

**PARENTING, ATTACHMENT, AND PERFECTIONISM: A TEST OF THE  
PERFECTIONISM SOCIAL DISCONNECTION MODEL IN CHILDREN AND  
ADOLESCENTS**

by

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B.A., The University of British Columbia, 2017

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in

THE FACULTY OF GRADUATE AND POSTDOCTORAL STUDIES  
(Psychology)

THE UNIVERSITY OF BRITISH COLUMBIA  
(Vancouver)

August 2019

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Parenting, attachment, and perfectionism: A test of the Perfectionism Social Disconnection Model in children and adolescents

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submitted by Ariel Hoi Ching Ko in partial fulfillment of the requirements for

the degree of Master of Arts

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## **Abstract**

Perfectionism is a multifaceted personality construct involving perfectionistic traits (i.e., demand for the self and/or others to be perfect), perfectionistic self-presentation (i.e., requirement of the self to appear perfect), and intrapersonal/self-relational perfectionism (i.e., automatic perfectionistic thoughts and self-recriminations). Perfectionism is a risk factor for multiple psychological and physical dysfunction across the lifespan and has been reported to be increasing over the past 30 years (Curran & Hill, 2017). Given the host of difficulties linked to perfectionism and the elevated levels of perfectionism among individuals, further research is needed to determine how perfectionism develops. Hewitt, Flett, and Mikail (2017) proposed a developmental framework of perfectionism as part of their Perfectionism Social Disconnection Model (PSDM). This model suggests that perfectionism stems from attachment insecurities rooted in asynchrony between parental behaviors and a child's needs. The general goal of the study is to examine whether adverse parenting (i.e., authoritarian parenting, parental psychological control, and parental noninvolvement) and insecure attachment are relevant developmental factors in perfectionism. Specifically, we investigated the relationships among adverse parenting, insecure attachment, and perfectionism, as well as the mediating effect of insecure attachment on the relationship between adverse parenting and perfectionism. A total of 96 parent-child dyads with youth ranging from 8 to 15-years old completed self-report questionnaires on parenting, attachment, and perfectionism. Findings from this study suggest that adverse parenting behaviours and attachment insecurity are influential factors to various trait and self-presentational components of perfectionism. In particular, parental noninvolvement contributed to various trait and self-presentational perfectionism through insecure attachment.

Study results provide further empirical support for Hewitt et al.'s (2017) developmental model of

perfectionism and suggest the importance of parental noninvolvement and insecure attachment on the development of perfectionism in younger populations. Study findings also shed insight on treatment strategies for children and adolescents struggling with perfectionism.

## **Lay Summary**

Perfectionism is the need to be or appear to be perfect. Previous research has shown perfectionism is associated with many psychological and physical difficulties; however, not much is known about how perfectionism develops. The present study looks at how parenting behaviours and insecure attachment (i.e., unhealthy dependence on or rejection of relationships) influence the development of perfectionism in children and adolescents aged 8 to 15-years old. Findings suggest that adverse parenting behaviours, such as authoritarian parenting (i.e., demanding/punitive parents), parental psychological control (i.e., emotionally manipulative parents), and parental noninvolvement (i.e., neglectful/uninvolved parents), and insecure attachment are relevant factors to the development of perfectionism. Specifically, results show that parental noninvolvement gives rise to insecure attachment, and in turn, leads to perfectionism. Through our study, we hope to better understand how perfectionism develops in children and adolescents, so we can inform effective treatment strategies for youth struggling with perfectionism.

## **Preface**

This thesis is based on the research project, “The Nature of the Interpersonal Expression of Perfectionism: Perfectionistic Self-Presentation”, designed by Dr. Paul L. Hewitt, with co-investigator, Dr. Susan A. J. Birch, and has been approved by the University of British Columbia’s Behavioural Research Ethics Board [certificate #H16-01699].

My involvement on this research project involved writing the ethics application, selecting appropriate measures, refining the procedures, data collection, and data analysis. Mediation analyses described in Section 2.5 was conducted with the R code written by Jordan C. Brace, a statistical consultant in the Department of Psychology.

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## **Acknowledgements**

First and foremost, I would like to thank my supervisor, Dr. Paul L. Hewitt, for his continued support and patience from the initial stages of this research project to the final written thesis. He has inspired me to be creative, take initiative, and continue pursuing research and clinical work in this field. I would also like to thank Dr. David Kealy, Dr. Kiley Hamlin, and Dr. Frances Chen, for their guidance on this project. This research was supported by a grant from the Social Sciences and Humanities Research Council of Canada (SSHRC) awarded to Dr. Paul. L. Hewitt and co-applicants, Dr. Susan A. J. Birch and Dr. Gordon L. Flett, as well as the Joseph-Armand Bombardier CGS Master's Scholarship awarded to Ariel Hoi Ching Ko.

I would like to express my sincerest gratitude to the research assistants on this project, Diana Lee, Hira Peracha, Jazz Wilson, Maria Bleier, and Carly Chui, as without their hard work and effort, this project would not have been completed. As well, thank you to my lab mates, Chelzea Madia, Keah Sully-Daniels, and Saffron Wadsley-Rose, and members of my cohort, Arezoo Shahnaz and Brittney Russel, for making research fun.

Special thanks are owed to my parents, Eric Ko and Eliza Tsing. Without their unconditional love and support throughout my years of education, I would not be where I am today. Thank you to my sister, Bowie Ko, and brother, Longco Ko, for keeping me grounded and lifting my mood during difficult times. To my friends, Sabrina Lam, Ronny Au, Sherry Lin, Kevin Zhao, Robert Ngai, and Ahren Fung, thank you for always making me laugh and reminding me there is life outside of research.

Last but not least, to Jacky Tang, thank you for your unwavering support and encouragement. Your passion for health care and pursuit of science inspired me to go into this

field. Thank you for loving me endlessly and unconditionally and for widening my perspective on life and science.

*To the parents and children who made this project possible*

## Chapter 1: Introduction

Perfectionism is a complex personality style involving dispositional, self-presentational, and intrapersonal cognitive elements. Individuals incessantly demand perfection for the self and/or others or attempt to present the self as perfect. Perfectionism has been described as a vulnerability factor to many clinical and nonclinical problems across the lifespan (Egan, Wade, & Shafran, 2011; Limburg, Watson, Hagger, & Egan, 2017; Morris & Lomax, 2014; Sirois & Molnar, 2016), and levels of perfectionism has been increasing over time (Curran & Hill, 2017). The alarming costs associated with perfectionism call for a better understanding of the developmental mechanisms of perfectionism.

Past theorists have alluded to early caregiver-child relationships as a contributing factor to perfectionism (Hamachek, 1978; Hollender, 1965; Horney, 1942; Missildine, 1963), and contemporary researchers have provided support for the influence of adverse parenting on perfectionism (Flett, Hewitt, Oliver, & Macdonald, 2002; Ko, Hewitt, Cox, Flett, & Chen, in press; Soenens et al., 2005; Speirs Neumeister, 2004). Recently, Hewitt, Flett, and Mikail (2017) proposed a theoretical framework, incorporating theories on early childhood experiences, attachment, self psychology, and aversive affective states, in understanding the development of perfectionism as part of the Perfectionism Social Disconnection Model (PSDM). There is currently support for various components of the developmental portion of the PSDM (e.g., Chen, Hewitt, & Flett, 2015; Chen et al., 2012; Ko et al., in press) but research on this component of the PSDM has been conducted primarily on adults. As a consequence, there is an imbalance of empirical knowledge on the development of perfectionism in younger populations. Moreover, research on perfectionism has focused extensively on trait dimensions of perfectionism, so other components of perfectionism, such as perfectionistic self-presentation (PSP; Hewitt et al., 2003,

2011) and intrapersonal elements (Flett, Hewitt, Blankstein, & Gray, 1998), among children and adolescents has not yet been addressed.

Therefore, the present study investigated the PSDM's developmental framework of perfectionism in a sample of children and adolescents and their parents. We are interested in the associations among adverse parenting behaviours, insecure attachment, and various components of perfectionism. Additionally, we assess whether there are group differences between securely attached and insecurely attached individuals on reported adverse parenting behaviours and dimensions of perfectionism. Furthermore, we look at whether different adverse parenting behaviours differentially predict types of perfectionism. Finally, we examine multiple mediation models where adverse parenting is related to various perfectionism dimensions through insecure attachment. To our knowledge, this is the first study investigating the PSDM's developmental model of perfectionism in children and adolescents. Findings from this study not only provide further support for the PSDM, but also has important clinical implications in establishing treatment models for perfectionism in children and adolescents.

### **1.1 Perfectionism theory and research**

There are several theoretical conceptualizations of perfectionism (e.g., Frost, Marten, Lahart, & Rosenblate, 1990; Gaudreau & Thompson, 2010; Hewitt & Flett, 1991; Hewitt et al., 2017; Hewitt et al., 2003). However, this study will focus on Hewitt et al.'s (2017) Comprehensive Model of Perfectionistic Behaviour (CMPB), defining perfectionism as a dysfunctional, pernicious, and multifaceted personality style. Hewitt et al.'s (2017) CMPB posits perfectionism as multidimensional and as operating on various levels. The CMPB involves three components: trait, self-presentational, and intrapersonal or self-relational. These components are

not mutually exclusive as individuals embody various aspects of the components to varying degrees and patterns.

### **1.1.1 Trait perfectionism**

The trait dimensions of perfectionism involve stable personality dispositions exhibiting a strong need for the self and/or others to be perfect (Hewitt & Flett, 1991). The three trait dimensions of perfectionism are: *self-oriented perfectionism* (requirement for the self to be perfect), *other-oriented perfectionism* (requirement for others to be perfect), and *socially prescribed perfectionism* (perception that others require the self to be perfect).

Self-oriented perfectionism involves a rigid demand for the self to attain perfection. The need for absolute perfection is directed towards the self, thus, self-oriented perfectionists base their concept of the self and self-worth on achieving perfection. The unrealistic expectation to be perfect is believed to be obtainable and that it should be realized in all situations. The need to be perfect is unrelenting and all-or-nothing – if anything is less than perfect, it is equated as a failure. Self-oriented perfectionists perceive “failures” to be a reflection of the self as inadequate and worthless, and experience intense feelings of self-hatred and shame. The self-defeating thoughts and accompanying negative affects are seen as deserving, acting as a form of self-punishment for not living up to the expectation of being perfect.

On the other hand, other-oriented perfectionism directs the need for perfection toward others. Instead of requiring the self to be perfect, other-oriented perfectionism involves the requirement that other people be perfect. This is usually targeted towards a significant other, family member, or people within the individual’s social circle, but it can also be directed more broadly to the world at large. This form of perfectionism is often characterized by criticism of others’ shortcomings and dissatisfaction with others’ performance. By imposing impossible

expectations on others and judging others negatively, other-oriented perfectionists can not only deflect judgment away from themselves, but also protect their own self-worth by focusing externally.

Finally, socially prescribed perfectionism reflects the belief that others expect perfection from the self and is motivated by interpersonal needs to feel validated and accepted by others. The individual experiences real or perceived external pressure from close-others, colleagues, or the society to be perfect, and believes that others will only be satisfied once the imposed perfectionistic standards are met. However, successful performances are perceived to increase the level of expectation for next time, so socially prescribed perfectionists often feel hopeless because of the impression of having to achieve an endless cycle of impossible demands.

### **1.1.2 Perfectionistic self-presentation**

Perfectionistic self-presentation represents interpersonal expressions of one's perfection in order to appear perfect to others (Hewitt et al., 2003). Thus, rather than concerns with being perfect, as with the trait components, the self-presentation components reflect the drive to appear perfect to others. The three perfectionistic self-presentational facets are: *perfectionistic self-promotion* (overpromotion of one's "perfection"), *nondisplay of imperfections* (concealment of behaviours that may be viewed as flaws or mistakes), and *nondisclosure of imperfections* (verbal concealment of shortcomings or "imperfections"). Perfectionistic self-promoters over-communicate or excessively display their own purported "perfection" to others. Individuals with this type of perfectionistic self-presentation actively present an image of the self as perfect to obtain positive appraisals. By engaging in self-promotion, the individual attempts to impress others and strengthen their own self-worth.

On the contrary, nondisplay and nondisclosure of imperfections involve concealing perceived inadequacies or weaknesses in order to appear perfect. Whereas nondisplay of imperfections is the avoidance of demonstrating flaws, nondisclosure of imperfections is the avoidance of talking about flaws. Individuals with nondisplay of imperfections will often conceal mistakes or errors to avoid being seen as anything less than perfect. It is also common to avoid situations or activities where imperfect behaviours can be observed or evaluated by others. Similarly, individuals with nondisclosure of imperfections refrain from talking about anything that might be perceived as a weakness, so personal disclosures are avoided. As such, these individuals might be perceived as distant, impersonal, and disingenuous. Perfectionistic individuals who engage in nondisplay or nondisclosure of imperfections are sensitive to the scrutiny of others and feel vulnerable to open criticism. By hiding perceived imperfections, these individuals are constantly protecting their fragile concept of the self (Hewitt et al., 2017).

### **1.1.3 Intrapersonal/self-relational perfectionism**

Intrapersonal or self-relational components of perfectionism are reflected by automatic perfectionistic thoughts regarding the absolute attainment of perfection (Flett et al., 1998) and by harshly recriminating self-statements reflecting severe self-criticism (Hewitt, Molnar, Flett, & Smith, manuscript in preparation). This component of perfectionism reflects self-relational elements of perfectionism and captures the internal dialogue of perfectionistic individuals. With constant rumination, self-directed statements involving the need to be perfect (e.g., “Why can’t I be perfect”, “My work should be flawless”) become automatic and dominate the individual’s internal dialogue. This perfectionistic internal dialogue is also extremely harsh and self-critical, fraught with self-recriminations (e.g., “Why am I so stupid”, “I should be ashamed of myself”)

reflecting not only the self-critical nature of perfectionism but also the harshly evaluated relationship with the self.

Research on trait, self-presentational, and intrapersonal/self-relational components of perfectionism show significant evidence for the pernicious nature of perfectionism (Egan et al., 2011; Limburg et al., 2017; Morris & Lomax, 2014; Sirois & Molnar, 2016; Smith et al., 2018; Smith et al., 2016). Many have identified perfectionism as a contributing factor to poor psychological wellbeing, physical health functioning, and many forms of dysfunction across the lifespan. Although the majority of the research has been conducted on adults, the next section will demonstrate the negative impact that perfectionism has on children and adolescents.

#### **1.1.4 Perfectionism and maladjustment in children and adolescents**

There is a wealth of evidence supporting perfectionism as a risk factor to psychopathology in adults (for reviews, see Egan et al., 2011; Hewitt et al., 2017; Sirois & Molnar, 2016; Stoeber, 2018). Similarly, perfectionism components are associated with depression, anxiety, obsessive-compulsive disorder, and eating disorders among children and adolescents (Morris & Lomax, 2014). For example, self-oriented and socially prescribed perfectionism has been linked with depression in a sample of grade 4 and grade 7 students (Stornelli, Flett, & Hewitt, 2009) and 8 to 12-year old children (Dry, Kane, & Rooney, 2015). Socially prescribed perfectionism was also a significant predictor of a diagnosis of depression in a group of 10 to 11-year-old children (Huggins, Davis, Rooney, & Kane, 2008). Likewise, self-oriented and socially prescribed perfectionism was significantly correlated with anxiety symptoms in 12 to 17-year-old adolescents from Germany and Hong Kong (Essau, Leung, Conradt, Cheng, & Wong, 2008), and perfectionistic concerns (i.e., concerns about making mistakes, others expecting perfection, and doubts about actions) predicted increases in

adolescents' anxiety symptoms in a longitudinal study (Damian, Negru-Subtirica, Stoeber, & Baban, 2017). Furthermore, perfectionism was identified as a key factor in a measure of obsessive beliefs in children (Wolters et al., 2011), and perfectionistic dimensions were found to be associated with severity of obsessive-compulsive disorder symptoms (Soreni et al., 2014). Studies have also posited perfectionism as a risk factor for eating disorders (Boone, Soenens, Braet, & Goossens, 2010; Dour & Theran, 2011), with self-oriented and socially prescribed perfectionism being linked to problematic eating behaviours in a group of Portuguese adolescents (Bento et al., 2010). Moreover, in 10 to 17-year old youth with eating disorders, higher levels of perfectionism were associated with more severe symptoms at intake assessment, 6 months, and 12 months follow up (Johnston et al., 2018).

In addition to clinical disorders, the perniciousness of perfectionism is present in other domains of functioning among youth. One of the more alarming findings, is the association between perfectionistic traits and perfectionistic self-presentation with increased risk of suicidality in children and adolescents (Hewitt, Newton, Flett, & Callander, 1997; O'Connor, Rasmussen, & Hawton, 2010; Roxborough et al., 2012). There is also research suggesting a relationship between a facet of perfectionism (i.e., sensitivity to mistakes) and interpersonal dysfunction (Ye, Rice, & Storch, 2008). Aside from psychological difficulties, perfectionism also impairs physical functioning in youth (Azevedo et al., 2010; Ben-Amitay, Nevo, Lieberman, Mester, & Harel, 1998; Kowal & Pritchard, 1990). Finally, perfectionism has also been implicated in the treatment process (Hewitt, Flett, Mikail, Kealy, & Zhang, 2018). For example, perfectionistic youth do not respond well to treatment for depression and suicidality (Jacobs et al., 2009; O'Connor et al., 2007), and are less likely to experience remission of eating disorder symptoms at 12 months follow up (Johnston et al., 2018). Given the host of clinical and

nonclinical problems associated with perfectionism, the increase of reported self-oriented, other-oriented, and socially prescribed perfectionism among individuals over the past thirty years (Curran & Hill, 2017), and the lack of empirical work on perfectionistic self-presentation and intrapersonal elements of perfectionism, it is imperative to investigate the developmental pathway of perfectionism.

## **1.2 Perfectionism social disconnection model (PSDM)**

Hewitt et al.'s (2017) Perfectionism Social Disconnection Model (PSDM) offers a two-part theoretical framework on 1) the developmental pathway of perfectionism and 2) the link between perfectionism and maladjustment. The purpose of this study is to examine the developmental component of the PSDM, which is partly built upon early theories of perfectionism, attachment, self psychology, and affectivity.

A central theme from the writings of early theorists suggest that perfectionism may stem from actual or perceived childhood experiences and may be specifically rooted in the perceived quality of the relationship between a caregiver and a child. For example, Horney (1950) theorized that perfectionism arises when children are unable to satisfy individual needs, such as love and safety, because of parental indifference or neglect. Similarly, Hollender (1965) proposes that perfectionism develops in children who are insecure due to a lack of or conditional approval and affection from parents. Other theorists have also suggested that perfectionism arises in environments with inadequate parental caregiving (Greenspon, 2014; Hamachek, 1978; Missildine, 1963). Another key point among early theorists is that perfectionism reflects an underlying sense of the self as defective. For Adler (1938/1998), perfectionism is linked with feelings of inferiority; for Horney (1950), perfectionism represents a way of coping with perceived inadequacies; and for Hollender (1965), perfectionism stems from personal

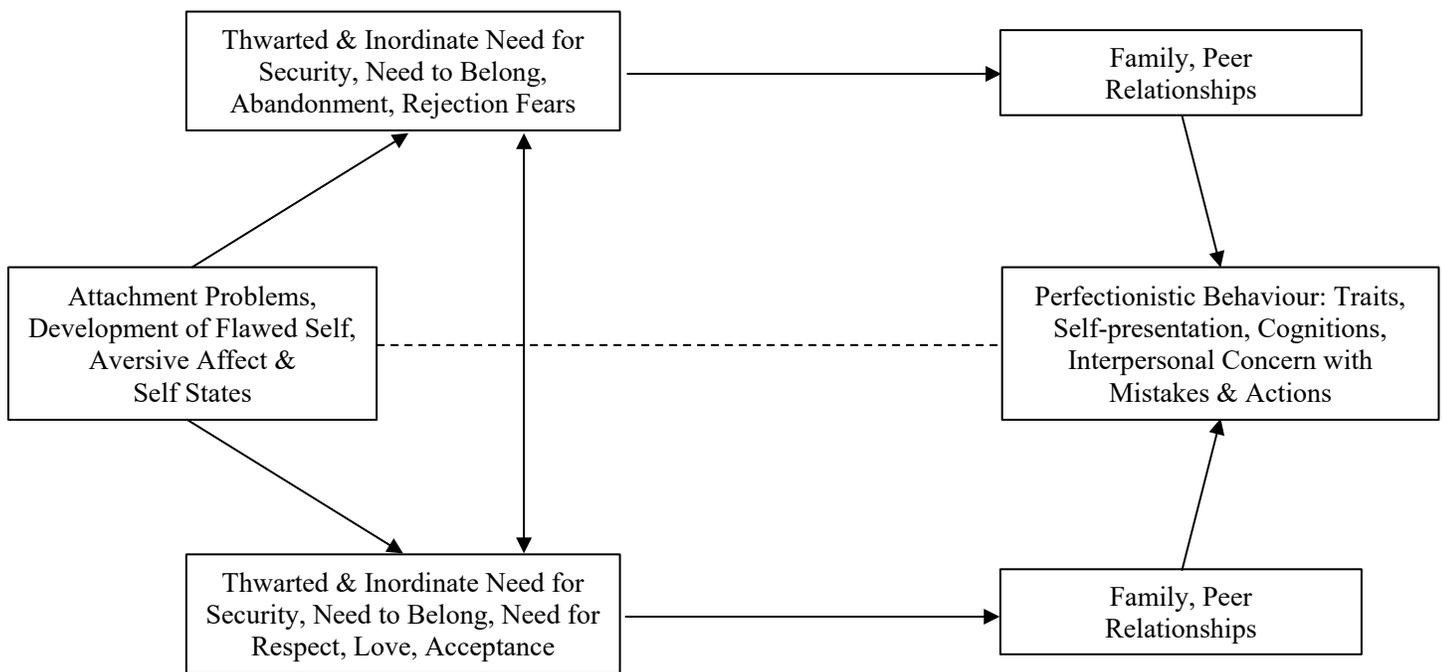
insecurities. It is proposed that the need for perfection is interpersonally driven in order to gain acknowledgement, feel valued by important others, and garner a sense of belongingness (Hewitt, Flett, Sherry, & Caelian, 2006; Hewitt et al., 2017).

Attachment theory asserts that early childhood experiences, particularly the quality of the caregiver-child relationship, have lasting influences on an individual's psychological connectedness to others (Bowlby, 1969). Likewise, theories of the self also place importance on early parent-child relationships on the development of self-concepts, self-resilience, and self-cohesiveness (Kohut, 1971). It is theorized that those with caring and responsive parents tend to have healthy internal working models of people and relationships (i.e., secure attachment), where interpersonal closeness is welcomed, and the individual has a stable and constructive view of the self. In contrast, those with parents who are unavailable, uninvolved, inconsistent, or indifferent, are more likely to engender negative working models of relationships biased towards unhealthy dependence and/or rejection (i.e., insecure attachment), fixate on personal defects and failures, and ingrain a sense of the self as unworthy and unlovable. This perceived defective self is often accompanied by negative affectivity such as shame, guilt, and anger (Hewitt et al., 2017), powerful emotional states that place individuals at a greater risk for distress.

Hewitt et al. (2017) proposed that perfectionistic behaviour arises as a result of asynchronous parent-child relationships. Asynchrony represents a perceived or veridical incompatibility between the nurturance and responsiveness of the caregiver and the needs of the child. Although a lack of synchrony in the parent-child relationship can reflect adverse parenting (i.e., controlling, dismissive, or non-supportive parenting), it is sometimes the case that the needs of the child are not being fulfilled despite proper care and support from parents. When parental caregiving does not meet the child's needs, asynchrony occurs. Hewitt et al. (2017) hypothesize

that long-term and relatively consistent asynchrony leads to attachment insecurity, understanding of the self as inadequate and defective, and a vulnerability to intense negative affective states. The need to belong and need to engender a sense of one's self-worth become driving factors for the establishment of perfectionistic tendencies and behaviours. The person learns that by being or appearing perfect, others may accept them, fulfilling their sense of belongingness and repairing their sense of the self as defective. Figure 1 illustrates the developmental component of the PSDM.

**Figure 1 The developmental component of the Perfectionism Social Disconnection Model (PSDM).**



### 1.2.1 Adverse parenting and perfectionism

The role of adverse parenting as a developmental antecedent to perfectionism has not only been alluded to by past theorists but has received abundant empirical support. Research on the link between adverse parenting and perfectionism has consistently shown that authoritarian

parenting style (i.e., demanding and punitive parenting, low on warmth; Baumrind, 1991) and parental psychological control (i.e., fostering guilt and withdrawing love to pressure children to meet standards; Barber, 1996) are relevant factors to developing perfectionism. Additionally, other adverse parenting behaviours, such as perfectionistic parenting and parental expectations and criticisms, have also been reported to be contributing factors to perfectionism.

A number of studies (e.g., Gong, Fletcher, & Bolin, 2015; Kawamura, Frost, & Harmatz, 2002; Sapieja, Dunn, & Holt, 2011; Soysa & Weiss, 2014) have shown that authoritarian parenting is positively associated with perfectionism, particularly socially prescribed perfectionism. For instance, in a group of gifted college students, authoritarian parenting was identified as a developmental factor to socially prescribed perfectionism but not self-oriented perfectionism (Speirs Neumeister, 2004). Consistent with this finding, other studies on young adults have shown the specificity of authoritarian parenting to socially prescribed perfectionism (Flett, Hewitt, & Singer, 1995; Miller, Lambert, & Speirs Neumeister, 2012; Miller & Speirs Neumeister, 2017). Along the same lines, authoritarian parenting (Hibbard & Walton, 2014) was found to be positively correlated with perfectionistic attitudes (i.e., concern over mistakes and doubts about actions). It should be noted that Baumrind's (1991) other typology of parenting styles, such as authoritative (i.e., assertive but emotionally available and supportive parenting) and permissive (i.e., non-disciplinary and indulgent parenting but high on responsiveness), has also been associated with perfectionism but it appears that they may be protective factors instead. For example, authoritative parenting was related to fewer doubts about actions and lower perceived parental criticism, while permissive parenting was associated with lower levels of perceived criticism and concern over mistakes (Hibbard & Walton, 2014). Moreover, non-perfectionistic youth reported higher levels of authoritative parenting compared to perfectionistic

youth (Sapieja et al., 2011). It appears that the demands and pressure coupled with the lack of warmth and support from authoritarian parents may be primary influences for the development of perfectionism, in particular, socially prescribed perfectionism.

In addition to authoritarian parenting, numerous studies have demonstrated the effect of parental psychological control on perfectionism (e.g., Craddock, Church, & Sands, 2009; Deas, Power, Collin, Yellowlees, & Grierson, 2011; Fletcher, Shim, & Wang, 2012; Smith et al., 2017; Soenens, Vansteenkiste, Duriez, & Goossens, 2006). For instance, perfectionism (i.e., socially prescribed perfectionism, concern over mistakes, doubts about actions) has a mediating effect on the relationship between parental psychological control and eating disorders in both adolescents and adults (Costa, Hausenblas, Oliva, Cuzzocrea, & Larcan, 2016; Reilly, Stey, & Lapsley, 2016; Soenens et al., 2008b). Furthermore, interparental conflict affected concern over mistakes and doubts about actions through psychological control (Gong, Paulson, & Wang, 2016), while parental perfectionism influenced daughters' perfectionism through psychological control (Soenens et al., 2005). More importantly, a longitudinal study on a sample of adolescents demonstrated that parental psychological control predicted elevated levels of perfectionism (Soenens et al., 2008a). Particularly, direct associations were reported between maternal parental control and socially prescribed perfectionism in children (Kenney-Benson & Pomerantz, 2005). Similar associations were found for a specific type of psychological control, namely parental conditional regard (i.e., inducing guilt and shame in children when expectations are unmet; Barber, 1996). In two samples of adolescents ( $n=316$  and  $n=148$ ), dimensions of perfectionism were positively predicted by parental conditional regard (Curran, 2018; Curran, Hill, & Williams, 2017), lending support for the notion that individuals engage in perfectionistic behaviours in an attempt to obtain acceptance or acknowledgement from parents. From these

findings, it is clear that perfectionism is likely to foster in individuals with parents who are psychologically controlling.

Although authoritarian parenting and parental psychological control are two major adverse parenting behaviours that have received the most attention in research on parenting and perfectionism, there are other adverse parenting practices that have been linked with perfectionism (e.g., Enns, Cox, & Clara, 2002; Hong et al., 2017; Turner & Turner, 2011). For example, perfectionistic parenting characterized by worry over children's imperfections (i.e., anxious rearing; Flett et al., 2002) has been shown to increase children's level of perfectionism (Affrunti & Woodruff-Borden, 2017; Mitchell, Broeren, Newall, & Hudson, 2013). This could be in part due to the reported parental pressure perceived by adolescents with perfectionistic parents (Randall, Bohnert, & Travers, 2015) and perfectionistic parents' self-reported heightened use of criticism as discipline (Greblo & Bratko, 2014). Indeed, perception of parental expectations and criticism is associated with perfectionism in children (Harvey, Moore, & Koestner, 2017) and adults (Weinburger Biran & Reese, 2007). For instance, perceived parental expectations predicted increased levels of socially prescribed perfectionism in a group of adolescents (Damian, Stoeber, Negru, & Baban, 2013), and mothers with high levels of criticism had children with elevated levels of perfectionism in both mother-daughter and mother-son dyads (Clark & Coker, 2009). Furthermore, a few studies looked at the impact of neglectful parenting or parental noninvolvement on perfectionism. Uninvolved parenting was positively correlated with doubts about actions (Hibbard & Walton, 2014) and socially prescribed perfectionism (Miller & Speirs Neumeister, 2017). However, a recent study reported that the childhood experience of neglect was a negative predictor of socially prescribed perfectionism (Chen, Hewitt, & Flett, 2019). As such, more research is required to better understand the

relationship between parental noninvolvement and perfectionism. Altogether, various adverse parenting behaviours (i.e., authoritarian parenting, parental psychological control, perfectionistic parenting, and parental expectations and criticisms) emerge as important influential factors of perfectionism.

### **1.2.2 Attachment and perfectionism**

The development of perfectionism as described in the PSDM postulate attachment insecurity as a key contributing factor (Hewitt et al., 2017). Various studies have replicated the relationship between insecure attachment and perfectionism (e.g., Dakanalis et al., 2014; Dunkley, Berg, & Zuroff, 2012; Gnilka, Rice, Ashby, & Moate, 2016; Rice & Lopez, 2004; Rice, Lopez, & Vergara, 2005). For example, attitudinal factors of perfectionism (i.e., perceived discrepancy between one's expectations and performance, concern over mistakes, and doubts about actions) are associated with attachment anxiety and avoidance (Gnilka, Ashby, & Noble, 2013; Wei, Heppner, Russell, & Young, 2006; Wei, Mallinckrodt, Russell, & Abraham, 2004). Moreover, in a sample of young American adults, insecure attachment predicted elevated levels of perfectionistic attitudes (Rice & Mirzadeh, 2000). Similar associations were reported in a group of young Portuguese adults (Oliveira, Carmo, Cruz, & Bras, 2012) and Turkish university students (Ulu & Tezer, 2010). More recently, various components of trait and self-presentational perfectionism were found to be positively correlated with insecure attachment styles (i.e., preoccupied, dismissing, and fearful; Chen et al., 2015) and dimensions of attachment insecurity (i.e., attachment anxiety and avoidance; Borroni et al., 2016; Ko et al., in press). From a review of the literature on attachment and perfectionism in adults, it is evident that insecure attachment appears to be a relevant factor in perfectionism.

On the other hand, research on attachment and perfectionism in children and adolescents have not been as widely researched, but a handful of studies do report findings similar to those in adults. In a sample of 12 to 18-year old adolescents ( $n=290$ ), attitudinal elements of perfectionism were positively correlated with preoccupied and fearful attachment and negatively correlated with secure attachment (Taylor, Couper, & Butler, 2017). Similarly, in a group of 14 to 20-year old youth ( $n=328$ ), socially prescribed perfectionism was related to both anxious and avoidant attachment, while perfectionistic self-promotion was associated with anxious attachment (Boone, 2013). In another sample of 16 to 19-year old youth ( $n=178$ ), perfectionistic self-promotion was positively correlated with preoccupied attachment, nondisclosure of imperfections was positively associated with fearful and dismissing attachment, and nondisplay and nondisclosure of imperfections were negatively correlated with secure attachment (Chen et al., 2012). Although there are few studies on attachment and perfectionism, especially perfectionistic self-presentation, in children and adolescents, emerging findings show comparable results to research on adults, strengthening the link between insecure attachment and perfectionism.

### **1.2.3 Existing empirical evidence on the developmental component of the PSDM**

The aforementioned studies on adverse parenting and perfectionism and insecure attachment and perfectionism only provide partial support for specific components of Hewitt et al.'s (2017) developmental model of perfectionism in the PSDM. Thus, more thorough testing of multiple components of the model is required. Currently, there exists three studies that provide a closer examination of Hewitt and colleagues' (2017) proposed developmental framework of perfectionism.

Chen et al. (2012) examined several elements of the PSDM, namely perfectionistic self-presentation, insecure attachment, and social disconnection. In a sample of 16 to 19-year old adolescents, findings demonstrated a negative relationship between secure attachment and nondisplay and nondisclosure of imperfections, and positive associations between insecure attachment and perfectionistic self-promotion and nondisclosure of imperfections. Chen and colleagues' (2012) study was the first to report a link between insecure attachment and perfectionistic self-presentation, but this only partially supports the developmental component of the PSDM as other factors, such as adverse parenting, were not included.

To follow up, Chen, Hewitt, and Flett (2015) conducted a more comprehensive investigation, and looked at insecure attachment, need to belong, shame, and interpersonal components of perfectionism (i.e., socially prescribed perfectionism and perfectionistic self-presentation) on a large group of 513 university students. Correlational analyses on attachment and perfectionism demonstrated that secure attachment was negatively correlated with socially prescribed perfectionism and all facets of perfectionistic self-presentation, while insecure attachment styles (i.e., preoccupied, dismissing, and fearful) were positively correlated with various components of trait and self-presentational perfectionism. More importantly and consistent with the PSDM, the authors found that the need for belonging and shame mediated the association between insecure attachment and interpersonal components of perfectionism. This suggests that motivational factors driving perfectionism (i.e., need to belong) as well as vulnerability to negative affective states (i.e., shame) have an indirect effect on the relationship between insecure attachment and perfectionism, providing support for examining mediational pathways of perfectionism development. Although this study provides further empirical evidence

for the developmental component of the PSDM, an evaluation of early parent-child relationship, a key factor in the model, is still missing.

Recently, we tested the mediating effects of attachment insecurity and perceived defectiveness on the relationship between adverse parenting (operationalized as perceived lack of parental warmth, involvement, and support) and perfectionism in a sample of young adults (Ko et al., in press). Congruent with earlier studies, significant positive associations were found between adverse parenting, attachment insecurity, perceived defectiveness, and various elements of perfectionism including self-oriented perfectionism, socially prescribed perfectionism, and all perfectionistic self-presentational facets. Furthermore, adverse parenting had an indirect effect on all perfectionism components through different combinations of attachment insecurities and a perception of the self as defective, suggesting that there may be unique developmental pathways for different dimensions of perfectionism. Although findings further support the developmental component of the PSDM, adverse parenting was measured as a combination of perceived lack of parental warmth, involvement, and support. As such, we could not assess the specificity of different adverse parenting behaviours on different dimensions of insecure attachment and various components of perfectionism.

To date, Chen et al. (2012), Chen et al. (2015), and Ko et al. (in press) are the few studies to directly examine the developmental model of perfectionism outlined in the PSDM. Together, they provide preliminary evidence for Hewitt et al.'s (2017) perfectionism developmental model but these findings have not yet been reproduced in younger populations.

### **1.3 The present study, goals, and hypotheses**

The wealth of clinical and nonclinical problems associated with perfectionism in children and adolescents, along with individuals reporting higher levels of trait perfectionism over the

past three decades (Curran & Hill, 2017), make research on the developmental pathway of perfectionism imperative. From a review of the current literature, empirical findings demonstrate that 1) various adverse parenting behaviours are linked with components of perfectionism, 2) insecure attachment is associated with various dimensions of perfectionism, and 3) there is preliminary evidence that insecure attachment mediates the relationship between adverse parenting and perfectionism in adults.

However, several limitations exist in the current literature on the development of perfectionism. First, the vast majority of perfectionism studies have been conducted on adults, and the scarcity of research on developmental antecedents of childhood perfectionism is concerning. Second, research on perfectionism predominantly focused on trait dimensions of perfectionism, so the relationship between adverse parenting and attachment insecurity with perfectionistic self-presentation is less clear. Third, the existing empirical support for the developmental portion of the PSDM (e.g., Chen et al., 2012; Chen et al., 2015; Ko et al., in press) relied solely on participants' self-report and parental reports were not obtained. Fourth, the examination of adverse parenting in Ko et al.'s (in press) study examined adverse parenting as a single construct involving the perceived lack of parental autonomy support, involvement, and warmth. As such, it is unknown whether specific facets of adverse parenting differentially contribute to attachment insecurity and perfectionism. Finally, a review of the literature on adverse parenting and perfectionism showed that active parental involvement characterized by demands and punishment (i.e., authoritarian parenting), psychological control, unrealistic expectations, and harsh criticisms are important influential factors to perfectionism. However, one area of adverse parenting, namely, uninvolved parenting, and its relation to perfectionism is

less clear. Thus, more research is needed to clarify the relationship between parental noninvolvement and perfectionism.

To begin addressing these research gaps, the present study investigates the PSDM's developmental model of perfectionism in 8 to 15-year old children and adolescents. Children and adolescents were asked to complete self-report measures on perceived parenting behaviours, attachment, and trait and self-presentational components of perfectionism. Parents were also invited to complete measures on their own parenting style. Moreover, to build on previous studies and to contribute to the current literature, we assessed three adverse parenting behaviours – authoritarian parenting, parental psychological control, and parental noninvolvement. Therefore, the present study investigates the PSDM's developmental model of perfectionism in children and adolescents, using both self-reports and parental reports in examining various components of perfectionism and multiple facets of adverse parenting behaviours.

To summarize, the goal of the present study is to address the following research questions: 1) are various adverse parenting behaviours, insecure attachment, and trait and self-presentational dimensions of perfectionism intercorrelated, 2) are there differences between insecurely and securely attached children and adolescents on levels of perfectionism and perceived adverse parenting behaviours, 3) do different adverse parenting behaviours (i.e., authoritarian parenting, parental psychological control, and parental noninvolvement) contribute to different dimensions of perfectionism, and 4) are parental noninvolvement and insecure attachment developmental antecedents to perfectionism? We hypothesize that 1) positive relationships will be observed among adverse parenting, insecure attachment, and trait and self-presentational perfectionism, 2) insecurely attached children and adolescents will report higher levels of perfectionism and perceived adverse parenting compared to securely attached youth, 3)

various facets of adverse parenting will differentially predict different components of perfectionism, and 4) insecure attachment will mediate the relationship between parental noninvolvement and dimensions of perfectionism. To our knowledge, this is the first study to examine the PSDM's developmental model of perfectionism in children and adolescents and the first study to assess parental noninvolvement in the context of the PSDM. Findings from this study can not only contribute to the growing knowledge of developmental antecedents to perfectionism but also shed light on areas of focus in treatment for children and adolescents struggling with perfectionism.

## Chapter 2: Methods

### 2.1 Research design

A cross-sectional study design was implemented to investigate the influences of adverse parenting behaviours and insecure attachment on the development of trait and self-presentational perfectionism in children and adolescents.

### 2.2 Participants

Power analyses was conducted to calculate the sample size needed to detect the hypothesized effects. G\*Power software was used, where the required sample size was determined based on specified effect sizes, significance level, and power (Faul, Erdfelder, Buchner, & Lang, 2009). Based on a meta-analysis on perfectionism yielding 2,047 effect sizes, the weighted average effect size was .26 (Limburg et al., 2017). With an effect size ( $f^2$ ) of .26,  $\alpha = .05$ , power = .80, a minimum sample size of  $N = 90$  is required for correlation analyses, a minimum sample size of  $N = 56$  is required for multivariate analysis of variance (MANOVA), and a minimum sample size of  $N = 47$  is required for a multiple regression analyses. G\*Power does not have a function to calculate sample size for mediation analyses. However, according to Fritz and MacKinnon (2007), the empirical estimates of sample sizes needed for mediation analyses using percentile bootstrap with a medium effect size and .80 power is  $N = 78$ .

102 parent-child dyads were recruited through the University of British Columbia's Early Development Research Group (EDRG). The Early Development Research Group share a database containing information on families who have previously consented to be contacted for UBC research studies. Participants have complete freedom in responding and deciding on their participation in the study. Any child or adolescent between the ages of 8 to 15 and their primary

caregiver from the Metro Vancouver Regional District (MVRD) are included in the study. There was no exclusion criteria for participation in this study.

Children and adolescents' ages ranged from 8 to 15 with a mean age of 11.58 years ( $SD = 1.73$ ). Youth were reported to be between the grades of 3 and 10 in school. 61.5% of child and adolescent participants identified as female, while 38.5% identified as male. Youth participants were predominantly Caucasian (55.2%), with 19.8% identifying as mixed race, 9.4% as Chinese, 5.2% as South Asian, 3.1% as Southeast Asian, 2.1% as Middle Eastern, and 5.2% as other races/ethnicity. 87.5% of children and adolescents reported having a sibling, while 12.5% are an only child. 14.6% of youth participants were indicated by parents to have a mental health disorder (e.g., ADHD, anxiety, depression, OCD, Tourette's Syndrome). An independent-samples t-test was conducted and no significant differences were found between those with a mental health disorder and those without on all study variables.

Parents' ages ranged from 33 to 64 with a mean age of 46.39 years ( $SD = 5.23$ ). A total of 85.4% of adult participants identified as female, 11.5% identified as male, and 3.1% identified as other gender constructs. The majority of parents are Caucasian (60.4%), with 16.7% identifying as Chinese, 5.2% as mixed race, 5.2% as South Asian, 3.1% as South American, 2.1% as Southeast Asian, 1% as Middle Eastern, 1% as Japanese, 1% as First Nation or North American Indian, and 4.2% as other races/ethnicity. 84.4% of adult participants are married, 5.2% identified as being in a common-law relationship, 4.2% reported being separated from a spouse, 3.1% reported as divorced, 1% identified as engaged, 1% identified as single, and 1% reported to be widowed. In terms of education, 49% of parents completed a Bachelor's degree, 17.7% had some post-secondary school education, 16.7% completed a Master's degree, 5.2% hold a Doctoral degree, 4.2% hold an associate/vocational school degree, 3.1% have a high school

diploma or equivalent, 3.1% have a professional degree, and 1% have some high school education. The vast majority of the families (61.5%) report having an annual household income of more than \$100,000, 25% report earning between \$50,000 and \$100,000, 8.3% report earning between \$25,000 and \$50,000, and 5.2% report earning less than \$25,000.

## **2.3 Measures**

Demographic information such as age, gender, ethnicity, family composition, marital status, education level, and annual household income were collected from all participants. Please refer to the Appendix for copies of study measures.

### **2.3.1 Youth Measures**

*Child-Adolescent Perfectionism Scale* (CAPS; Flett et al., 2016). The CAPS is a 22-item measure of trait perfectionism in children and adolescents. Participants are asked to rate each statement on a scale from 1 (*false-not at all true of me*) to 5 (*very true of me*). Examples of items include: “I try to be perfect in everything I do” (self-oriented perfectionism) and “There are people in my life who expect me to be perfect” (socially prescribed perfectionism). The CAPS does not have a scale for other-oriented perfectionism. Items are summed for each subscale and high scores indicate greater endorsement of perfectionistic traits. Across samples of children and adolescents from Canada, China, Israel, and Russia, coefficient alphas for the CAPS range from .68 to .82 for self-oriented perfectionism, and .68 to .89 for socially prescribed perfectionism (Flett et al., 2016). Test-retest reliability within a one-year period was .65 for self-oriented perfectionism and .59 for socially prescribed perfectionism, and as children grew older, the test-retest reliabilities increased, supporting the CAPS’ temporal stability (Flett et al., 2016). In terms of concurrent validity, self-oriented perfectionism was associated with self-reports of a personal need for perfection, socially prescribed perfectionism was associated with self-reports of

perceptions of parental expectations for perfection, and the CAPS was associated with related measures of perfectionism, such as the Eating Disorders Inventory (EDI) perfectionism subscale (Flett et al., 2016). Overall, the CAPS have good psychometric properties. Cronbach's alpha for the study sample was .89 for self-oriented perfectionism and .86 for socially prescribed perfectionism.

*PSPS-Junior Form* (PSPS-Jr; Hewitt et al., 2011). The PSPS-Jr is an 18-item measure of perfectionistic self-presentation styles in children and adolescents. Participants are asked to rate each statement on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Statements include: "I always have to look as good as I can" (perfectionistic self-promotion), "I do not want my friends to see even one of my bad points" (nondisplay of imperfections), and "I should always keep my problems secret" (nondisclosure of imperfections). Items are summed to obtain an overall score on each of the subscales, and high scores reflect higher levels of perfectionistic self-presentation. Coefficient alphas obtained from three samples for perfectionistic self-promotion range from .89 to .92, nondisplay of imperfections range from .70 to .82, and nondisclosure of imperfections range from .60 to .72 (Hewitt et al., 2011). Regarding validity, all PSPS-Jr subscales correlated with the CAPS subscales, severity of depressive symptoms, and maladaptive outcomes, consistent with PSPS research in adults (Hewitt et al., 2011), thus providing support for the reliability and validity of the PSPS-Jr. Cronbach's alpha for the study sample was .91 for perfectionistic self-promotion, .74 for nondisplay of imperfections, and .61 for nondisclosure of imperfections.

*Perception of Parents Scale-Child Scale* (POPS-C; Grolnick et al., 1991). The POPS-C is a 22-item measure of children's perception of their parents' involvement and autonomy support. Participants are asked to select the statement that best describes their mother and father

separately. Each item presents four different statements indicating the frequency of which the mother and father engage in the specified behavior from *never*, *sometimes*, *usually*, to *always*. Examples of items in each subscale include: “Some mothers/fathers always have enough time to talk to their children” (involvement), and “Some mothers/fathers always like their children to decide for themselves what to do” (autonomy support). Cronbach’s alpha for maternal autonomy support is .53, maternal involvement is .56, paternal autonomy support is .67, and paternal involvement is .64 (Grolnick et al., 1991), suggesting adequate internal consistency. Furthermore, convergent validity was assessed by comparing the POPS-C subscales with self-reports and interviews from parents, which found stronger support for the maternal subscales than the paternal subscales (Grolnick et al., 1991). Scale ratings for both parents will be combined and reversed to create a composite score reflecting parental noninvolvement and parental non-autonomy support. However, only the parental noninvolvement subscale is used in this study and high scores indicate higher level of perceived parental noninvolvement. Cronbach’s alpha for parental noninvolvement in this study sample is .75.

*Dependency-oriented and Achievement-oriented Psychological Control Scale (DAPCS;* Soenens, Vansteenkiste, & Luyten, 2010). The adapted DAPCS for middle childhood (Scharf, Rousseau, & Smith, 2016) was used. The adapted DAPCS is a 15-item measure of children’s perception of parents’ psychological control in terms of dependency (i.e., “My parents only show their love for me as long as we keep doing everything together”) and achievement (i.e., “My parents are only friendly with me if I excel in everything I do”). Participants are asked to rate each item on a scale from 1 (*not at all*) to 5 (*always*). Studies show good reliability with Cronbach’s alpha ranging between .76 and .92, and good convergent and discriminant validity (Scharf et al., 2016; Soenens et al., 2010). The dependency-oriented and achievement-oriented

subscales were combined to represent a single construct reflecting parental psychological control. Cronbach's alpha for this study sample was .87 for parental psychological control.

*Attachment Questionnaire for Children* (AQC; Muris, Meesters, van Melick, & Zwambag, 2001). The AQC is a measure of children's attachment style adapted from Hazan and Shaver's (1987) measure of adult attachment. Three descriptions of feelings towards relationships are presented, and participants are asked to select the one that best describe them. "I find it easy to become close friends with other children. I trust them and I am comfortable depending on them. I do not worry about being abandoned or about another child getting too close friends with me" describes secure attachment; "I am uncomfortable to be close friends with other children. I find it difficult to trust them completely, difficult to depend on them. I get nervous when another child wants to become close friends with me. Friends often come more close to me than I want them to" describes avoidant attachment; and "I often find that other children do not want to get as close as I would like them to be. I am often worried that my best friend doesn't really like me and wants to end our friendship. I prefer to do everything together with my bestfriend. However, this desire sometimes scares other children away" describes ambivalent attachment. For the purposes of our study, children and adolescents who select avoidant or ambivalent attachment descriptions are classified as insecurely attached due to insufficient sample sizes in either avoidant or ambivalent categories. Cronbach's alpha for the AQC cannot be computed because it is a 1-item measure. However, secure attachment, as measured by the AQC, was associated with higher levels of trust and lower levels of alienation when compared to other attachment measures (Muris et al, 2001), and those classified as insecurely attached on the AQC showed higher levels of anxiety and depression compared to securely attached individuals (Muris, Mayer, & Meesters, 2000; Muris, Meesters, Merckelbach,

& Hulsenbeck, 2000). Thus, the AQC shows good convergent and discriminant validity (Muris et al., 2001).

### **2.3.2 Parental Measures**

*Parenting Styles and Dimensions Questionnaire-Short Version* (PSDQ-Short Version; Robinson, Mandleco, Olsen, & Hart, 2001). The PSDQ-Short Version is a 32-item measure of three parenting styles – authoritative, authoritarian, and permissive. The primary caregiver is asked to make two ratings, one for the self and one for the spouse, on how often each behavior is endorsed on a scale from 1 (*never*) to 5 (*always*). Examples of items include: “Encourages child to talk about the child’s troubles” (authoritative parenting style), “Uses threats as punishment with little or no justification” (authoritarian parenting style), and “States punishment to child and does not actually do them” (permissive parenting style). Items are averaged to obtain an overall score on each subscale. Cronbach’s alpha for authoritative parenting style is .86, authoritarian parenting style is .82, and permissive parenting style is .64 (Robinson et al., 2001), suggesting that the PSDQ has adequate internal reliability. A handful of studies looked at the validity of the PSDQ and found that the three parenting styles mapped onto appropriate constructs. For example, authoritative parenting style was positively correlated with adaptive behaviors but negatively correlated with maladaptive behaviors and psychological distress, whereas authoritarian and permissive parenting styles showed the opposite associations (Olivari, Tagliabue, & Confalonieri, 2013). The present study only includes the primary caregiver’s ratings (i.e., the parent who attended the study with the child) and only the authoritarian parenting subscale is assessed. Cronbach’s alpha for authoritarian parenting is .80 for this study sample.

## **2.4 Procedure**

Participants were invited to the UBC Vancouver campus. Upon arrival, a trained research assistant greeted the family and provided a description of the study purpose and procedure. The research assistant guided the parents through the consent form and the children and adolescents through the assent form, clearly explaining the consent to participate and confidentiality.

Participants were given time to read through the forms and ask questions. After participants signed the consent and assent forms, a copy of the forms was given to the participants for their personal records. The parent-child dyads were separated into different rooms to complete self-report measures to prevent participants from talking with each other. Once measures were completed, the research assistant debriefed the family on the study. As an appreciation for their participation, parents and adolescents each received a \$10 gift card, while younger children received a t-shirt.

## **2.5 Data analyses**

All statistical analyses for this study was conducted with SPSS Statistics Version 25 and The R Project for Statistical Computing.

The first stage of analyses involved assessing missing data, outliers, and normality. To begin, five parent-child dyads (i.e., 4.9% of the original sample) were excluded from the analyses due to missing over 50% of data on at least one scale on any given measure (Tabachnick & Fidell, 2007). In addition, another parent-child dyad was excluded due to the parent participating twice in the study with two siblings. As such, of the original 102 participants, six were excluded, leaving only 96 in the data analyses. An independent-samples t-test was conducted and there were no significant differences between excluded and remaining participants on all study variables. Missing data from the 96 participants that made up the final

sample was negligible, with only 20 missing observations out of the 7,488 expected observations (i.e., 0.27%). Little's MCAR test was nonsignificant (Chi-Square = 734.36, DF = 752,  $p = .67$ ), indicating that data was missing completely at random. After dealing with missing data, two univariate outliers were identified ( $z > 3.3$ ) for the psychological control variable and were Winsorized by converting the data points to the next highest value not considered to be an outlier. Moreover, the Mahalanobis Distance was calculated to examine multivariate outliers and computation showed that there were no multivariate outliers in this study. Lastly, normality testing was conducted and not all variables were normally distributed, as assessed by the Shapiro-Wilk's test ( $p < .05$ ). The distribution for self-oriented perfectionism, socially prescribed perfectionism, perfectionistic self-promotion, authoritarian parenting, and parental psychological control were positively skewed. Thus, a square root transformation was performed, and all analyses were conducted with both the transformed and untransformed values. Results did not differ between the transformed and untransformed data, as such the following results are reported with untransformed data.

The second stage of analyses involved computing descriptive statistics for all study variables. To determine whether the study sample is comparable to previous child and adolescent samples, descriptive statistics on means, standard deviations, and Cronbach's alpha for all variables are reported. In addition, due to the skewed distribution of the data, the median and interquartile range are also reported.

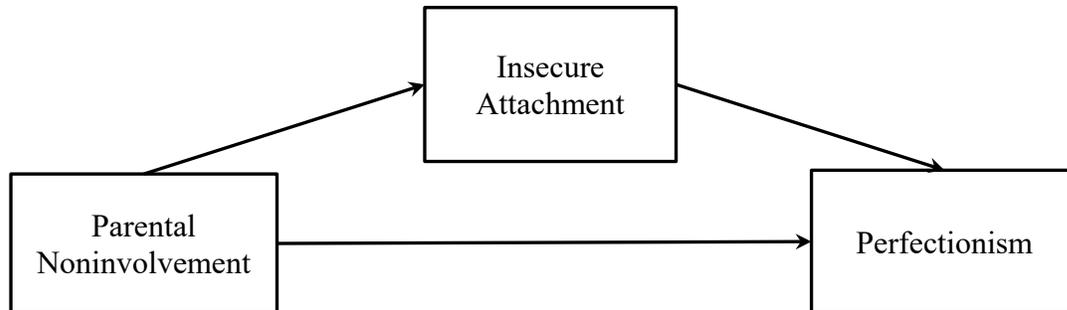
The third stage of analyses involved assessing the associations between various adverse parenting behaviours, insecure attachment, and trait and self-presentational dimensions of perfectionism. Correlational analyses are conducted with the non-parametric Spearman's Rho as a result of the skewed nature of the data.

The fourth stage of analyses involved running two one-way multivariate analysis of variance (MANOVA) to compare differences between securely attached and insecurely attached children and adolescents on various perfectionism dimensions and perceived adverse parenting behaviours.

The fifth stage of analyses involved conducting multiple linear regressions to assess whether authoritarian parenting, parental psychological control, and parental noninvolvement differentially predict various dimensions of perfectionism.

Finally, the last stage of analyses involved multiple mediation analyses by bootstrapping to examine the mediating effect of insecure attachment on the relationship between parental noninvolvement and perfectionism (see Figure 2). Given that the mediating variable is a dichotomous variable (i.e., secure vs. insecure attachment), Iacobucci (2012) suggests conducting path *a* (predicting the mediator from the independent variable) using binary logistic regression, and running paths *c-prime* and *b* (predicting the dependent variable from the independent variable and mediator) and path *c* (predicting the dependent variable from the independent variable) with ordinary least squares regression. The bootstrapping approach is non-parametric and does not assume normality (Preacher & Hayes, 2004). Bootstrapping takes 5,000 random samples of the original sample with replacement and computes the indirect effect (path *ab*) and 95% confidence interval. A confidence interval that does not contain zero indicate significant indirect effect (Hayes, 2013).

**Figure 2 Mediation model with insecure attachment as the mediator between parental noninvolvement and dimensions of perfectionism.**



## Chapter 3: Results

### 3.1 Descriptive statistics

Descriptive statistics are displayed in Table 1. Compared to the normative data on community samples of children and adolescents, means and standard deviations of socially prescribed perfectionism, nondisplay of imperfections, and nondisclosure of imperfections were comparable to previous studies (e.g., Flett et al., 2000; Hewitt et al., 2011). However, levels of self-oriented perfectionism in this study sample ( $M = 35.42$ ,  $SD = 10.27$ ) appears to be slightly higher compared to other community samples of children ( $M = 29.38$ ,  $SD = 8.34$ ) and adolescents ( $M = 31.45$ ,  $SD = 8.46$ ). In addition, perfectionistic self-promotion in this study sample ( $M = 18.77$ ,  $SD = 7.05$ ) appears to be slightly lower compared to other community samples of youth ( $M = 21.21$ ,  $SD = 7.04$ ). Furthermore, means and standard deviations for authoritarian parenting was comparable to those reported in adult samples (e.g., Rinaldi & Howe, 2012), while means and standard deviations for perceived parental psychological control and noninvolvement were comparable to previous studies on child and adolescent samples (e.g., Kocayörük, Altıntaş, & İçbay, 2014; Soenens, Park, Vansteenkiste, & Mouratidis, 2012). Lastly, Cronbach's alpha (i.e., .61 – .91) were acceptable for all study variables.

**Table 1 Means, standard deviations, medians, interquartile ranges, and coefficients alpha of trait perfectionism, perfectionistic self-presentation, and adverse parenting ( $n=96$ ).**

Variables	Mean	Standard Deviation	Median	Interquartile Range	Cronbach's alpha
<i>Trait Perfectionism</i>					
Self-Oriented Perfectionism	35.42	10.27	33.00	26.25 – 44.00	0.89
Socially Prescribed Perfectionism	23.55	7.85	22.00	17.00 – 30.00	0.86
<i>Perfectionistic Self-Presentation</i>					
Perfectionistic Self-Promotion	18.77	7.05	18.00	13.00 – 23.00	0.91
Nondisplay of Imperfections	18.81	4.55	18.00	16.00 – 21.75	0.74
Nondisclosure of Imperfections	10.81	3.10	11.00	9.00 – 13.00	0.61
<i>Adverse Parenting</i>					
Authoritarian Parenting	1.73	0.42	1.58	1.42 – 1.98	0.80
Psychological Control	1.54	0.52	1.40	1.20 – 1.72	0.87
Parental Noninvolvement	3.82	0.80	3.80	3.20 – 4.40	0.75

*Note.* Descriptive statistics for insecure attachment are not reported as the variable is dichotomous.

### 3.2 Correlations between adverse parenting, insecure attachment, and perfectionism

To answer our first research question on whether various adverse parenting behaviours, insecure attachment, and trait and self-presentational dimensions of perfectionism are intercorrelated, correlational analyses were conducted. Consistent with our hypothesis, positive associations are observed among study variables. Correlational findings are displayed in Table 2.

First, findings demonstrated a positive relationship between various adverse parenting behaviours and perfectionism dimensions. There was a statistically significant positive correlation between authoritarian parenting and socially prescribed perfectionism and nondisclosure of imperfections. Parental psychological control was positively associated with all trait and self-presentational components of perfectionism. Moreover, parental noninvolvement

was positively related to perfectionistic self-promotion and nondisclosure of imperfections. Second, statistically significant correlations were found between insecure attachment and all perfectionism dimensions. Lastly, insecure attachment was positively correlated with parental psychological control and parental noninvolvement. In sum, correlational findings provide support for the hypothesis that elevated degrees of adverse parenting and insecure attachment are associated with higher levels of perfectionism.

**Table 2 Bivariate correlations among trait perfectionism, perfectionistic self-presentation, insecure attachment, and adverse parenting ( $n=96$ ).**

Variables	1	2	3	4	5	6	7	8	9
1. Self-Oriented	–								
2. Socially Prescribed	.64**	–							
3. Self-Promotion	.61**	.53**	–						
4. Nondisplay	.58**	.44**	.64**	–					
5. Nondisclosure	.40**	.34**	.49**	.54**	–				
6. Insecure Attachment	.40**	.29**	.30**	.46**	.46**	–			
7. Authoritarian	.06	.21*	-.02	.07	.27**	-.02	–		
8. Psychological Control	.38**	.48**	.36**	.38**	.31**	.27**	.12	–	
9. Noninvolvement	.09	.13	.24*	.17	.24*	.25*	-.19	.28**	–

Note. \* $p < .05$ , \*\* $p < .01$  (2-tailed).

### 3.3 Multivariate analysis of variance (MANOVA)

Two one-way multivariate analysis of variance (MANOVA) were conducted to answer the second research question of whether there are differences between securely and insecurely attached children and adolescents on levels of perfectionism and perceived adverse parenting. Results show a statistically significant difference between the two groups and are in line with our

hypothesis that insecurely attached youth report elevated degrees of perfectionism and perceived adverse parenting compared to securely attached individuals.

### **3.3.1 Insecure attachment on perfectionism**

First, a one-way MANOVA was employed to determine the effect of attachment on perfectionism. The assumption of multicollinearity was met among dependent variables (see Table 1,  $r_s < 0.9$ ) and there was homogeneity of variance-covariances matrices as assessed by Box's test of equality of covariance matrices ( $p = .211$ ). The assumption of linear relationships among dependent variables (i.e., trait and self-presentational perfectionism) was also met as assessed by visual inspection of scatterplots. Compared to securely attached individuals, those with an insecure attachment scored higher on all dimensions of trait and self-presentational perfectionism ( $F(5, 89) = 8.109, p < .0001, \text{Wilks' } \Lambda = .687, \text{partial } \eta^2 = .313$ ). Follow-up univariate ANOVAs using a Bonferroni adjusted  $\alpha$  level of .01 (i.e.,  $\alpha = 0.05/5$ ) showed that all trait and self-presentational perfectionism were significantly different between securely and insecurely attached individuals (see Table 3). Findings support the hypothesis that on average, insecurely attached children and adolescents have higher levels of trait and self-presentational perfectionism.

**Table 3 Univariate effects of securely attached ( $n=74$ ) and insecurely attached ( $n=21$ ) individuals on trait and self-presentational perfectionism.**

Dependent Variables	$F(1, 93)$	Attachment	Mean	95% Confidence Interval	
				Lower Bound	Upper Bound
Self-Oriented Perfectionism	16.09***	Secure	33.36	31.16	35.57
		Insecure	42.86	38.71	47.00
Socially Prescribed Perfectionism	7.69**	Secure	22.45	20.69	24.20
		Insecure	27.67	24.37	30.97
Perfectionistic Self-Promotion	14.04***	Secure	17.35	15.83	18.88
		Insecure	23.48	20.61	26.34
Nondisplay of Imperfections	32.55***	Secure	17.54	16.63	18.45
		Insecure	23.10	21.39	24.80
Nondisclosure of Imperfections	25.69***	Secure	10.05	9.42	10.69
		Insecure	13.52	12.32	14.72

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

### 3.3.2 Insecure attachment on adverse parenting behaviours

A second one-way MANOVA was conducted to determine the effect of attachment on adverse parenting behaviours. Based on the correlations among the dependent variables in Table 1, it was revealed that there was no multicollinearity ( $r_s < 0.9$ ) and the assumption of homogeneity of variance-covariances matrices was met as assessed by Box's test of equality of covariance matrices ( $p = .092$ ). Additionally, the assumption of linearity between dependent variables (i.e., facets of adverse parenting) was also met as assessed by scatterplot. Results show that insecurely attached children and adolescents scored lower on authoritarian parenting, but higher on parental psychological control and noninvolvement compared to securely attached individuals. The difference between the two attachment groups on adverse parenting behaviours was statistically significant ( $F(3, 91) = 3.309, p < .05$ , Wilks'  $\Lambda = .902$ , partial  $\eta^2 = .098$ ).

Follow-up univariate ANOVAs using Bonferroni adjusted  $\alpha$  level of .02 (i.e.,  $\alpha = 0.05/3$ ) showed that only parental noninvolvement was significantly different between securely and insecurely attached individuals (see Table 4). Findings provide some support for the hypothesis that on average, children and adolescents with an insecure attachment have higher perceptions of adverse parenting behaviours, specifically parental noninvolvement.

**Table 4 Univariate effects of securely attached ( $n=74$ ) and insecurely attached ( $n=21$ ) individuals on adverse parenting behaviours.**

Dependent Variables	$F(1, 93)$	Attachment	Mean	95% Confidence Interval	
				Lower Bound	Upper Bound
Authoritarian Parenting	0.15	Secure	1.75	1.65	1.84
		Insecure	1.71	1.52	1.89
Parental Psychological Control	4.61	Secure	1.47	1.35	1.58
		Insecure	1.72	1.51	1.92
Parental Noninvolvement	7.59***	Secure	3.69	3.52	3.87
		Insecure	4.22	3.88	4.55

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

### 3.4 Multiple linear regression

To address our third research question of whether various facets of adverse parenting (i.e., authoritarian parenting, parental psychological control, and parental noninvolvement) uniquely predict different components of perfectionism, we conducted multiple linear regression. Five multiple regression models were conducted for each of the trait and self-presentational perfectionism with authoritarian parenting, parental psychological control, and parental noninvolvement as independent variables. Preliminary assumptions testing revealed that there

was no multicollinearity as VIF scores ranged between 1.032 – 1.132 and tolerance scores ranged between 0.884 – 0.969 for all regression models. Furthermore, Durbin-Watson statistics show that assumption of independence of residuals was met as the Durbin-Watson values were close to 2, ranging from 1.566 – 2.080. Next, visual inspection of plots of standardized residuals versus predicted values indicate there was evidence of homoscedasticity, and visual inspection of P-P plots for residuals suggest that values of residuals were normally distributed for all regression models. Lastly, Cook's Distance values were all below 1, indicating that there are no highly influential cases biasing the regression models.

As hypothesized, results show that all multiple regression models were statistically significant ( $F(3, 92) = 5.167, p < .01$  for self-oriented perfectionism;  $F(3, 92) = 8.677, p < .001$  for socially-prescribed perfectionism;  $F(3, 92) = 6.088, p < .001$  for perfectionistic self-promotion;  $F(3, 92) = 5.470, p < .01$  for nondisplay of imperfections; and  $F(3, 92) = 7.654, p < .001$  for nondisclosure of imperfections), with authoritarian parenting, parental psychological control, and parental noninvolvement accounting for roughly 12–20% of the variance in trait and self-presentational perfectionism (see Table 5). Furthermore, results support the hypothesis that specific facets of adverse parenting predict different types of perfectionism. Table 5 shows that in predicting specific perfectionism components, parental psychological control was uniquely associated with self-oriented perfectionism, socially prescribed perfectionism, perfectionistic self-promotion, and nondisplay of imperfections, after controlling for authoritarian parenting and parental noninvolvement. Moreover, regression analyses show that authoritarian parenting, psychological control, and parental noninvolvement are positive independent predictors of nondisclosure of imperfections. In brief, findings from the multiple regression analyses indicate

that various adverse parenting behaviours, particularly psychological control, are uniquely related to various types of perfectionism.

**Table 5 Summary of multiple regression analyses with facets of adverse parenting as the independent variable and trait and self-presentational perfectionism as the dependent variables ( $n=96$ ).**

Variables	Self-Oriented		Socially Prescribed		Self-Promotion		Nondisplay		Nondisclosure	
	Adjusted $R^2$	$\beta$	Adjusted $R^2$	$\beta$	Adjusted $R^2$	$\beta$	Adjusted $R^2$	$\beta$	Adjusted $R^2$	$\beta$
Authoritarian parenting		-.009	.123		.017		.039		.233*	
Psychological control	.116	.395***	.195	.436***	.138	.343**	.124	.366***	.174	.234*
Parental noninvolvement		-.631	.265		.136		.050		.245*	

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

### 3.5 Mediation analyses

Finally, multiple mediation analyses by bootstrapping was conducted to test the developmental component of the PSDM (Hewitt et al., 2017) by addressing the final research question of whether insecure attachment mediates the relationship between parental noninvolvement and various components of perfectionism. Results support the hypothesis demonstrating significant indirect effects of parental noninvolvement on trait and self-presentational perfectionism through insecure attachment (see Table 6).

Follow-up mediation analyses were conducted to further support the hypothesized mediation links between parental noninvolvement, insecure attachment, and perfectionism. First, we reversed the directionality of parental noninvolvement and insecure attachment, running mediation models with parental noninvolvement as the mediator between insecure attachment and dimensions of perfectionism. Results show nonsignificant indirect effects for all perfectionism dimensions (e.g.,  $\beta = -0.29$ , 95% CI [-2.07, 1.10] for self-oriented perfectionism;  $\beta = 0.45$ , 95% CI [-0.67, 1.84] for socially prescribed perfectionism;  $\beta = 0.65$ , 95% CI [-0.22, 1.96] for perfectionistic self-promotion;  $\beta = 0.02$ , 95% CI [-0.54, 0.59] for nondisplay of imperfections; and  $\beta = 0.37$ , 95% CI [-0.06, 0.95] for nondisclosure of imperfections). Second, we ran mediational analyses to examine whether perfectionism influences perception of parental noninvolvement, and in turn, affect attachment style. Findings demonstrate nonsignificant indirect effects for all dimensions of perfectionism as the independent variable (e.g.,  $\beta = 0.01$ , 95% CI [-0.01, 0.02] for self-oriented perfectionism;  $\beta = 0.01$ , 95% CI [-0.01, 0.04] for socially prescribed perfectionism;  $\beta = 0.02$ , 95% CI [-0.01, 0.06] for perfectionistic self-promotion;  $\beta = 0.02$ , 95% CI [-0.01, 0.08] for nondisplay of imperfections; and  $\beta = 0.04$ , 95% CI [-0.02, 0.13] for nondisclosure of imperfections).

Based on the previous MANOVA findings, parental noninvolvement was the only adverse parenting variable that differed as a function of attachment. As such, only parental noninvolvement is examined in the mediation analyses. Together, results from the mediation and follow-up analyses provide support for the hypothesized relations and directionality of our mediation model, where perceived parental noninvolvement is associated with insecure attachment, resulting in higher levels of perfectionism.

**Table 6 Insecure attachment as the mediator of the relationship between parental noninvolvement and perfectionism ( $n=96$ ).**

Dependent variable (DV)	Mediator	Noninvolvement on Mediator (path $a$ )	Mediator on DV (path $b$ )	Direct Effect (path $c'$ )	Indirect Effect (path $ab$ )	Indirect effect 95% CI	Total effect (path $c$ )
Self-Oriented		0.88**	9.79***	-0.56	<b>8.60</b>	<b>1.07 – 9.19</b>	0.74
Socially Prescribed		0.88**	4.77*	0.86	<b>4.19</b>	<b>0.27 – 5.15</b>	1.42
Self-Promotion	Insecure Attachment	0.88**	5.47**	1.25	<b>4.81</b>	<b>0.36 – 5.60</b>	2.11*
Nondisplay		0.88**	5.54***	0.04	<b>4.86</b>	<b>0.62 – 4.98</b>	0.90
Nondisclosure		0.88**	3.10***	0.71	<b>2.72</b>	<b>0.43 – 2.97</b>	1.12**

Note. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ ; bolded confidence intervals do not include a zero, indicating a significant indirect effect.

## **Chapter 4: Discussion**

The purpose of this study was to investigate the developmental antecedents to perfectionism, with the main goal of testing the Perfectionism Social Disconnection Model's (PSDM; Hewitt et al., 2017) developmental framework of perfectionism in children and adolescents. The present study is one of the first to simultaneously examine the interrelationships among adverse parenting, insecure attachment, and perfectionism in youth. Four research questions were posed, and findings are not only consistent with previous research, but new empirical links were discovered. In this study, we found that authoritarian parenting, parental psychological control, parental noninvolvement, and insecure attachment are significantly correlated with various dimensions of perfectionism. In addition, insecurely attached individuals reported higher levels of perfectionism and parental noninvolvement compared to securely attached participants. Findings also show that adverse parenting behaviors are significant predictors of perfectionism, with parental psychological control as a unique predictor for all dimensions of perfectionism (except nondisclosure of imperfections), and authoritarian parenting, parental psychological control, and parental noninvolvement as independent contributors to nondisclosure of imperfections. Lastly, in support of Hewitt et al.'s (2017) PSDM, mediational analyses show that adverse parenting behaviours, such as parental noninvolvement, are important in producing insecure attachment and trait and self-presentational components of perfectionism.

### **4.1 Associations among adverse parenting, insecure attachment, and perfectionism**

The first research question we are interested in is whether there are intercorrelations among facets of adverse parenting, insecure attachment, and trait and self-presentational perfectionism. In terms of the associations between adverse parenting and perfectionism,

findings show that parental ratings of authoritarian parenting were positively associated with socially prescribed perfectionism and nondisclosure of imperfections in youth. This is in line with numerous studies reporting the link between authoritarian parenting and perfectionism (e.g., Gong et al., 2015; Kawamura et al., 2001; Sapieja et al., 2011; Soysa & Weiss, 2014).

Specifically, the prominence of authoritarian parenting on socially prescribed perfectionism has been replicated in a number of studies on adults (e.g., Flett et al., 1995; Miller et al., 2012; Miller & Speirs Neumeister, 2017; Speirs Neumeister, 2004). However, no study has looked at the link between authoritarian parenting and facets of perfectionistic self-presentation. Our findings show that in addition to socially prescribed perfectionism, authoritarian parenting is also relevant to nondisclosure of imperfections. It appears that parents who emphasize obedience and punishment, but lack warmth and nurturance are likely to foster children with a perception of others as having unrelenting expectations and demands as well as children who avoid talking about anything perceived as a flaw or imperfection. It is possible that as children grow in an environment with stringent rules where the expression of love and support is limited, they learn that in order to obtain acceptance or support from parents, they must fulfil their expectations and/or present an image of the self as perfect.

Next, there was significant positive relationships between youth's perception of parental psychological control and all dimensions of trait and self-presentational perfectionism, echoing the results of past researchers (e.g., Costa et al., 2016; Reilly et al., 2016; Soenens et al., 2008a; Soenens et al., 2008b). Similar to findings by Kenny-Benson and Pomerantz (2005), we found a link between parental psychological control and socially prescribed perfectionism. However, our findings further indicate that perceived parental psychological control is also associated with self-oriented perfectionism and all facets of perfectionistic self-presentation. The shame inducing

nature inherent in parental psychological control (i.e., “My parents make me feel guilty if my performance is inferior”, “My parents love me less if I perform badly”, and “My parents only respect me if I am the best at everything”); items from the parental psychological control measure (DAPCS)) may be a key factor for all dimensions of perfectionism. Shame is one of the most consistently described affect relevant to perfectionism (e.g., Greenspon, 2008; Hamacheck, 1978; Hollender, 1965; Tangney, 2002), and it reflects the deep-rooted view of the self as defective or flawed (Hewitt et al., 2017). Indeed, studies have reported the mediating effect of shame between insecure attachment and perfectionism (Chen et al., 2015), and the mediating effect of perceived defectiveness between adverse parenting and perfectionism (Ko et al., in press).

In addition to authoritarian parenting and parental psychological control, children and adolescents’ perception of parental noninvolvement was positively associated with perfectionistic self-promotion and nondisclosure of imperfections. Few studies have looked at the relationship between parental noninvolvement and perfectionism, and findings are mixed. In studies on adults, Hibbard and Walton (2014) reported that uninvolved parenting was associated with the perfectionistic attitude of doubts about actions, while Miller and Speirs Neumeister (2017) reported a positive correlation between uninvolved parenting and socially prescribed perfectionism. However, a recent study by Chen et al. (2019) found that adults who experienced childhood emotional or physical neglect negatively predicted socially prescribed perfectionism. It is possible that more active or involved forms of adverse parenting, such as authoritarian parenting and parental psychological control, play a larger role in the development of perfectionism, particularly socially prescribed perfectionism. On the other hand, uninvolved parenting may be more salient for the development of perfectionistic self-presentation as

uninvolved parents tend to have minimal demands or expectations. As such, instead of developing the need to be perfect, individuals may be more concerned with the need to appear perfect. This may be especially the case for children as they often rely on parents for guidance on how to behave, but without direction, there is no indication for children on how recognition or affection can be obtained. Thus, children and adolescents may present a perfect and flawless portrayal of the self at all times in an attempt to gain attention from parents. However, given the lack of research on parental noninvolvement and perfectionism, more studies are required to fully understand the influence of uninvolved parenting on perfectionism. Together, the correlational findings on adverse parenting and perfectionism provide support for our hypothesis that higher actual or perceived adverse parenting is related to higher levels of various dimensions of perfectionism.

With respect to the association between insecure attachment and perfectionism, we found that insecure attachment in children and adolescents is positively related to all perfectionism dimensions. This is in line with past research on adults (e.g., Borroni et al., 2016; Chen et al., 2015; Gnilka et al., 2013; Ko et al., in press; Rice & Mirzadeh, 2000; Speirs Neumeister & Finch, 2006; Wei et al., 2006; Wei et al., 2004), but more importantly, reiterate the importance of attachment insecurity on perfectionism in children and adolescents. For instance, in a group of 16 to 19-year old adolescents, insecure attachment was positively correlated with perfectionistic self-promotion and nondisclosure of imperfections (Chen et al., 2012). In a different sample of 14 to 20-year old youth, socially prescribed perfectionism and perfectionistic self-promotion was associated with attachment insecurity (Boone, 2013). Furthermore, in a younger sample of 12 to 18-year old adolescents, preoccupied and fearful attachment was positively correlated with perfectionistic attitudes (Taylor et al., 2017). The link between insecure attachment and

perfectionism suggests that an internal working model of the self as unlovable and defective and a working model of others as unreliable and rejecting is connected to perfectionistic tendencies and behaviours. Thus, our findings contribute to the robustness of the relationship between insecure attachment and perfectionism.

Finally, correlational analyses demonstrated significant positive associations between parental psychological control and noninvolvement with insecure attachment. This finding further supports the extensive theoretical and empirical literature regarding the roots of insecure attachment as based on the quality of the parent-child relationship. In particular, insecure attachment is posited to be a result of overbearing or unresponsive parents (Holmes, 2014b). For overbearing parents, such as parents with high psychological control, the shame induction and contingent love may prompt children and adolescents to either pull away from parents to restore autonomy and protect self-worth, or to maintain attachment with parents to rely on parental acknowledgement as a reflection of self-worth. Studies have shown that parental psychological control is indeed positively associated with attachment avoidance and anxiety in children and adolescents (Pittman, Kerpelman, Soto, & Adler-Baeder, 2012; Xiang & Liu, 2018). On the other hand, children with unresponsive or uninvolved parents may develop a belief that they are unworthy of the love, attention, and support of their parents and/or that their parents may not be dependable or trustworthy. As such, children may develop a rejecting stance towards parents and relationships as a way to dampen or deny fears of abandonment, or hold onto parents and relationships to preserve their sense of belongingness and acceptance. In line with this, studies have shown positive relationships between uninvolved parenting and insecure attachment (Speirs Neumeister & Finch, 2006). Overall, the finding that parental psychological control and noninvolvement are associated with insecure attachment support the influence of parent-child

relationships on the development of attachment representations. Collectively, correlational findings support the study hypothesis that there are positive relationships among adverse parenting, insecure attachment, and perfectionism.

#### **4.2 The role of insecure attachment on perfectionism and adverse parenting**

The second research question this study set out to answer was whether there are differences between securely and insecurely attached children and adolescents on perfectionism tendencies and behaviours and perceived adverse parenting. Consistent with our hypothesis, results from the first multivariate analysis of variance (MANOVA) showed that insecurely attached individuals reported higher levels of trait and self-presentational perfectionism. Moreover, the second multivariate analysis of variance (MANOVA) demonstrated that insecurely attached children and adolescents also have elevated perceptions of adverse parenting, specifically parental noninvolvement. These findings suggest that parental noninvolvement may be a defining feature differentiating secure and insecure attachment in children and adolescents. Akin to our previous discussion, uninvolved parenting may be particularly influential on children and adolescents' self and social development, as it is a notable period of time where parental involvement is required for healthy development (Kellaghan, 1993).

More importantly, the finding that insecurely attached individuals endorse elevated degrees of perfectionism underscore insecure attachment-related strategies that individuals use to regulate distress (Dozier et al., 2008). These insecure attachment-related strategies can be defined as behaviours where a person attempts to retain or achieve any touch of security (Holmes, 2014a), and are divided into hyperactivating and deactivating strategies (Mikulincer, Shaver, & Pereg, 2003). When hyperactivating strategies are employed, individuals attempt to reestablish proximity by focusing on their attachment needs and distress, which heightens their

vigilance to threats in the environment. On the other hand, when deactivating strategies are engaged, individuals dismiss their attachment needs, avoid closeness and intimacy, and strive for independence to suppress their distress. From our findings, it appears that perfectionism may be a reflection of insecure attachment-related strategies. For example, perfectionistic individuals may engage in hyperactivating strategies to strengthen their self-worth and fulfil interpersonal needs of validation and acceptance through being perfect (i.e., self-oriented and socially prescribed perfectionism) or avoiding appearing imperfect (i.e., perfectionistic self-promotion and nondisplay of imperfections). Alternatively, perfectionistic individuals may engage in deactivating strategies aimed at concealing pain and protecting their fragile concept of the self by avoiding personal disclosures (i.e., nondisclosure of imperfections). Although our study combined ambivalent and avoidant attachment into one single insecure attachment construct, studies have shown that specific attachment insecurities give rise to different types of perfectionism. For example, while perfectionistic self-promotion was associated with attachment anxiety (i.e., preoccupied attachment), nondisclosure of imperfections was associated with attachment avoidance (i.e., fearful and dismissing attachment; Chen et al., 2012). Similarly, socially prescribed perfectionism has been found to be correlated with both anxious and avoidant attachment, but perfectionistic self-promotion was only correlated with anxious attachment (Boone, 2013). More recently, attachment anxiety was a significant mediator of the relationship between adverse parenting and all trait and self-presentational perfectionism (except nondisclosure of imperfections), while attachment avoidance was a significant mediator of the link between adverse parenting and nondisclosure of imperfections (Ko et al., in press). Therefore, it is likely that perfectionistic tendencies and behaviours represent the hyperactivating and deactivating strategies used by insecurely attached individuals to obtain a sense of security.

Altogether, findings from the multivariate analysis of variance (MANOVA) demonstrate that children and adolescents with an insecure attachment endorse more perfectionistic tendencies and behaviours and experience more perceived parental noninvolvement.

### **4.3 Differential influences of adverse parenting on perfectionism**

The third goal of the study was to address whether different facets of adverse parenting (i.e., authoritarian parenting, parental psychological control, and parental noninvolvement) uniquely contribute to different types of perfectionism. Given that numerous studies consistently report the relevance of adverse parenting, especially authoritarian parenting and parental psychological control, on perfectionism, we wanted to assess how well adverse parenting explains the development of perfectionism in children and adolescents, as well as to tease apart the contribution of various forms of adverse parenting on perfectionism. Analyses with multiple linear regression models show that authoritarian parenting, parental psychological control, and parental noninvolvement together are significant predictors of all trait and self-presentation perfectionism, explaining approximately 12–20% of the variance. This not only provides support for past theorists who alluded to the role of adverse parenting in the development of perfectionism (e.g., Hamachek, 1978; Hollender, 1965; Horney, 1942; Missildine, 1963), but is also consistent with findings of previous researchers on the predictive ability of authoritarian parenting and parental psychological control on perfectionism (e.g., Soenens et al., 2008a; Speirs Neumeister & Finch, 2006). Further analyses demonstrate that parental psychological control is a unique predictor of all trait and self-presentational perfectionism (except for nondisclosure of imperfections). It appears that after controlling for authoritarian parenting and parental noninvolvement, parental psychological control emerges as the sole positive predictor of all forms of perfectionism, except nondisclosure of imperfections. This suggests that while

authoritarian parenting and parental noninvolvement may still be relevant predictive factors of perfectionism, the specific nature of parental psychological control (i.e., fostering guilt and shame when expectations are not met, conditional love and support upon performance) plays a unique role in predicting self-oriented perfectionism, socially prescribed perfectionism, perfectionistic self-promotion, and nondisplay of imperfections. However, for nondisclosure of imperfections, authoritarian parenting, parental psychological control, and parental noninvolvement each independently contribute to this facet of perfectionistic self-presentation. This intriguing finding warrants further analyses in the future as no study thus far has looked at different adverse parenting behaviours on perfectionistic self-presentation in children and adolescents. In sum, regression results support our hypothesis that specific adverse parenting behaviours do differentially predict distinct types of perfectionism.

#### **4.4 A test of the Perfectionism Social Disconnection Model in children and adolescents**

The final research question of this study was to directly test the developmental component of the Perfectionism Social Disconnection Model (PSDM; Hewitt et al., 2017) to determine the influence of parental noninvolvement and insecure attachment on dimensions of perfectionism. This is the first study to examine parental noninvolvement in the context of the PSDM, and results are in line with our study hypothesis, providing additional empirical support for Hewitt et al.'s (2017) PSDM in children and adolescents. Mediational findings indicate significant indirect effects of parental noninvolvement on all trait and self-presentational perfectionism through insecure attachment. We ran follow-up mediation analyses to ascertain the directionality of our hypothesized mediation model. The first follow-up analyses reversed the order of parental noninvolvement and insecure attachment. Results were all nonsignificant, indicating that parental noninvolvement gives rise to attachment insecurity and not the other way

around. The second follow-up analyses examined perfectionism as the independent variable on insecure attachment through parental noninvolvement and all findings were also nonsignificant, suggesting that children and adolescents' perfectionism are not affecting their perception of caregivers' parenting behaviours, and leading to attachment insecurity. The follow-up analyses provide support for the hypothesized directionality of the PSDM, with parental noninvolvement affecting insecure attachment, and in turn, contributing to perfectionism.

The present mediational findings reproduces and extends upon our recent test of the developmental portion of the PSDM in young adults (Ko et al., in press), where attachment anxiety and avoidance, along with perceived defective self were significant mediators between adverse parenting (operationalized as the combination of perceived parental lack of warmth, involvement, and support) and all trait and self-presentational perfectionism. More importantly, these findings are consistent with specific components of the PSDM (Hewitt et al., 2017), namely, the development of perfectionism as rooted in insecure attachment as a result of adverse parenting. According to the PSDM, perfectionism develops as a result of asynchrony between the parent and child. Attachment theory asserts that the quality of the parent-child relationship influences a child's internal working model of the self and others (Bowlby, 1969). Parents who are intrusive, uninvolved, or inconsistent in their care and nurturance are likely to foster children with negative working models of the self as defective and unlovable, and others as unpredictable and unreachable (i.e., insecure attachment). As such, individuals engage in perfectionistic tendencies and behaviours in an attempt to secure love and acceptance and repair their fragile concept of the self (Hewitt et al., 2017).

#### **4.5 Limitations and future directions**

Although the present study addressed some of the limitations from previous research, there are several limitations to note in the current study. First, the present study implemented a cross-sectional design. Thus, the temporal stability of the results cannot be determined. Future research should consider using a longitudinal study design to examine the causal pathways to perfectionism. Additionally, longitudinal studies allow examination of associated changes as children transition into adolescents and as adolescents transition into young adulthood. Such developmental and social changes may affect the quality of the parent-child relationship and future studies should explore whether relational changes with parents affect attachment patterns and in turn, perfectionistic tendencies and behaviours. Second, this study relied on a self-report measure (i.e., Attachment Questionnaire for Children; AQC) of children and adolescents' attachment. Although the measure can validly capture attachment representations in youth, other more sophisticated methods, such as the Child Attachment Interview (Shmueli-Goetz, Target, Fonagy, & Datta, 2008), may be able to provide a more thorough assessment of childhood and adolescent attachment. Third, we classified participants into secure and insecure attachment categories due to the small sample size in each of the insecure attachment classifications (i.e., ambivalent and avoidant). By doing so, we simplified attachment as a unidimensional construct. However, findings from past research (e.g., Boone, 2013; Chen et al., 2012; Ko et al., in press) suggest that specific insecure attachment dimensions affect different types of perfectionism. As such, future studies should look at attachment as a multidimensional construct to examine the specific developmental pathway of various trait and self-presentational perfectionism. Fourth, although the current study obtained self-reports from both children and parents, only parents' perception of their own parenting style was used. Future analyses could include both parent and

child reports on all study variables to compare any differences or similarities between parental and child reports, as parents may have the tendency to underreport undesirable parenting behaviors due to the social desirability bias. Fifth, we cannot determine whether the current findings are due to the construct of adverse parenting or children's perception of their parents' parental behaviours. It will be important for future studies to tease apart the difference to better understand the role of adverse parenting on perfectionism. Sixth, we did not assess the differential influences of parental gender on child and adolescent perfectionism as parents from our study sample were predominantly (i.e., 86.5%) mothers. However, previous studies have reported relationships between parenting and perfectionism in specific gender-related parent-child dyads (e.g., Clark & Coker, 2009; Frost, Lahart, & Rosenblate, 1991; Rinaldi & Howe, 2012). Thus, future studies should take into account parental gender influences on child perfectionism. Seventh, the majority of study participants were female (i.e., 85.4% for adults, 61.5% for children), Caucasian (i.e., 60.4% for adults, 55.2% for children), come from families in the upper-middle class (i.e., 61.5% of parents report an annual household income of more than \$100,000) and with an educated background (i.e., 49% of parents completed a Bachelor's degree). Therefore, the generalizability of the study findings may be limited. Lastly, the emphasis on parental behaviours in establishing the quality of the parent-child relationship overlooks the complex biological factors that can influence a child's susceptibility to parenting and vulnerability to stressors. For example, studies have found that dopamine, serotonin, and oxytocin are related to attachment in children and infants (Bakermans-Kranenburg & van IJzendoorn, 2007; Chen, Barth, Johnson, Gotlib, & Johnson, 2011). Additionally, past research show that children's temperament can affect their sensitivity to parenting behaviours (Pluess &

Belsky, 2010). As such, future studies could look at the genetic makeup of children and its association with perfectionism.

#### **4.6 Clinical implications**

Through a close examination of the developmental antecedents to perfectionism, the present study shed light on possible predisposing and perpetuating factors of perfectionism. By doing so, this can inform potential treatment methods for children and adolescents dealing with perfectionism. Currently, the vast majority of treatment studies on perfectionism is conducted on adults. Thus, not much is known about treatment of perfectionism in children and adolescents. To date, there is one systematic review conducted on treatment of childhood perfectionism and seven studies were identified, with only two directly targeting perfectionism in treatment (Morris & Lomax, 2014). The period from childhood to adolescence is accompanied by significant developmental and social changes that can alter the quality of the child-caregiver relationship. Several studies have shown that changes in attachment patterns can occur during childhood and adolescence (Jones et al., 2017; Weinfield, Sroufe, & Egeland, 2000), and changes in attachment representations can also occur with psychotherapy (Murray et al., 2011). Given that empirical data provide support for the role of parenting and attachment in the development of perfectionism, inclusion of parents beyond consultation and assessment in the therapy process is needed. Treatment of childhood perfectionism may focus on attachment-based family therapy involving parents to help children and adolescents rebuild a secure base of attachment figures. Part of the intervention could involve educating parents on maintaining factors of perfectionism and training parents to be more emotionally responsive and available, and/or make more realistic and less demanding expectations for their child. The clinical relevance of our study findings is

the beginning of a critical area of research to shed light on treatment strategies to help children and adolescents struggling with perfectionism.

#### **4.7 Concluding remarks**

The present study assessed the links between adverse parenting (i.e., authoritarian parenting, parental psychological control, and parental noninvolvement), insecure attachment, and trait and self-presentational perfectionism. This is the first study to investigate the developmental component of the Perfectionism Social Disconnection Model (PSDM; Hewitt et al., 2017) in children and adolescents. In general, our findings suggest that adverse parenting and insecure attachment are relevant developmental factors to perfectionism. Specifically, insecure attachment mediates the relationship between parental noninvolvement and all dimensions of perfectionism. Study results not only provide robust evidence for the associations between adverse parenting and insecure attachment with perfectionism, but also presents further empirical support for Hewitt et al.'s (2017) PSDM in children and adolescents. The present study underscores the importance of relational factors in the development of perfectionism and highlights prominent areas to target in treatment of perfectionism in children and adolescents.

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# Appendices

## Appendix A Study Measures

### A.1 Child-Adolescent Perfectionism Scale (CAPS)

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#### CHILD-ADOLESCENT PERFECTIONISM SCALE

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This is a chance to find out about yourself. It is not a test. There are no right answers and everyone will have different answers. Be sure that your answers show how you actually are. Please do not talk about your answers with anyone else. We will keep your answers private and not show them to anyone.

When you are ready to begin, please read each sentence below and pick your answer by circling a number from “1” to “5”. The five possible answers for each sentence are listed below:

- 1 = False—Not at all true of me
- 2 = Mostly False
- 3 = Neither True Nor False
- 4 = Mostly True
- 5 = Very True of me

For example, if you were given the sentence “I like to read comic books,” you would circle a “5” if this is very true of you. If you were given the sentence “I like to keep my room neat and tidy,” you would circle a “1” if this was false and not at all true of you. You are now ready to begin.

Please be sure to answer all of the sentences.

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	False			True	
1. I try to be perfect in everything I do.....	1	2	3	4	5
2. I want to be the best at everything I do.....	1	2	3	4	5
3. My parents don't always expect me to be perfect in everything I do.....	1	2	3	4	5
4. I feel that I have to do my best all the time.....	1	2	3	4	5
5. There are people in my life who expect me to be perfect.....	1	2	3	4	5
6. I always try for the top score on a test.....	1	2	3	4	5
7. It really bothers me if I don't do my best all the time.....	1	2	3	4	5
8. My family expects me to be perfect.....	1	2	3	4	5
9. I don't always try to be the best.....	1	2	3	4	5
10. People expect more from me than I am able to give.....	1	2	3	4	5
11. I get mad at myself when I make a mistake.....	1	2	3	4	5
12. Other people think that I have failed if I do not do my very best all the time.....	1	2	3	4	5
13. Other people always expect me to be perfect.....	1	2	3	4	5
14. I get upset if there is even one mistake in my work.....	1	2	3	4	5
15. People around me expect me to be great at everything.....	1	2	3	4	5
16. When I do something, it has to be perfect.....	1	2	3	4	5
17. My teachers expect my work to be perfect.....	1	2	3	4	5
18. I do not have to be the best at everything I do.....	1	2	3	4	5
19. I am always expected to do better than others.....	1	2	3	4	5
20. Even when I pass, I feel that I have failed if I didn't get one of the highest marks in the class.....	1	2	3	4	5
21. I feel that people ask too much of me.....	1	2	3	4	5
22. I can't stand to be less than perfect.....	1	2	3	4	5

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**A.2 Perfectionistic Self-Presentation Scale-Junior Form (PSPS-Jr)**

## PSPS-Jr

Listed below are a group of statements. Please rate your agreement with each of the statements using the following scale. If you strongly agree, circle 5. If you disagree, circle 1. If you feel somewhere in between, circle any one of the numbers between 1 and 5. If you feel neutral or undecided the middle point is 3.

	1	2	3	4	5
	<b>Disagree Strongly</b>		<b>Neutral</b>		<b>Agree Strongly</b>
1.I think a lot about mistakes that I have made in front of other people.....	1	2	3	4	5
2.I always have to look as good as I can .....	1	2	3	4	5
3.I do not let other people know when I fail at something.....	1	2	3	4	5
4.It is important to act perfectly around other people .....	1	2	3	4	5
5.I always have to look perfect .....	1	2	3	4	5
6.I feel bad about myself when I make mistakes in front of other people .....	1	2	3	4	5
7.I have to look perfect around other people.....	1	2	3	4	5
8.I should always keep my problems secret .....	1	2	3	4	5
9.I want others to know about it when I do something well .....	1	2	3	4	5
10.I should fix my own problems rather than telling them to other people.....	1	2	3	4	5
11.Mistakes are worse when others see me make them.....	1	2	3	4	5
12.I never let others know how hard I work on things .....	1	2	3	4	5
13.If I seem perfect, other people will like me more .....	1	2	3	4	5
14.I do not want my friends to see even one of my bad points .....	1	2	3	4	5
15.I have to look like I always do things perfectly.....	1	2	3	4	5
16.It would be bad if I made a fool of myself in front of other people.....	1	2	3	4	5
17.I try hard to look perfect around other people.....	1	2	3	4	5
18.I like trying to look perfect to other people .....	1	2	3	4	5

### A.3 Perceptions of Parents Scale-Child Scale (POPS-C)

## Perceptions of Parents Scales (POPS)

### The Child Scale

Name: \_\_\_\_\_ Teacher: \_\_\_\_\_

Boy or Girl (circle one) Age: \_\_\_\_\_

#### Things About My Parents

We are interested to know more about your mother and your father. First we will ask about your mother, and then we will ask about your father.

Each number is followed by four statements that describe four different types of parents. For some, there will be a description of four types of mothers, and for others there will be descriptions of four types of fathers. In either case, read the four statements about the four types of mothers or fathers, and decide which one is the best description of your own mother or father. Different people's mothers and fathers are different, and we want to know about yours.

Now please think about your mother and compare her to these descriptions of people's mothers. If you do not ever spend time with your mother but another woman lives in your household instead, please respond about that woman. So, begin with number 1, and read the four descriptions. If your mother is most like the mothers in the first statement, then circle the letter **a** in front of that statement. If she is most like the mothers in the second statement, then circle the letter **b** in front of that statement. If she is most like the mothers in the third statement, then circle the letter **c** in front of that statement. If she is most like the mothers in the fourth statement, then circle the letter **d** in front of that statement.

1.    a.    Some mothers **never have enough time** to talk to their children.  
      b.    Some mothers **usually don't have enough time** to talk to their children.  
      c.    Some mothers **sometimes have enough time** to talk to their children.  
      d.    Some mothers **always have enough time** to talk to their children.
  
2.    a.    Some mothers **always explain** to their children about the way they should behave.

- b. Some mothers **sometimes explain** to their children about the way they should behave.
  - c. Some mothers **sometimes make** their children behave because they're the boss.
  - d. Some mothers **always make** their children behave because they're the boss.
- 3.
- a. Some mothers **always ask** their children what they did in school that day.
  - b. Some mothers **usually ask** their children what they did in school that day.
  - c. Some mothers **usually don't ask** their children what they did in school that day.
  - d. Some mothers **never ask** their children what they did in school that day.
- 4.
- a. Some mothers **always get very upset** if their children don't do what they're supposed to right away.
  - b. Some mothers **sometimes get very upset** if their children don't do what they're supposed to right away.
  - c. Some mothers **sometimes try to understand** why their children don't do what they're supposed to right away.
  - d. Some mothers **always try to understand** why their children don't do what they're supposed to right away.
- 5.
- a. Some mothers **always have the time to talk** about their children's problem.
  - b. Some mothers **sometimes have the time to talk** about their children's problem.
  - c. Some mothers **don't always have the time to talk** about their children's problem.
  - d. Some mothers **never have the time to talk** about their children's problem.
- 6.
- a. Some mothers **never punish** their children; they **always talk** to their children about what was wrong.
  - b. Some mothers **hardly ever punish** their children; they **usually talk** to their children about what was wrong.

- c. Some mothers **usually punish** their children when they've done something wrong **without talking to them very much.**
  - d. Some mothers **always punish** their children when they've done something wrong **without talking to them at all.**
- 7.
- a. Some mothers **always tell** their children what to do.
  - b. Some mothers **sometimes tell** their children what to do.
  - c. Some mothers **sometimes** like their children to **decide for themselves what to do.**
  - d. Some mothers **always** like their children to **decide for themselves what to do.**
- 8.
- a. Some mothers **always think it's OK** if their children make mistakes.
  - b. Some mothers **sometimes think it's OK** if their children make mistakes.
  - c. Some mothers **always get angry** if their children make mistakes.
  - d. Some mothers **sometimes get angry** if their children make mistakes.
- 9.
- a. Some mothers **never want to know** what their children are doing.
  - b. Some mothers **usually don't want to know** what their children are doing.
  - c. Some mothers **sometimes want to know** what their children are doing.
  - d. Some mothers **always want to know** what their children are doing.
- 10.
- a. Some mothers **always get upset** when their children don't do well in school.
  - b. Some mothers **sometimes get upset** when their children don't do well in school.
  - c. Some mothers **hardly ever get upset** when their children don't do well in school.
  - d. Some mothers **never get upset** when their children don't do well in school.
- 11.
- a. Some mothers **always like to talk to their children's teachers** about how they are doing in school.

- b. Some mothers **sometimes like to talk to their children's teachers** about how they are doing in school.
- c. Some mothers **usually don't like to talk to their children's teachers** about how they are doing in school.
- d. Some mothers **never like to talk to their children's teachers** about how they are doing in school.

Now, please think about your father. If you do not see your father but some other man lives in your household, please respond about that man.

- 12.
  - a. Some fathers **never have enough time** to talk to their children.
  - b. Some fathers **usually don't have enough time** to talk to their children.
  - c. Some fathers **sometimes have enough time** to talk to their children.
  - d. Some fathers **always have enough time** to talk to their children.
- 13.
  - a. Some fathers **always explain** to their children about the way they should behave.
  - b. Some fathers **sometimes explain** to their children about the way they should behave.
  - c. Some fathers **sometimes make** their children behave because they're the boss.
  - d. Some fathers **always make** their children behave because they're the boss.
- 14.
  - a. Some fathers **always ask** their children what they did in school that day.
  - b. Some fathers **usually ask** their children what they did in school that day.
  - c. Some fathers **usually don't ask** their children what they did in school that day.
  - d. Some fathers **never ask** their children what they did in school that day.
- 15.
  - a. Some fathers **always get very upset** if their children don't do what they're supposed to right away.

- b. Some fathers **sometimes get very upset** if their children don't do what they're supposed to right away.
  - c. Some fathers **sometimes try to understand** why their children don't do what they're supposed to right away.
  - d. Some fathers **always try to understand** why their children don't do what they're supposed to right away.
- 16.
- a. Some fathers **always have the time to talk** about their children's problem.
  - b. Some fathers **sometimes have the time to talk** about their children's problem.
  - c. Some fathers **don't always have the time to talk** about their children's problem.
  - d. Some fathers **never have the time to talk** about their children's problem.
- 17.
- a. Some fathers **never punish** their children; they **always talk** to their children about what was wrong.
  - b. Some fathers **hardly ever punish** their children; they **usually talk** to their children about what was wrong.
  - c. Some fathers **usually punish** their children when they've done something wrong **without talking to them very much**.
  - d. Some fathers **always punish** their children when they've done something wrong **without talking to them at all**.
- 18.
- a. Some fathers **always tell** their children what to do.
  - b. Some fathers **sometimes tell** their children what to do.
  - c. Some fathers **sometimes** like their children to **decide for themselves** what to do.
  - d. Some fathers **always** like their children to **decide for themselves** what to do.
- 19.
- a. Some fathers **always think it's OK** if their children make mistakes.
  - b. Some fathers **sometimes think it's OK** if their children make mistakes.
  - c. Some fathers **always get angry** if their children make mistakes.

- d. Some fathers **sometimes get angry** if their children make mistakes.
20. a. Some fathers **never want to know** what their children are doing.  
b. Some fathers **usually don't want to know** what their children are doing.  
c. Some fathers **sometimes want to know** what their children are doing.  
d. Some fathers **always want to know** what their children are doing.
21. a. Some fathers **always get upset** when their children don't do well in school.  
b. Some fathers **sometimes get upset** when their children don't do well in school.  
c. Some fathers **hardly ever get upset** when their children don't do well in school.  
d. Some fathers **never get upset** when their children don't do well in school.
22. a. Some fathers **always like to talk to their children's teachers** about how they are doing in school.  
b. Some fathers **sometimes like to talk to their children's teachers** about how they are doing in school.  
c. Some fathers **usually don't like to talk to their children's teachers** about how they are doing in school.  
d. Some fathers **never like to talk to their children's teachers** about how they are doing in school.

**A.4 Dependency-Oriented & Achievement-Oriented Psychological Control Scale  
(DAPCS)**

**Scale of 1 to 5 from 1 (not at all) to 5 (always)**

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Items

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*My parents*

Dependency oriented psychological control

- Will make me feel guilty when I will leave home permanently
- Make me feel guilty if my ideas differ from theirs
- Are only happy with me if I rely exclusively on them for advice
- Only show their love for me as long as we keep doing everything together
- Interfere in my problems, even if I prefer to solve them myself
- Are less friendly with me if I perform less than perfectly
- Show that they are disappointed in me if I make a mistake
- Are less attentive to me if I do not perform up to my fullest potential
- Show that they love me less if I perform badly
- Make me feel guilty if my performance is inferior
- Appreciate me more if I pursue high standards

Achievement oriented psychological control

- Only show their love for me if I get good grades
  - Only respect me if I am the best at everything
  - Are only friendly with me if I excel in everything I do
  - Are only proud of me if I perform well on exams
-

## A.5 Attachment Questionnaire for Children (AQC)

### Attachment Questionnaire for Children (AQC)

Instructions: Please select the description below that fits you best.

1. I find it easy to become close friends with other children. I trust them and I am comfortable depending on them. I do not worry about being abandoned or about another child getting too close friends with me.
2. I am uncomfortable to be close friends with other children. I find it difficult to trust them completely, difficult to depend on them. I get nervous when another child wants to become close friends with me. Friends often come more close to me than I want them to.
3. I often find that other children do not want to get as close as I would like them to be. I am often worried that my best friend doesn't really like me and wants to end our friendship. I prefer to do everything together with my best friend. However, this desire sometimes scares other children away.

## A.6 Parenting Styles and Dimensions Questionnaire-Short Form (PSDQ-SF)

### PSDQ-Short Version

REMEMBER: Make two ratings for each item; (1) rate how often your spouse exhibits this behavior with your child and (2) how often you exhibit this behavior with your child.

SPOUSE EXHIBITS BEHAVIOR:

- 1 = Never
- 2 = Once In Awhile
- 3 = About Half of the Time
- 4 = Very Often
- 5 = Always

I EXHIBIT THIS BEHAVIOR:

- 1 = Never
- 2 = Once In Awhile
- 3 = About Half of the Time
- 4 = Very Often
- 5 = Always

[ He ] [ I ]

- |       |       |  |
|-------|-------|--|
| _____ | _____ | 1. [He is] [I am] responsive to our child's feelings and needs.  |
| _____ | _____ | 2. [He uses] [I use] physical punishment as a way of disciplining our child.   |
| _____ | _____ | 3. [He takes] [I take] our child's desires into account before asking the child to do something.                                   |
| _____ | _____ | 4. When our child asks why he/she has to conform, [he states] [I state]: because I said so, or I am your parent and I want you to. |
| _____ | _____ | 5. [He explains] [I explain] to our child how we feel about the child's good and bad behavior.                                     |
| _____ | _____ | 6. [He spans] [I spank] when our child is disobedient.   |
| _____ | _____ | 7. [He encourages] [I encourage] our child to talk about his/her troubles.   |
| _____ | _____ | 8. [He finds] [I find] it difficult to discipline our child.   |
| _____ | _____ | 9. [He encourages] [I encourage] our child to freely express himself/herself even when disagreeing with parents.                   |
| _____ | _____ | 10. [He punishes] [I punish] by taking privileges away from our child with little if any explanations.                             |
| _____ | _____ | 11. [He emphasizes] [I emphasize] the reasons for rules.   |
| _____ | _____ | 12. [He gives] [I give] comfort and understanding when our child is upset.   |
| _____ | _____ | 13. [He yells or shouts] [I yell or shout] when our child misbehaves.  |
| _____ | _____ | 14. [He gives praise] [I give praise] when our child is good.  |
| _____ | _____ | 15. [He gives] [I give] into our child when the child causes a commotion about something.  |
| _____ | _____ | 16. [He explodes] [I explode] in anger towards our child.  |
| _____ | _____ | 17. [He threatens] [I threaten] our child with punishment more often than actually giving it.                                      |
| _____ | _____ | 18. [He takes] [I take] into account our child's preferences in making plans for the family.                                       |
| _____ | _____ | 19. [He grabs] [I grab] our child when being disobedient.  |
| _____ | _____ | 20. [He states] [I state] punishments to our child and does not actually do them.  |
| _____ | _____ | 21. [He shows] [I show] respect for our child's opinions by encouraging our child to express them.                                 |
| _____ | _____ | 22. [He allows] [I allow] our child to give input into family rules.   |
| _____ | _____ | 23. [He scolds and criticizes] [I scold and criticize] to make our child improve.  |
| _____ | _____ | 24. [He spoils] [I spoil] our child.   |
| _____ | _____ | 25. [He gives] [I give] our child reasons why rules should be obeyed.  |
| _____ | _____ | 26. [He uses] [I use] threats as punishment with little or no justification.   |
| _____ | _____ | 27. [He has] [I have] warm and intimate times together with our child.   |
| _____ | _____ | 28. [He punishes] [I punish] by putting our child off somewhere alone with little if any explanations.                             |

[ He ] [ I ]

REMEMBER: Make two ratings for each item; (1) rate how often your spouse exhibits this behavior with your child and (2) how often you exhibit this behavior with your child.

SPOUSE EXHIBITS BEHAVIOR:

- 1 = Never
- 2 = Once In Awhile
- 3 = About Half of the Time
- 4 = Very Often
- 5 = Always

I EXHIBIT THIS BEHAVIOR:

- 1 = Never
- 2 = Once In Awhile
- 3 = About Half of the Time
- 4 = Very Often
- 5 = Always

- \_\_\_\_\_ 29. [He helps] [I help] our child to understand the impact of behavior by encouraging our child to talk about the consequences of his/her own actions.
- \_\_\_\_\_ 30. [He scolds or criticizes] [I scold or criticize] when our child's behavior doesn't meet our expectations.
- \_\_\_\_\_ 31. [He explains] [I explain] the consequences of the child's behavior.
- \_\_\_\_\_ 32. [He slaps] [I slap] our child when the child misbehaves.