Scale

Part 1. How I Parent

Prompt: To what extent do you agree with the following statements?

Scale:

1 = *Never*

2 = *Rarely*

3 = *Sometimes*

4 = *Pretty often*

5 = *Very often*

Appendix E1: Psychological Control

1. I tell my child how disappointed I am in her/him when she/he does not do things I approve of.
2. I tell my child that I know what is best for her/him and she/he should not question it.
3. I tell my child of all the sacrifices I have made for her/him.
4. I let my child know that she/he should feel guilty when she/he does not meet my expectations for her/him.
5. If my child does something I do not like, I sometimes act less friendly to her/him so that she/he knows I am disappointed.
6. I tell my child that when she/he grows up she/he will appreciate all the decisions I have made for her/him.
7. When my child falls short of my expectations, I let her/him know that she/he is not as good as other kids.
8. I often answer my child's arguments by saying things like, "You'll know better when you grow up."

Appendix E2: Autonomy Support

1. I allow my child to make choices about herself/himself whenever possible.
2. I listen to my child's opinion or perspective when she/he has got a problem.
3. I allow my child to decide things for herself/himself.
4. I am usually willing to consider my child's point of view.
5. When I want my child to do something, I explain to her/him why.
6. I let my child make her/his own plans for things she/he wants to do.
7. I encourage my child to give her/his ideas and opinions when it comes to decisions about herself/himself.
8. I trust my child to do what I expect without checking up on her/him.

Appendix F. Regulatory Focus Scale

Part 3. How I Feel

Prompt: To what extent do you agree with the following statements?

Scale:

1 = *Not at all true of me*

2

3

4 = *Neutral*

5

6

7 = *Very true of me*

Appendix F1: Prevention Focus

1. In general, I am focused on preventing negative events in my life.
2. I am anxious that I will fall short of my responsibilities and obligations.
3. I often think about the person I am afraid I might become in the future.
4. I often imagine myself experiencing bad things that I fear might happen to me.
5. I frequently think about how I can prevent failures in my life.

Appendix F2: Promotion Focus

1. I frequently imagine how I will achieve my hopes and aspirations.
2. I often think about the person I would ideally like to be in the future.
3. I typically focus on the success I hope to achieve in the future.
4. In general, I am focused on achieving positive outcomes in my life.
5. I often imagine myself experiencing good things that I hope will happen to me.

Appendix G. Emotion Dysregulation Scale

Part 3. How I Feel (cont')

Prompt: Please indicate how often the following apply to you when you are upset.

"When I am upset..."

Scale:

1 = *Almost never*

2 = *Sometimes*

3 = *About half the time*

4 = *Most of the time*

5 = *Almost always*

Appendix G1: Goals

1. I have difficulty getting work done.
2. I have difficulty focusing on other things.
3. I have difficulty thinking about anything else.
4. I have difficulty concentrating.

Appendix G2: Impulse

1. I become out of control.
2. I have difficulty controlling my behaviors.
3. I feel out of control.
4. I lose control over my behaviors.

Appendix H. Perceived Threat Scale

Part 5. World Around Me

Prompt: To what extent do you agree with the following statements?

Scale:

1 = *Strongly disagree*

2 = *Disagree*

3 = *Somewhat disagree*

4 = *Neutral*

5 = *Somewhat agree*

6 = *Agree*

7 = *Strongly agree*

Appendix H1: Scarcity

1. There are only so many good jobs to go around.
2. It's competitive out there. Only some kids can make it.
3. There aren't enough opportunities out there for everyone.

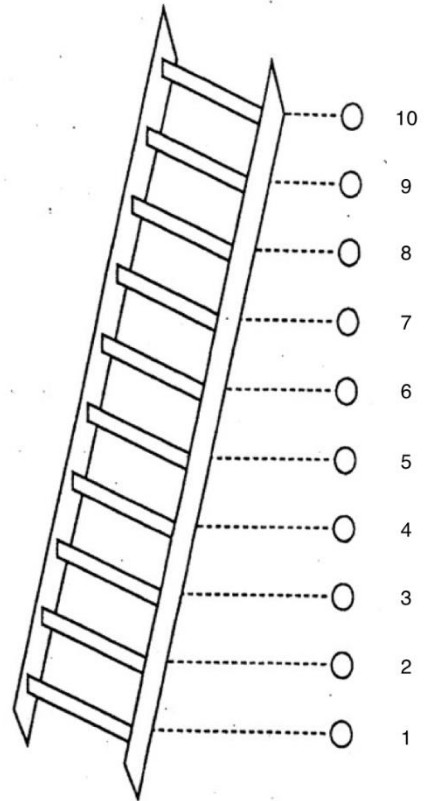
Appendix H2: Instability

1. It's getting harder and harder all the time to make a decent living.
2. Kids today face an unpredictable future. There can be prosperity one minute and poverty the next.
3. These days you could work for the same company for 30 years and then suddenly get fired without any warning or explanation.

Appendix I. Child Competence Scale

5. Now assume that these ladders show where your child stands in their year group at her/his school. Please tell us where you think your child would be on each ladder.

- 4-1. How well is your child doing at school compared with the rest of their year group? (**Top = children who get the best grades*)
- 4-2. How attractive or good looking is your child compared with the rest of their year group? (**Top = children who are most attractive, good looking*)
- 4-3. How ethical or moral is your child compared with the rest of their year group? (**Top = children who are most ethical, moral*)



Appendix J. COVID-19 Stress Scale

Part 5. World Around Me

Prompt: To what extent do you agree with the following statements?

Scale:

1 = *Not at all true of me*

2

3

4 = *Neutral*

5

6

7 = *Very true of me*

Appendix J1: Perceived Coronavirus Threat Questionnaire

1. Thinking about the coronavirus (COVID-19) makes me feel threatened.
2. I am afraid of the coronavirus (COVID-19).
3. I am stressed around other people because I worry I'll catch the coronavirus (COVID-19).

Appendix J2: Coronavirus Impacts Questionnaire

Financial Scale

1. The Coronavirus (COVID-19) has impacted me negatively from a financial point of view.
2. I have lost job-related income due to the Coronavirus (COVID-19).

Resource Scale

1. I have had a hard time getting needed resources (food, toilet paper) due to the Coronavirus (COVID-19).
2. It has been difficult for me to get the things I need due to the Coronavirus (COVID-19).

Psychological Scale

1. I have become depressed because of the Coronavirus (COVID-19).
2. The Coronavirus (COVID-19) outbreak has impacted my psychological health negatively.

Appendix K. Parental Psychological Availability Scale

Prompt: Please indicate how much you agree with each statement.

“When I spent time with my son/daughter today, ...”

Scale:

1 = *Totally disagree*

2 = *Disagree*

3 = *Neither agree nor disagree*

4 = *Agree*

5 = *Totally agree*

1. ... I was fully available for activities with my child.
2. ... I was fully open to what my child wanted to tell me.
3. ... my thoughts were completely focused on my child.

Appendix L. Social Desirability Scale

Prompt: Here are a few statements about your relationships with others. How much is each statement TRUE or FALSE for you?

Scale:

1 = *Definitely false*

2 = *Mostly false*

3 = *Don't know*

4 = *Mostly true*

5 = *Definitely true*

1. I am always courteous even to people who are disagreeable.
2. There have been occasions when I took advantage of someone. [Reversed]
3. I sometimes try to get even rather than forgive and forget. [Reversed]
4. I sometimes feel resentful when I don't get my way. [Reversed]
5. No matter who I'm talking to, I'm always a good listener.