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The Effects of Parents' Socialization Goals, Responsiveness, and Psychological Control on Chinese Adolescents' Anxiety

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ABSTRACT

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This study investigated the relationship of parents' achievement-oriented and self-development goals (for their children) on youth reported anxiety, while taking parents' psychological control and responsiveness into account as possible mediating factors. More specifically, the purpose of this study was to further investigate the direct/indirect effects of (a) parents' reported achievement-oriented goals on youth anxiety via parental psychological control in two types of schools (*key school* for more academically advanced students and *typical school* for students with lower academic achievement); and (b) parents' reported self-development goals on youth anxiety via parental psychological control in key and typical schools. The current study also introduced parents' responsiveness as a new mediator and single-child family/ multiple-child family (family type/size) as a new moderator to investigate their effect on the overall model as related to youth anxiety.

This study included 1,044 participants, reflecting 522 dyads (student and primary caregiver) from an urban city in Eastern Mainland China. Participating students were enrolled in the 11th grade in senior high school. Due to the high correlations of parents' achievement-oriented goals and parents' self-development goals ($r = 0.975$, $p < 0.001$), we combined and created one new variable—parents' achievement/self-development goals. Therefore, in the final multigroup SEM analyses we used this new variable in place of the previously hypothesized two goal-related variables. Additionally, rather than the initially proposed two types of schools, due to constricting limitations in the data, we were limited to making comparisons between single-child and multiple-child families.

In our data analyses, no indirect effects were found among the identified variables. However, data analyses indicated a direct effect from parents' psychological control on youth anxiety in the key school regardless of family composition (single-child or multiple-child families), and in youth attending the typical school and from a single-child family. In general, the data analyses identified two major findings: (a) We found a positive relationship between parents' psychological control and youth anxiety for youth attending a typical school and living in a single-child family and for youth attending a key school, regardless of family type/size (single-child or multiple-child family); and (b) A marginally significant relationship ($p = 0.053$) was identified between parents' reported achievement/self-development goals and youth reported parent responsiveness.

Some concerns were voiced among research team members about cultural sensitivity to one of the parents' survey questions. For example, one question referred to students being interested in and joining extracurricular activities. Students in China may or may not have had opportunities to participate in these types of activities. Data were reanalyzed after seven items were removed. In post hoc exploratory analyses, a new variable was defined and created,

parents' reported achievement goals. Parents' reported achievement goals were found to be positively related with youth reported parents' psychological control only in (a) the typical school and single child family model and (b) the key school and multiple-child family model. Parents' reported achievement goals were negatively related with youth reported parents' responsiveness only in (a) the key school and single child model and (b) the typical school and multiple child model. Youth reported parents' responsiveness is negatively related with youth reported anxiety only in (a) the key school and single child model and (b) the typical school and multiple child model. Youth reported parents' psychological control is positively related to youth anxiety in all the models. Indirect paths were found from parents' achievement goals on youth anxiety via youth reported parents' psychological control were only found in (a) the multiple child model, (b) the multiple child and key school model, and (c) the single child and typical school model.

We acknowledge that our data were collected in China during the COVID-19 global pandemic. During this pandemic, professionals note that youth, including youth in China, reported significantly higher levels of anxiety, making our current data more difficult to compare with pre-COVID-19 data collected in China.

Future research should further explore the development of youth anxiety across time (longitudinal studies). To inform prevention and intervention efforts targeting youth anxiety, researchers must consider numerous variables that may directly or indirectly mitigate or exacerbate youth anxiety. Future research may consider and investigate the following variables: family composition; parenting styles and cultural factors that are embedded in parenting styles; parents' goals for and expectations of their children's academic achievement; family composition, including sibling relationships; and the type of school youth attend.

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As I complete this dissertation, I want to thank the two participating schools in China, particularly the students and parents, the school administrators, and the teachers. Their participation is greatly appreciated, particularly because this study was conducted during the COVID-19 pandemic. I also express appreciation to my family for their support as I completed my doctoral degree.

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CHAPTER ONE

Introduction

Across cultures and across time, individuals have reported experiencing anxiety (Crocq, 2015, 2017). Ancient Greek and Latin literature reveals a long history of people suffering from anxiety-related symptoms and also various ways in which individuals coped with anxiety. Over time, anxiety became associated with feelings related to melancholia and panic terrors (Coste & Granger, 2014). The various editions of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM; American Psychiatric Association [APA], 1952, 1968, 1980, 1994, 2013, 2022) chart changes in clinical diagnostic criteria for mental health disorders, including anxiety disorders. In the last several editions, increased attention is given to anxiety in children and adolescents and the early onset of symptoms and the development of anxiety across the lifetime (Lallukka et al., 2019).

Diagnostic and Statistical Manual of Mental Disorders -V Descriptors of Anxiety

In the DSM-V (APA, 2013), descriptors of anxiety disorders commonly include an *anticipation of future threat* and avoidance behaviors when coping with both real and imagined threats. The anticipation of a future threat differs from fears that arise from an immediate and clearly identifiable threat. Some physiological symptoms, such as muscle tension and hypervigilance are also related to the manifestation of anxiety disorders (APA, 2013). Additionally, the DSM-V indicates that anxiety disorders are typically accompanied by entrenched cognitive distortions. From a longitudinal perspective, symptoms of anxiety initially emerge in childhood and extend into adulthood (Hovenkamp-Hermelink et al., 2021; Lenze & Wetherell, 2011). Other DSM-V descriptors for generalized anxiety disorder include feeling on edge, irritable, and restless; feeling tired and lacking energy; having difficulty concentrating and

staying mentally focused; experiencing muscle tension; and having sleep disturbance and restless sleep, such as having difficulty falling asleep and staying asleep. When considering children's anxious behaviors and complaints, one must also consider the severity of the anxiety, the persistence of the anxiety, and how anxiety impacts one's ability to function on a daily basis in the home and in society (APA, 2013; Hovenkamp-Hermelink et al., 2021).

Children's Mental Health and Anxiety

Recent data indicate an "alarming rate" of increased mental health problems in children and youth, identified by mental health professionals as a "substantial public health concern" (Bitsko et al., 2022, p. 1). Based on current data provided by The Centers for Disease Control and Prevention (CDC), 20% of all children meet criteria for a mental health disorder, and prior to their 18th year, 40% of all children will—at some point—have met diagnostic criteria for a mental health disorder (Bitsko et al., 2022; Shim et al., 2022). Of the mental health disorders diagnosed in children, anxiety disorders are the most common (Anxiety and Depression Association of America, 2022; CDC, 2022a, 2022b; Shim et al., 2022).

Another trend, children and adolescents are being diagnosed with anxiety disorders at an earlier age and at an ever-increasing rate (CDC, 2022a, 2022b; Palitz & Kendall, 2020). In Western nations, research indicates an increasing trend for elevated anxiety in young people (Twenge, 2011). For example, in the United States, social anxiety has a median age onset of 13, and 75% of adults with a social anxiety diagnosis started showing symptoms in youth from 8–15 years of age (Fried et al., 2017; Kessler et al., 2005). Prior to the COVID-19 pandemic, US youth ages 3–17 years old, 4.4 million (7.1%) were diagnosed with an anxiety disorder (Canady, 2020).

As anxiety appears to be on the increase in adolescents, it is also worth noting that adolescence itself is a crucial developmental stage (Anniko et al., 2019). Adolescents tend to

experience more anxiety than younger children and report increased conflict at this time with their parents as they are seeking independence and more individuation (Anniko et al., 2019; Lee et al., 2006; Zhang, Wei, et al., 2017). Both social factors across time and adolescents' developmental issues place them in the challenging position of coping with these increased risk factors (Anniko et al., 2019).

International Trends in Children's Mental Health and Anxiety

These trends are not only occurring in the United States. Youth from other countries also appear to be suffering from higher prevalence rates of anxiety (Barendse et al., 2021; Racine et al., 2021). For example, in China, an earlier survey found that about 30 million adolescents experienced mental health issues that were most commonly related to anxiety (Li, 2003). In China, prevalence rates of youth anxiety appeared to have initially escalated in the 1990s (Woloshyn & Savage, 2020; Xin et al., 2010). In 1992, on average, Chinese adolescents scored at the 50th percentile on the distribution of self-reported anxiety scores, whereas in 2005, on average, Chinese adolescents scored at the 76th percentile (Woloshyn & Savage, 2020; Xin et al., 2010). Additionally, research indicates that during the COVID-19 global pandemic, approximately 25% of Chinese youth reported significant levels of anxiety (Chai et al., 2021). Although prevalence rates and severity of anxiety during the COVID-19 pandemic vary from study to study, studies conducted in China have generally reported increasing rates of anxiety in China's youth (Chai et al., 2021; Wang et al., 2022).

Parenting, Family Dynamics, and Youth Anxiety

Proponents of attachment theory emphasize the importance of lifelong relationship skills that are strongly linked to early primary attachments to significant others (i.e., parent-child relationship; Bowlby, 1988)—which if underdeveloped or insufficiently satisfied negatively impacts current-day interpersonal relationships and contributes to anxiety symptoms (Slavin-

Mulford & Hilsenroth, 2012). Parent-child relationships in early development are thought to predict children's future emotional well-being (Bowlby, 1988). Secure parent-child relationships help individuals develop better coping mechanisms to manage stress (Mikulincer & Shaver, 2019).

Parental responsiveness to their children's emotional and physical needs is correlated with children's overall psychological wellbeing and a decrease in internalizing symptoms such as anxiety and depression (Clark & Ladd, 2000; Haverfield & Theiss, 2017; Peterson & Hann, 1999). For example, researchers find that children with social anxiety experience a lower level of parental responsiveness compared to children without social anxiety (Hummel & Gross, 2001; Morris & Oosterhoff, 2016). Youth tolerance of anxiety symptoms can be reinforced by frequent supportive interactions with their parents (Gottman et al., 1996; Hurrell et al., 2017). Therefore, increasing parents' responsiveness is one simple strategy to help children cope with anxiety.

One research study investigated the relationships between parents' goals and parents' psychological control in Chinese high schools (Luebbe et al., 2018). Luebbe et al. (2018) found that the specific relationship between parents' self-development goals and parenting styles was not clearly indicated. Their study's data collected from 247 students and the students' caregivers indicated a positive relationship between psychological control and youth anxiety. Identified models for data analyses were categorized based on the type of school the student attended. Students attended either a key school (higher test scores and academically competitive school) or a typical school (lower test scores and less academically competitive). Other variables included parent goals. These were identified as achievement-oriented goals, self-development in context goals, and interdependence-oriented socialization goals. The data indicated moderated indirect effects. Those attending typical schools whose parents endorsed higher levels of achievement-oriented goals and self-development in context goals also self-reported higher levels of youth

anxiety, indirectly through higher levels of parents' psychological control. Only parents' achievement-oriented goals for adolescents who attended key schools were related to youth anxiety indirectly through parents' psychological control. One finding of particular interest, data from Luebbe et al.'s study (2018) indicated that parents' interdependence-oriented socialization goals were unrelated to either psychological control or anxiety.

Proposed Research

The current study builds on a previous study that was conducted with 11th grade students and parents in China (Luebbe et al., 2018). Our current study identified connections between Chinese parents' achievement-oriented and self-development goals (for their children) and adolescent anxiety. Additionally, as was shown in the Luebbe et al. (2018) study, we looked into parental psychological control that previously serves as a mediating variable between parents' goals and youth anxiety. Expanding from the previous Luebbe et al. (2018) study, in our study we considered youth perceptions of parental responsiveness to adolescents' distress and the family's size (one child or multiple children). We anticipated these variables mediating or moderating youth anxiety. Specifically, we proposed running multigroup SEM models with two grouping variables, defined as (a) type of school: key school vs. typical school and (b) family size: single-child family vs. multiple-child family.

CHAPTER TWO

Literature Review

In today's society, people commonly talk about their anxiety (Horwitz, 2013). The American Psychological Association's website (2022) describes anxiety as "an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure" (para. 1). This website includes additional descriptive information: "People with anxiety disorders usually have recurring intrusive thoughts or concerns. They may avoid certain situations out of worry. They may also have physical symptoms such as sweating, trembling, dizziness or a rapid heartbeat" (American Psychological Association, 2022, para. 2).

With individuals' life stressors, busy work schedules, and schooling, a certain amount of anxiety is inevitable (Rycroft, 2018). When anxious, individuals may experience physical symptoms such as racing thoughts and a pounding heart (American Psychiatric Association, 2013). In younger children, separation anxiety is typical when they leave or are separated from their parents, such as when entering school on the first day of kindergarten (Rycroft, 2018). In college students, anxiety is commonly associated with preparing for and taking exams and successfully mastering a certain level of performance on those exams (Pascoe et al., 2020). In the workplace, anxiety may escalate when negotiating with an employer for a pay raise or when conversing with coworkers about contentious topics (Swee et al., 2018).

Across cultures and across time, individuals have reported experiencing anxiety (Crocq, 2015, 2017). As such, anxiety-themed research has been conducted to better understand anxiety and to identify interventions to prevent, address, and manage anxiety (Slavin-Mulford & Hilsenroth, 2012). In fact, ancient Greek and Latin literature reveals a long history of people suffering from anxiety-related symptoms, and ways in which individuals cope with anxiety (Crocq, 2017; Hippocrates, ca. 430 B.C.E./1994). For example, in a compilation of ancient

Greek medical records, the *Hippocratic Corpus*, a specific phobia was noted in a girl who played the flute and was described and defined as an official disorder (Hippocrates, ca. 430 B.C.E./1994). Horwitz (2013) concluded that some Latin Stoic philosophers clustered affliction, worry, and anxiety, but made clear distinctions between anxiety and sadness. Additionally, in the book *Lingshu Interrogation*, ancient Chinese writers also referred to anxiety as an emotion that negatively affected the balance of the whole-body system (Li, 2004).

History of Anxiety in Professional Psychology

In 1621, Robert Burton's compendium first mentioned anxiety under the umbrella term *melancholy* and identified the anxious state as *melancholia* (Horwitz, 2013). Further, Burton described the man's condition: "...his complexion is altered, his digestion hindered, his sleep gone, his spirits obscured and his heart heavy" (Horwitz, 2013, pp. 9–10). In 1909, Kraepelin described anxiety as one of the anhedonia states, where an individual's inner tension builds, leading to heightened anxiety and emotional distress. Over time, anxiety became associated with feelings that are related to melancholia and panic terrors (Coste & Granger, 2014).

In current diagnostic terms, Horwitz (2013) describes multiple overlapping symptoms of both anxiety and depression. Emerging from several developing psychological interpretations, in particular, current definitions of anxiety arose from neuroses associated with psychoanalytic perspectives (Crocq, 2015, 2017). For example, aspects of the characteristic of anxiety's inflexible subconsciousness as an underlying source were highlighted by George Miller Beard and Sigmund Freud (Beard, 1881; Crocq, 2017; Freud, 1953).

Diagnostic and Statistical Manual of Mental Disorders (DSM)

Across time, the various editions of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM; American Psychiatric Association [APA], 1952, 1968, 1980, 1994, 2013), record changes in the identifying diagnostic criteria for anxiety disorders. For example, in the

DSM-I (APA, 1952), *anxiety reaction* was the label for what is now referred to as an anxiety disorder. Similar to historical definitions, the DSM-I defined anxiety as a neurotic action stemming from an individual's failure to resolve internal and external stressors, typically directly linked to physiological symptoms. Although included under *psychoneurotic disorders*, the DSM-I listed anxiety reaction as separate from dissociative, conversion, phobic, obsessive compulsive, and depressive reactions.

Later in DSM-II (APA, 1968), anxiety was described as the main feature under *neurosis*, along with similar categories, such as phobias. At this point in time, DSM-II moved the dissociative and conversion reactions to fit under *hysterical neurosis*. The DSM-II also emphasized the comorbidity of hallucinations, delusions, and anxiety.

In DSM-III (APA, 1980), under the category of anxiety disorder, authors introduced agoraphobia, with and without panic attack; social phobia; simple phobia; generalized anxiety disorder; and post-traumatic stress disorder. The 1980 DSM-III version made the diagnostic criteria of anxiety similar to the current diagnostic criteria.

Moving forward, the DSM-IV (APA, 1994) not only removed the simple phobia from the official diagnosis of anxiety disorders, but also differentiated symptoms among several diagnoses. In particular, the DSM-IV included contextual information related to demographics, such as gender and cultural factors. This information provided greater insight into how anxiety disorders and different manifestations of anxiety disorders were related to within-person characteristics and environmental factors.

In the latest edition, DSM-V (APA, 2013), descriptors of anxiety disorders commonly include an *anticipation of future threat*, which differs from fears that arise from an immediate threat. Some physiological symptoms, such as muscle tension and hypervigilance are also related

to the manifestation of anxiety disorders. Additionally, the DSM-V indicates that anxiety

disorders are typically accompanied by cognitive distortions that extend across time. In

particular, the DSM-V criteria for separation anxiety includes fear, anxiety, and/or avoidance

that persists for more than four weeks in youth and more than six months in adults. The DSM-V

also indicates that from a longitudinal perspective many of the anxiety symptoms initially

emerge in childhood and extend into adulthood (Lenze & Wetherell, 2011; Wang et al., 2022).

Additionally, in the DSM-V-TR (APA, 2022), specific categories are included under

anxiety disorders. These include separation anxiety, selective mutism, specific phobia, social

anxiety disorder (social phobia), panic disorder, agoraphobia, generalized anxiety disorder,

substance/medication-induced anxiety disorder, anxiety disorder due to another medical

condition, other specified anxiety disorder, and unspecified anxiety disorder.

Adolescent Anxiety

Children and adolescents are being diagnosed with anxiety disorders at an earlier age and

at an increasing rate (CDC, 2022a; CDC, 2022b; Palitz & Kendall, 2020). In Western nations,

research indicates an increasing trend for elevated anxiety in young people (Shim et al., 2022;

Twenge, 2011). For example, in the United States, social anxiety has a median age onset of 13,

and 75% of individuals with a social anxiety diagnosis start showing symptoms between ages 8

to 15 years old (Fried et al., 2017; Kessler et al., 2005). According to the National Institute of

Mental Health (NIMH, 2017), up to 19.1% of adults have experienced anxiety related symptoms.

Among youth aged 3–17 years, 5.8 million (9.4%) have been diagnosed with an anxiety disorder

(CDC, 2022a; CDC, 2022b). Researchers also report that across the lifespan, children experience

an increasing risk for developing anxiety and depression, more so than other mental health issues

(Racine et al., 2021; Shim et al., 2022). These trends are not only happening in the United States;

youth from other countries also appear to be suffering from anxiety at higher rates than in

previous times (Barendse et al., 2021; Racine et al., 2021). For example, in China, an earlier survey found that about 30 million adolescents experienced mental health issues that are most commonly related to anxiety (Li, 2003). The upswing in youth anxiety began in the 1990s. In 1992, on average, Chinese adolescents on average scored at the 50th percentile on the distribution of self-reported anxiety scores, whereas in 2005 Chinese adolescents scored at the 76th percentile on average (Woloshyn & Savage, 2020; Xin et al., 2010). Additionally, recent research indicates that during the global pandemic of COVID-19, approximately 25% of Chinese youth reported significant levels of anxiety (Chai et al., 2021).

As anxiety appears to be on the increase in adolescents, it is also worth noting that adolescence itself is a crucial developmental stage (Anniko et al., 2019). Adolescents tend to experience more anxiety than younger children and report increased conflict at this time with their parents as they are seeking independence and more individuation (Anniko et al., 2019; Lee et al., 2006; Zhang, Wei, et al., 2017). Both social factors across time and adolescents' developmental issues place them in the challenging position of coping with these increased risk factors (Anniko et al., 2019).

History of Treatments Addressing Anxiety

Across cultures, current research shows adolescents at an increasing risk for developing anxiety (Barendse et al., 2021; Chai et al., 2021; Pascoe et al., 2020). Increasingly, researchers and practitioners are seeking strategies to effectively intervene and treat youth anxiety (Goger & Weersing, 2022; Higa-McMillan et al., 2016; Slavin-Mulford & Hilsenroth, 2012).

In ancient years, Epicureanism taught individuals that the negative cognitions about the past and the future should not be kept, that the focus of one's attention should remain on the present (Hossenfelder, 2006). It has been found to have close connections with mindfulness

treatments in modern society (Orsillo & Roemer, 2007). The rationale suggests that when your mind stays focused on the present (the here and now), anxious emotions will diminish.

In ancient China, another option was recommended to assist in reducing anxiety. Anger was seen to be balanced with worries (*Lushi chunqiu*; Zhan et al., 2017). For some individuals who experienced what we now refer to as *clinically significant* levels of anxiety, the ancient Chinese would attempt to infuriate the anxious individual in order to assist them in letting go of the anxious emotions and reaching a balance of emotions (Sellmann, 1999; Zhan et al., 2017). However, individuals who appeared to benefit from those treatments were mostly from the higher upper class in society at the time, while most of the population experienced little relief from anxiety.

Not until modern Western science did specific treatment plans emerge, and individuals started to seek and receive help. Freud started the trend of psychoanalytic treatment in the 1890s. He saw anxiety as "a signal of danger to the ego" (Grotstein et al., 2014, p. 189.) To some extent, Freud recognized both advantages and disadvantages of anxiety and saw it as "responses of the ego to increase of instinctual or emotional tension" (Rycroft, 1972, p. 8). Within Freud's approach of free association, he believed that anxiety can be relieved when therapists try to interpret the dream and to bring the unconscious danger to the awareness of patients.

Perls (1969) also attempted to solve the problems of anxiety by developing Gestalt therapy in 1964. He regarded anxiety as "the gap between the now and the later" (Perls, 1969, p. 30). He thought of anxiety as a preoccupied presence with catastrophic expectations for the future, and/or just *stage fright* (Perls, 1969). More specifically, Gestalt therapists use imagery and role play to help clients face thoughts that they previously avoided, helping clients to build a greater tolerance for stress and associated anxiety (Yip, 2003).

Spirituality-based therapy, on the other hand, is incorporated into different approaches that allow clients to apply their own spiritual coping mechanism during counseling (Smith et al., 2007). Kelly (1995) provides the definition of spirituality as an individual's understanding of and appreciation for the transcendent experiences of God or other forces in the Universe. With the interplay of spiritual belief and associated practices, clients with anxiety are likely to be benefitted, biologically and psychologically, by spirituality-based therapy (Smith et al., 2007).

Of the many treatment approaches, Cognitive Behavioral Therapy (CBT) has been studied the most extensively as a therapeutic intervention to address thoughts and emotions that affect behavior, including anxious thoughts and associated emotions that contribute to and escalate anxiety (Otte, 2011). For example, Beck (1997) mentioned how individuals' *automatic thoughts* play an important role in self-evaluation. These automatic thoughts, when reframed, would change people's interpretations of themselves or their world. Anxiety sometimes arises from falsely interpreted feelings, due to someone's automatic thoughts related to a future threat. Professionals relying on CBT try to help anxious clients identify, examine, and change beliefs about a future event. Influenced by CBT, Acceptance-Based behavioral therapy has also been effective in decreasing anxiety (Treanor et al., 2011). Acceptance-Based Behavior Therapists help clients establish more internal awareness and more acceptance of their anxious reactions. They also support clients in finding the legitimacy of having anxious reactions in daily life, and therefore normalize anxious feelings.

Similar to other approaches that address underlying thoughts and anxious feelings, psychodynamic theories also address the individual's unconscious threats and avoidance as major traits of anxiety. Psychodynamic therapists encourage clients to identify and understand their underlying conflictual patterns in interpersonal relationships, bringing unconscious wishes for relationships to the conscious level, and helping clients establish a new relationship with their

therapists (Keefe et al., 2014). Building from psychodynamic theories, proponents of attachment theory emphasize the importance of lifelong relationship skills that are strongly linked to our early primary attachments to significant others (parent-child relationship; Bowlby, 1988)—which if underdeveloped or insufficiently satisfied negatively impacts current-day interpersonal relationships and contributes to anxiety symptoms (Slavin-Mulford & Hilsenroth, 2012). Parent-child relationships in early development are thought to predict children's emotional well-being in the future (Bowlby, 1988). Secure parent-child relationships help individuals develop better coping mechanisms to manage stress (Mikulincer & Shaver, 2019).

Studies have shown that relationship-related topics are often the most worrisome precipitating stressors for anxious individuals, more so than other triggers of anxiety (Breitholtz et al., 1999). The extra stress and worry arising from a relationship could produce higher anxiety, whereas a supportive and healthy relationship could help counter and alleviate anxiety symptoms or even prevent people from having high levels of anxiety (Mikulincer & Shaver, 2019; Slavin-Mulford & Hilsenroth, 2012).

Parenting Characteristics Associated With Children's Anxiety

In the following sections characteristics of parenting that may affect children's anxiety are reviewed. Additionally, parents' and children's perceptions of these parenting characteristics are discussed. These characteristics include parents' psychological control; parents' achievement-oriented goals (for their children), parents' self-development goals in context, and parents' responsiveness to their children. Both parents' and youth's perceptions of these parenting characteristics are considered. Environmental factors that may affect parenting and possibly children's anxiety include the type of school the child attends and the size of the family.

Parents' Psychological Control

The relationship between different parenting styles and children's anxiety has been long discussed in previous research. One of the most commonly studied constructs is parents' psychological control. Barber (1996) defined psychological control as parents' "control attempts that intrude into the psychological and emotional development of the child (e.g., thinking process, emotional attachments to parents)" (p. 3296). Under the influence of parents' psychological control, children may miss or be denied opportunities to speak up for their own interests, further discouraging the expression of their individuality (Baumrind, 1978; Doepke & Zilibotti, 2017). When under the context of individualistic culture, it is crucial for children to have opportunities to build up their individual personality, as well as to maintain emotional connections with their primary caregivers. Failing to protect and encourage children's autonomy would likely put children's mental health and well-being at risk, because it creates internal conflict. Although children may experience lack of opportunities to develop autonomy in their home, they may experience increased expectations on their personal development and demands for self-autonomy in society (Barber et al., 2005; Pinquart, 2017). At the same time, children generally have a lot of curiosity in exploring their identities during adolescence, which could increase conflict as they face increased parental psychological control during adolescence.

According to Erikson's developmental theory (Erikson, 1994), adolescents go through a stage of *identity crisis*, wherein they need to learn to make judgments about who they are. When the autonomy of making judgements is undermined by psychological control from parents, more conflicts between adolescents and parents will hamper adolescents' achievement of psychological well-being.

Clinical research has also revealed a positive relationship between parental psychological control and children's perceived anxiety. When parents try to control their children by inducing

guilt or withdrawing love, children's anxiety symptoms are likely to increase accordingly (Luebbe et al., 2014). In Alloy et al.'s (1990) cognitive model of helplessness-hopelessness, when an individual obtains high uncertainties about their ability to take things under control, they will likely have *certain helplessness*. Then this helplessness would trigger more *aroused anxiety*. Parents' psychological control also includes the specific strategy of love withdrawal (Barber, 1996: Barber et al., 2005; Luebbe et al., 2018). Therefore, children will likely experience more conditioned *aroused anxiety* from parents even before they start thinking about any of their behaviors. Based on In Bowlby's attachment theory (1951, 1969, 1973, 1980), children gain a greater sense of security from their parents when they receive predictable and safe nurturing parenting. Parents' psychological control interferes with the consistency and predictability needed for parent-child bonding. After frequently experiencing such insecure bonding, anxious attachment forms and adolescents will likely experience higher anxiety related to such an attachment (Luebbe et al., 2014).

In Western cultures, parents value and prioritize their children's individuality and independence. On the other hand, in Eastern culture, interdependence and group-oriented thinking are much more valued by parents who align their parenting goals with their cultural values (Wang et al., 2007; Yu et al., 2018). When higher levels of psychological control are expected from parents in Asian culture, researchers found that adolescents did not perceive that their autonomy had been taken away, because in their culture it had not been granted to them in the first place (Greenfield et al., 2003; Varnum & Grossmann, 2017).

Although psychological control and anxiety have been extensively studied in previous literature, some have argued that cultural differences may moderate the effect of parents' psychological control on youth anxiety (Chyung et al., 2022). Although Dwairy et al. (2006) suggested that different parenting styles would neither have positive nor negative effects on

youth psychological outcomes, when these parenting styles are inconsistent with their cultural environments, several studies have not supported this supposition (Chyung et al., 2022: Luebbe et al., 2014). In other words, a significant body of research has shown that parents' psychological control over their children, even when culturally typical, is associated with increased anxiety and depression in children (Chyung et al., 2022; Luebbe et al., 2014). However, to more fully understand how parents' psychological control over their children has an effect on youth anxiety, we must consider cultural backgrounds and parenting practices (Barber et al., 2005; Chyung et al., 2022).

To explain the roots of youth anxiety, researchers must consider parents' psychological control over their children as one of the contributing factors of culturally embedded parenting practices. Barber et al. (2005) hypothesized that there is a universal need for autonomy for adolescents across different cultures. In general, parents taking away autonomy from children, which is one of the typical outcomes of psychological control, would be harmful to children's psychological well-being. Previously, one study specifically focused on increased anxiety as related to higher levels of perceived parental psychological control (Luebbe et al., 2018). Luebbe et al. (2018) conducted their study with adolescents in China (Luebbe et al., 2018). Considering their research, the current study sought to replicate the previous study, and test the direct relation between parental psychological control and children's anxiety.

Parent Socialization Goals

As parental psychological control is associated with negative socioemotional outcomes for children, researchers need to gain additional understanding of what influences parents to engage in such parenting practices. Darling and Steinberg (1993) found a direct relationship between parents' socialization goals and specific parenting practices. For example, when parents have goals around their children's school achievement, parents might engage in parenting

practices that include parents intently and frequently probing their child for information about academic achievement and grades (Barber & Harmon, 2002).

Socialization is the process that turns the child into a *domesticated creature* that allows children to know how to behave in a society (Harris, 2011; Hyde et al., 2017). If they fail to go through this process growing up, they will face difficulties and problems blending into society, and will likely have conflicts with their peers and families. Socialization reflects the transmission of some cultural aspects from one generation to the next (Denzin, 2017; Grusec & Hastings, 2014). Primary caregivers convey socialization goals to their children. Socialization goals have been extensively studied in Western society (Lamm et al., 2008; Raval & Walker, 2019), particularly parents' prioritized goals for their children, such as independence and individual uniqueness. Because socialization goals are largely influenced by culture and consistent with cultural norms, parents from different backgrounds may have different socialization goals for their children. For example, in China (Lieber et al., 2000), researchers found that in comparison to European parents, Chinese parents adopted goals related to filial piety and collectivist goals, and focused less on self-development goals (Chao, 2000; Li et al., 2010; Pearson & Rao, 2003; Zhang, Wei, et al., 2017).

Parents' Achievement Oriented Goals

In previous studies of Asian cultures (Chang & Lee, 2017; Luebbe et al., 2018), parents' achievement-oriented goals consisted of parents' academic achievement goals and parents' filial piety goals for their youth. In China, parents often expect youth to be perfect in both achieving academic success and respecting elders (Luebbe et al., 2018). The emphasis of academic achievement is due to the long history of selecting candidates with higher grades for state bureaucracy, and these selected candidates often held the highest social status at the time.

Along with the historical aspects, Confucian philosophers often encouraged people to pursue high levels of academic achievement (Ho, 1996), and its effect remains in contemporary Chinese society. Nowadays, college entrance exams put a similar type of stress on students in achieving excellence in schools' academic work. Children's success in school is often perceived as important (Chao, 1994; Zhang, Wei, et al., 2017; Zhang et al., 2019). Chinese parents' academic achievement goals are often considered one of the most important goals for their children (Rao et al., 2003; Zhang, Chan, et al., 2017). Parents are especially aware of their high school student's grades, as test scores and academic performance are openly ranked and transparent to students and parents. Additionally, students are often closely tracked and judged by their academic grades at school (Chao, 2000; Zhang, Wei, et al., 2017). With a heightened attention to strong academic achievement goals, Chinese parents engage in parenting practices that are consistent with such goals. Researchers have found that Chinese parents' higher levels of academic achievement goals are often associated with more parental psychological control (Luebbe et al., 2018).

Filial Piety is also a main parental expectation in Chinese culture (Ho, 1996). Confucian philosophers often claim Filial Piety is an important virtue for all people (especially scholars) to follow. It means to respect elders with love and courtesy, and to be obedient to rules made by ancestors and elders. Even though the concept of Filial Piety has existed for a long time, Ho and Kang (1984) stated that Filial Piety has been and continues to be an integral part of Chinese culture and influences parenting beliefs and practices. Filial Piety also influences expectations regarding academic achievement and academic goal setting. For example, Chinese students often seek higher academic achievement not only for themselves but to please their parents and to honor their family (Rao et al., 2003; Zhang, Chan, et al., 2017). Like the link between parents'

academic achievement goals and parents' psychological control, there's also a positive relationship between parents' filial piety goals and psychological control (Luebbe et al., 2018).

Parents' Self-Development Goals in Context

According to Luebbe et al. (2018), Chinese parents' self-development goals in context include parents' self-developmental goals, collectivist goals, and academic achievement goals. These goals are held in regard to their children and improving their children's lives. Parents' self-development goals in context measure Chinese parents' perceptions on the importance of their children having enough experience in a new environment (Luebbe et al., 2018). Like filial piety goals, collectivist goals are also common and considered to be an important aspect of goals for Chinese parents. The dichotomous category of individualism and collectivism has been used to describe certain cultures, but in reality, it does not adequately capture all of the cultural aspects.

Chinese culture has been found to be less individualistic and more collectivistic compared to other European countries (Oyserman et al., 2002; Zhang et al., 2019). In a family context, one of the parent's child rearing goals is to let children be aware of their roles in a group, and to be able to interact and live with the world outside. In Western society, parenting goals often emphasize youth independence and uniqueness. However, in Eastern society, harmonious relationships with others and obedience to the rules are typically the more important parenting goals (Wang et al., 2007; Yu et al., 2018). Chinese parents will frequently emphasize and pressure their children into developing more interdependence among family members (Jing & Wan, 1997; Wu, 1996), thereby influencing the parent's manner of parenting style.

Parents' academic achievement goals are listed under two categories. Parents' academic achievement goals are mentioned under the major category of parents' self-development goals but are also listed under the major category of parents' achievement-oriented goals. This

differentiation indicates different aspects of parents' expectations for their youth's academic achievement goals (Luebbe et al., 2018). Under parents' achievement-oriented goals, parents value youth academic outcomes directly (e.g., "I want my child to compete with classmates"). Whereas under parents' self-development in context goals, parents value youth ability in achieving academic success indirectly (e.g., "I want my child to be aware of other people's expectations"; Luebbe et al., 2018). For parents' academic achievement goals under self-development goals in context, it includes parents' expectations for youth to exhibit adequate social adjustment to serve the purpose of eventually achieving academic success (Rao et al., 2003).

Compared to academic achievement goals, filial piety goals, and collectivist goals, self-development goals are less prioritized by Chinese parents (Chao, 2000). Self-development goals are more individualistic (Markus & Kitayama, 1991; Triandis, 2018). Parents who have more self-development goals tend to encourage children's self-expression, uniqueness, and adventurous activities (Chao, 2000; Triandis, 2018). In an independence-focused culture, such as in the United States, parents' self-development goals for children encourage autonomy and self-reliance that enhance children's personal development, including mental health (Keller et al., 2006). In an interdependence-focused culture, such as in China, parents' self-development goals aim to help children strengthen ties to group membership. In China, parenting embedded in this interdependence-focused culture, tends to facilitate children's acceptance of hierarchy in a family and group and prepares children to support and be supported by a group (Keller et al., 2006; Lansford et al., 2018). Modern-day China appears to have a mix of influence from both independence- and interdependence-focused countries, and Chinese parents therefore have both types of self-development goals for their children (Keller et al., 2006). In addition to the interdependence focused socialization goals (academic achievement goals, filial piety goals, and

collectivist goals), Chinese parents also want their children to attain *autonomous functioning* under harmonious relationships in a family (Cao et al., 2021; Keller et al., 2004). Therefore, parents' self-development goals cannot be left out when attempting to understand different types of parenting goals, and how these goals affect parenting practices in the Chinese context.

One research study investigated the relationships between parents' goals and parents' psychological control in Chinese high schools (Luebbe et al., 2018). Luebbe et al. (2018) found that the specific relationship between Chinese parents' self-development goals and parenting styles was not clearly indicated. Their study's data were collected from 247 students and the students' caregivers. Data indicated a positive relationship between psychological control and youth anxiety. Other variables included in the identified models that were categorized based on the type of school the student attended (key school or typical school) included parent goals (achievement-oriented goals, self-development in context goals, and interdependence-oriented socialization goals). The data indicated moderated indirect effects. For youth who attended typical schools, the youth of parents who endorsed higher levels of academic achievement goals and self-development in context goals self-reported higher levels of anxiety. However, this was not a direct effect, but was linked indirectly through higher levels of parental psychological control. Only parents' achievement-oriented goals for adolescents who attended key schools were related to youth anxiety indirectly through parental psychological control. Data from Luebbe et al.'s study (2018) indicated that parents' interdependence-oriented socialization goals were unrelated to either parents' psychological control or youth anxiety.

Types of Parenting and Parents' Responsiveness

As shown in previous research conducted in China, parents' psychological control is identified as a possible cause of youth anxiety (Chyung et al., 2022; Luebbe et al., 2014; Luebbe et al., 2018). Therefore, it is important to know what type of parenting would be helpful in

preventing or lessening anxiety in Chinese adolescents. Baumrind (1971) defined four types of parenting style, including authoritative, authoritarian, permissive, and negligent (refer to Maccoby & Martin, 1983). Authoritative parenting means parents have both high control (demandingness) and high responsiveness to their children. Authoritative parents intend for their children to follow parents' rules, but also value the parent-child relationship. Authoritarian parents hold a high level of control over their children and are less responsive to their children's emotional needs. They mostly emphasize, often harshly, following family rules and are less responsive to their children's emotional needs. Permissive parenting means parents hold minimal control over their children's behavior yet are highly responsive to their children's needs. Negligent parenting means parents have both low control over their children's behaviors and exhibit low responsiveness to their children's needs. These parents are typically unavailable, ignoring children's behavior and emotional needs.

The latter three parenting types are generally considered detrimental to children's psychological well-being, with the authoritative type regarded as the ideal form of parenting (Baumrind, 1968; Doepke & Zilibotti, 2017; Yang & Schaninger, 2010). Authoritative parenting allows parents to maintain an optimal distance between them and their children, which allows children to have autonomy that allows them to separate themselves from their parents, while at the same time providing children with a stable and secure attachment with their parents (Baumrind, 1991; Doepke & Zilibotti, 2017). Grusec (2011) also emphasized the importance for children to both experience supportive responses as well as some degree of control from parents, as a process of achieving socialization goals.

Baumrind (1989) distinguished both psychological control and behavioral control as the manner in which parents exert their demandingness over their children. Although previous research demonstrated excessive parental behavioral control often contributed to youth

externalizing disorders, and excessive parental psychological control contributed to youth internalizing disorders (Barber, 1996; Barber et al., 2005), this is an overly simplified view because parental responsiveness must also be factored into the dynamic. Parental responsiveness facilitates a stronger bonding between parents and children and with appropriate boundaries and rules (as in authoritative parenting) may mediate parent-child conflict and nurture children's social and emotional development (Li et al., 2010; Lu & Chang, 2013).

Parents who are responsive to their children tend to grant autonomy to adolescents' behaviors and opinions (Baumrind, 1991; Doepke & Zilibotti, 2017). From a developmental standpoint, the granted autonomy from parents would especially be helpful to adolescents. Adolescents often need some space to make their own judgments about their identities (Erikson, 1994; Murrell, 2017), instead of following the identities or rules consistently forced upon them by their parents.

As parental responsiveness is often mentioned in the literature together with parental warmth, some perceive these two concepts as one in the same (Baumrind, 1971; Peterson & Hann, 1999). According to definitions, parental responsiveness encompasses parental reactions when children display emotional and physical needs (Maccoby & Martin, 1983; Roberts & Strayer, 1987). Parents who have a high level of responsiveness tend to help and support their children when needed. For example, responsive parents would celebrate their youth's success. While parents who have a low level of responsiveness would show hostility and/or ignorance to their youth's accomplishments and autonomy seeking needs. Likewise, unresponsive parents might not accept a child's need for privacy.

Parental warmth is defined as a generally positive affection that is expressed toward youth either before or during times of need (Maccoby & Martin, 1983; Miller-Slough et al., 2018; Roberts & Strayer, 1987). Additionally, higher levels of parental warmth were associated

with children's adaptive and social functioning, such as positive affect regulation, better peer acceptance, and better social reciprocity (Bugental, 2000; Davidov & Grusec, 2006).

A lack of parental responsiveness is associated with children's overall psychological deficits and maladaptive internalizing symptoms (Clark & Ladd, 2000; Haverfield & Theiss, 2017; Peterson & Hann, 1999). Specifically, researchers also find that children with social anxiety experience a lower level of parental responsiveness compared to children without social anxiety (Hummel & Gross, 2001; Morris & Oosterhoff, 2016). Youth tolerance of anxiety symptoms and ability to adaptively cope with anxiety can be reinforced by frequent supportive interactions with their parents (Gottman et al., 1996; Hurrell et al., 2017). Therefore, increasing parents' responsiveness is one simple strategy to help children cope with anxiety and to counter the detrimental effects of anxiety.

When embedded in an individualistic culture, children may benefit more from authoritative parenting that supports autonomy, individuality, and self-assertion (Baumrind, 1971). For example, adolescents from Western societies may value individual power more than adolescents from Eastern cultures, such as China (Wang et al., 2007). Wang et al. (2007) found that autonomy-supportive parenting in general seems to support children's emotional functioning, but possibly more strongly in the United States than in China. However, researchers also find that across cultures adolescents have a desire for autonomy (Barber et al., 2005), that regardless of culture adolescents would benefit from parenting that supports autonomy seeking. Not every study shows significant differences between the United States and China in the effect of autonomy supportive parenting on youth emotional functioning (Cheung et al., 2016). Since there are mixed findings and parental responsiveness has not been tested directly among Chinese adolescents to determine its influence on their anxiety symptoms, this is an important area of study for future research.

Interrelationship of Children's Anxiety With Parents' Socialization Goals, Psychological Control, and Responsiveness

Recent research in China has shown indirect paths of influence between parents' achievement-oriented or self-development goals and youth anxiety, via parental psychological control (Luebbe et al., 2018). Our current study sought to replicate and extend the Luebbe et al. (2018) study with the same age group of students (11th grade) in two high schools in China (one key school and one typical school).

Parental responsiveness is often regarded as a positive parenting practice that grants more autonomy to youth and builds a trusting bond with them (Baumrind, 1971). It is often seen as a direct opposite dimension of parents' psychological control, which takes away youth autonomy (Barber, 1996). While previous research (Baumrind, 1971; Maccoby & Martin, 1983) mostly has focused on the separate categories of parental responsiveness and parental demandingness. However, the complexity of exactly how the effects of parents' psychological control combined with parental responsiveness contribute to youth anxiety remains unknown. Therefore, parental responsiveness will be analyzed in this study to consider its relationship with parental psychological control.

The indirect path between parents' achievement-oriented goals and self-development goals in context and youth anxiety, via parental responsiveness would inform current research hypotheses. As parents' supportive responses and control could be an important process for them to achieve socialization goals for their youth (Grusec, 2011), it is also helpful to test if parents' achievement-oriented goals and self-development goals in contexts would be achieved directly by providing more or less parental responsiveness. Higher parental responsiveness has been found to be related with lower anxiety symptoms (Pettit et al., 2001). Therefore, a direct path between parental responsiveness and youth anxiety was also tested in the current study.

Environmental Characteristics That May Impact Parenting and Children's Anxiety

In the following sections, environmental factors that affect parenting and children's anxiety are reviewed. Additionally, parent and child perceptions of these parenting characteristics are discussed. These environmental factors in a Chinese cultural context include children's school type (key vs. typical), family size (single-child vs. multiple-child), and perceptions of parenting characteristics from the youth's and parent's points of view.

School Type as Moderator of Parenting and Children's Anxiety

According to Bronfenbrenner's (1979) ecological systems theory, an individual will directly or indirectly interact with different layers of environmental systems surrounding them. Systems range from the immediate environment to the influence of the broader culture. School and parents are important sources of influence in a child's microsystem (the immediate environment). These parts of the microsystem frequently connect to each other and influence each other, described by Bronfenbrenner as *mesosystemic* influences.

For a high school student in China, there are two types of high schools for them to attend. Unlike the categorization of public vs. private high school in the United States, Chinese high schools are divided into *key* schools and *typical* schools. Key schools are known to set a higher entrance score than typical schools, and key schools usually have better education resources as well. As a result, students from key high schools have a better chance of enrolling in a better college compared to students from typical high schools. After middle school students rank their preference in high schools and take the standardized academic test (in their area). If they meet the minimum score of their ranked high school, they will be admitted by that high school. Each year the entrance score for each high school is based on the percentage of how many high school graduates enter the top college. Therefore, there is continuous competition between high schools. The pressure of getting better academic outcomes is generally passed from school teachers to

students and their parents. For students from key high schools, the higher expectations for their academic achievement also contributes to higher anxiety (Li & Prevatt, 2008).

Chinese parents with adolescents studying in different types of high schools would likely have different socialization goals. While students in a typical high school would likely aim for a college degree, students in key high school would be expected by their parents to enter a top university. Parents with higher expectations would also send their children to after-school classes in order to achieve more rigorous academic goals (Wu, 2008). Therefore, it is reasonable to assume that parents would have different socialization goals and parenting styles, depending on their expectations for their child's academic future. In addition, because all Chinese students are expected to strive for high achievement (Rao et al., 2003; Zhang, Chan, et al., 2017), it seems inevitable for students in key schools to experience increased anxiety due to increased academic expectations.

Luebbe et al.'s (2018) previous study found overlapping and different indirect paths for students in key and typical schools. Parents' achievement-oriented goals were found to lead to youth anxiety via parental psychological control in both key and typical schools. In contrast, parents' self-development in context goals directly affected youth anxiety, but only in key schools. Moreover, the same parental goal in typical schools influenced youth anxiety indirectly through parental psychological control. These findings support the hypothesis that school type is an important moderator. With parental responsiveness as a new mediator in our current study's model, it's reasonable to assume there will be varied indirect paths between parents' socialization goals and youth anxiety. For example, there may be a path from more achievement-oriented goals to less parental responsiveness, which may then heighten youth anxiety for key school students.

Family Size as Moderator of Parenting and Children's Anxiety

Since China set the one-child policy in the 1970s, many studies have focused on how one-child families differ from traditional Chinese family structure (multi-child families; Zhang, 2017; Qian, 2004). The one-child policy also created a lot of discussion around parenting practices for one child in a family. Some have argued that Chinese parents tend to overindulge their *singletons* (Liu et al., 2010), with greater responsiveness but lower behavioral control. Indeed, several studies have found that singletons often receive a higher level of parental responsiveness compared to children in non-singleton families, and less psychological distress has been shown in singletons (Liu et al., 2010). A singleton can command the full attention of parents, relative to divided attention for non-singletons. Chinese parents with one child may accordingly apply more authoritative than authoritarian parenting, due to their greater responsiveness (Lu & Chang, 2013). When there's only one child in a family, the parenting practices are often child-centered, and can be regarded as positive and warmth-oriented instead of control-oriented (Lu & Chang, 2013; Zhang, Wei, et al., 2017). It is also possible for parents to have more self-development goals for their children when only one child is in focus. Consistent with self-development goals, Chinese parents want their children to be unique and self-reliant (Chao, 2000), a goal which aligns more with individualistic culture than collectivist culture. However, the self-development goals in a one-child family also place more responsibility and burden on the child, in that they have to take care of elders once these singletons become self-reliant. In prior research, for Chinese high school students in *key* schools, these self-development goals directly led to higher levels of youth anxiety, without any evidence of mediation by parenting styles or strategies (Luebbe et al., 2018). It is unknown, however, whether in the prediction of child anxiety a one-child family would be different from families with more than one child in the interplay of parenting goals and styles.

Parent and Youth Perceptions of Parenting and Children's Anxiety

When researching topics related to parents' socialization goals, parenting styles, and youth anxiety, most studies have only assessed responses from the child (Dwairy et al., 2006; Lee et al., 2006; Luebbe et al., 2014). Although youth perceptions of their parents' socialization goals, parenting styles, and their own anxiety symptoms are the most direct way to understand the issue, parents' responses would help researchers and clinicians to have a broader picture of how their socialization goals and parenting are delivered and received.

Current Study

The current study builds on a previous study (Luebbe et al., 2018). The previous study identified connections between Chinese parents' achievement-oriented and self-development goals (for their children) and adolescent anxiety. Additionally, the previous study found that parental psychological control served as a mediating variable between parents' goals and youth anxiety (Luebbe et al., 2018).

Expanding on the Luebbe et al. (2018) study, in the current study we additionally considered youth perceptions of parental responsiveness to adolescents' distress and the family's size (one child or multiple children). For a model of how we anticipated these variables mediating or moderating youth anxiety, see Figures 1 and 2. Specifically, we ran multigroup structural equation modeling (SEM) models as seen in Figures 1 and 2 with two grouping variables, defined as (a) type of school: key school vs. typical school and (b) family size: single-child family vs. multiple-child family.

Figure 1

Type of School and Proposed Model Interpreting Pathways Among Parents' and Youths'

Responses

Key school vs. Typical school
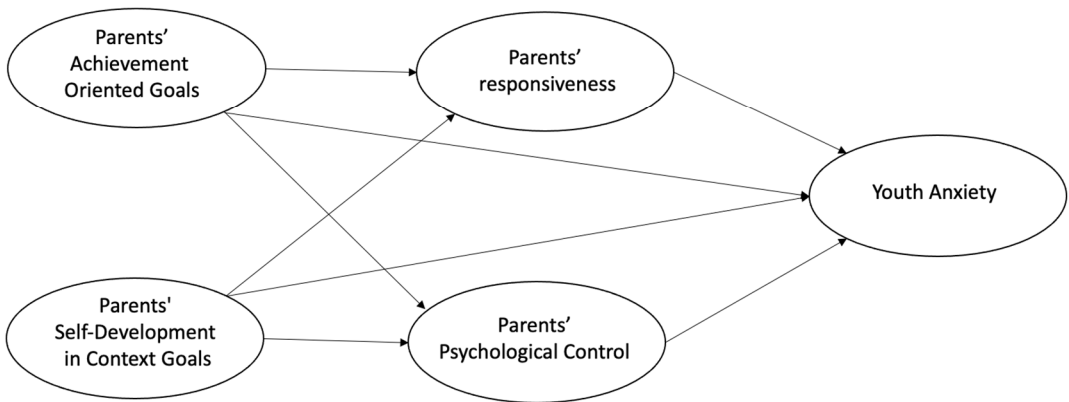
Figure 2

Single-Child and Multiple-Child Families and Proposed Model for Interpreting Pathways

Among Parents' and Youth Responses

Single-child family vs. Not single-child family
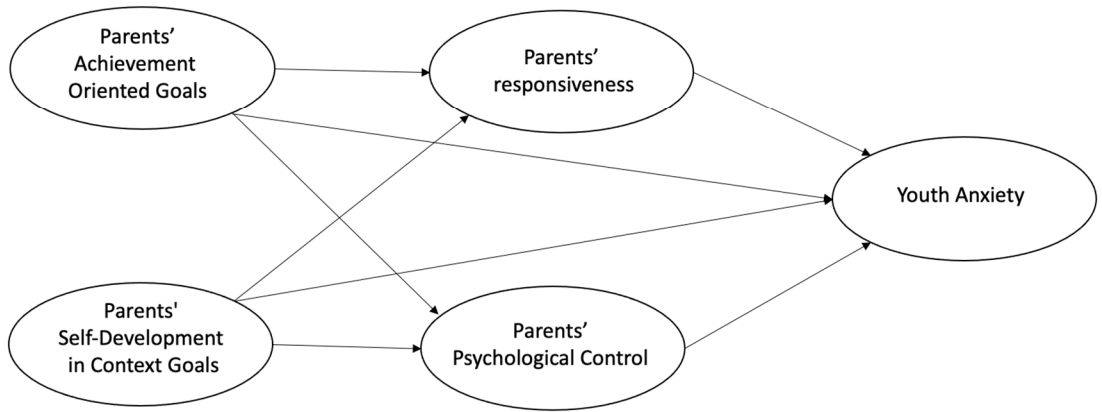
CHAPTER THREE

Method

Participants

The current study consisted of 1,044 participants (522 adolescents-parent dyads) from two high schools in an urban area of eastern China. In particular, the participants were 11th-grade students attending a required psychology class (offered as part of the student's class schedule) and one of their chosen primary caregivers. Students were invited to participate during their psychology class and paperwork was sent home to parents of students who elected to participate. Of those who volunteered to participate in the study and those who received parental permission to participate, data were collected from 522 students and 522 corresponding parents.

The adolescents were enrolled in the study from two different kinds of high schools. Specifically, 212 adolescents attended a typical high school, and 310 adolescents attended a key high school. Key high schools refer to schools that emphasize a competitive atmosphere and better academic outcomes; whereas vocational high schools (typical schools) refer to schools that are less academically competitive. In addition, the sample was composed of 169 male students and 340 female students, with an additional 13 students who did not identify their gender. Among identified caregivers, there were 274 mothers and 152 fathers who participated in the current study. In addition, 96 primary caregivers did not identify whether they were a mother or a father. The age range of students was from 15 to 18 years old ($M = 16.06$, $SD = .645$), and the age range of parents (primary caregiver) was from 23 to 65 years ($M = 42.99$, $SD = 4.375$). In regard to the number of children in the family, 332 parents reported having only one child in their family, and 100 parents had more than one child in their family. Regarding ethnicity,

98.08% of students reported themselves as Han, 1.901% identifying as Dong, and the remaining 0.019% identifying as Tujia.

Approval to use the existing data set from China was approved by the local school administrators and by Brigham Young University's Institutional Review Board (IRB). The IRB approval letter is included in Appendix A.

Measures

Demographic Information

Adolescents self-reported gender, age, and ethnic background. Parents (caregivers) self-reported gender, age, education level, relation to children, marital status, family income, and family size. School type was recorded by researchers. See Appendix B for the complete list of items.

Socialization Goals

There are four types of socialization goals being tested from both parents and youth report, including self-development goals, filial piety goals, collectivism goals, and academic achievement goals. According to the results of exploratory factor analysis for the previous research (Luebbe et al., 2018), these goals were separated and combined to two types of goals. One is achievement-oriented goals, and the other one is self-development in context goals. Although we hoped to narrow the items that measure the four socialization goals down to a subset of questions, we initially used the entire scale for each measure. After Luebbe et al.'s (2018) initial analysis that examined how different items loaded on each factor, the items loaded sufficiently on the factors of achievement-oriented goals and self-development in context goals. These two parents' goals were used in our study.

Achievement-Oriented Goals

The achievement-oriented goals measure achievement in general, an expectation that parents want their children to achieve. Achievement-oriented goals are composed of two questions about academic achievement goals (Rao et al., 2003) and two questions about respecting elders (filial piety goals; Chao, 2000). In the previous study (Luebbe et al., 2018), these four questions were clustered under the achievement-oriented goals.

Both parent and youth answered questions from academic achievement goals (six items) and filial piety goals (three items), responding on a five-point Likert scale. This scale offered response options ranging from 1, *not at all desired,* to 5, *very much desired*.

With Chinese parents, Cronbach's alpha for filial piety goals was .64 (Chao, 2000). Validity of filial piety goals scale has been tested by mothers (Chao, 2000) and college students' report to their parents (Li et al., 2010). The academic achievement goals in the original measure consisted of 21 items. For the 21 items, Cronbach's alpha was .75 (Rao et al., 2003).

From the previous study (Luebbe et al., 2018), these two measures were translated from English to Chinese, and then back into English. This back translation helped to ensure that the translation was sufficiently accurate (Brislin, 1980). Additionally, these measures have been used in studies conducted by researchers fluent in Chinese and familiar with Eastern culture. See Appendix C for the complete list of items that were included in this measure.

Self-Development in Context Goals

Self-Development in Context Goals measure the parents' expectations for their child's achievement, including parents' expectations on *being exposed to new people and places*, *developing interpersonal skills*, and on *the youth being unique* (Luebbe et al., 2018). Self-development in context goals are composed of two questions about self-development goals (Chao, 2000), one question about collectivist goals (Li et al., 2010), and three questions about

academic achievement goals (Rao et al., 2003). In the previous study (Luebbe et al., 2018), these six questions were clustered under the self-development in context goals.

Both parent and youth answered questions from self-development goals (four items) and collectivist goals (five items). Participants responded on a five-point Likert scale, with responses ranging from 1, *not at all desired,* to 5, *very much desired.* Cronbach's alpha for Self-Development Goals (four items) is .64 (Chao, 2000). Validity of self-development goals has been validated in previous research (Chao, 2000). The original collectivist goals consisted of five items (e.g., "I want my child to know the role he/she should play in a social group"). For five items, the Cronbach's alpha was .71 (Li et al., 2010). An *acceptable* level of validity for the collectivist goals was validated among Chinese young adults (Li et al., 2010; Luebbe et al., 2018). As previously noted, Cronbach's alpha for academic achievement goals (21 items) was .75 (Rao et al., 2003).

In the previous study by Luebbe et al. (2018), all of these three measures were translated from English to Chinese, and back translated to English. Back translation helped to ensure the accuracy of translation and that the measures would sufficiently communicate and elicit the intended information from participants (Brislin, 1980). See Appendix C for the complete list of items that were included in this measure.

Psychological Control

Barber (1996) developed the *Psychological Control Scale*. This scale was later adapted and translated for Chinese youth (Wang et al., 2007). This scale includes 18 items. These items are intended to assess several categories that describe parents' perceptions of their psychological control over their youth. For example, there are 10 questions under the category of *guilt induction* (e.g., "My parents tell me of all the sacrifices they have made for me."); there are five questions under the category of *love withdrawal* (e.g., "My parents tell me how disappointed

they are in me when I do not do things their way."); there are three questions under the category of *authority assertion* (e.g., "My parents answer my arguments by saying things like, 'You'll know better when you grow up.'"). These questions were originally created in youth self-report but were adapted to parents' self-report in the previous study (Luebbe et al., 2018). In other words, both youth and parents fill in these scales. Response options consist of a five-point Likert scale, ranging from 1, *not at all true,* to 5, *very true*. Strong reliability (Cronbach alphas) are reported for parents (*a*= .93) and youth (*a* = .93). See Appendix D for the complete list of items that were included in this measure.

Responsiveness

The *Parental Responsiveness Scale-Youth Self-Report* (PRS-Y; Paulson, 1994) was created together with the *Parental Demandingness Scale* for a two-dimensional paradigm. The *Parental Responsiveness Scale-Y* has 15 items with two categories. One is "granting autonomy" that allows youth to be self-reliant on the decisions they make (e.g., *My parents respect my opinion and encourage me to express it*.).

The other category in the *Parental Responsiveness Scale* is "contingent behavioral response and availability" (Bogenschneider et al., 1998). This category measures youth feelings of security about their parent-child relationship (e.g., "My parents expect me to tell them when I think a rule is unfair."). These questions are answered on a five-point Likert scale, ranging from 1, *strongly disagree*, to 5, *strongly agree*.

Cronbach's alpha for Chinese father's report is .85; Cronbach's alpha for Chinese mother's report is .75 (Yang et al., 2014). Yang et al. (2014) also described the *Parental Responsiveness Scale* as having sufficient convergent and discriminant validities. The *Parental Responsiveness Scale* has been validated in two independent Chinese samples (Yang et al., 2014).

This PRS-Y was translated into Chinese and was used in the previous study by Yang et al. (2014). This measure was requested from the author, who gave permission for its use. The original version of the translated scale is a youth-self-report. For the current study, this youth scale was rephrased and adapted into a parallel version, the parents' self-report of the *Parental Responsiveness Scale-Parent Self-Report* (PRS-P). The parents' version reflects the parents' perception of their responsiveness to their children. An example of how the PRS-P was created from the PRS-Y is offered: "My parents often spend time to chat with me" (PRS-Y); "I often spend time to chat with my child" (PRS-P). See Appendix E for the complete list of items that were included in this measure.

Youth Anxiety

The *Revised Child Anxiety and Depression Scale* (RCADS) was originally developed for youth and was used in the current study to assess anxiety symptoms among youth (Chorpita et al., 2000) and to gather information about parents' perceptions of youth anxiety. RCADS was adapted from the *Spence Children's Anxiety Scale* (SCAS; Spence, 1997, 1998).

The original SCAS had 56 items in total. The original version of RCADS slightly modified the original SCAS items and reduced the number of items to 47. The RCADS subscales are based on DSM-IV diagnoses of Separation Anxiety Disorder, Social Phobia, Generalized Anxiety Disorder, Agoraphobia, Obsessive and Compulsive Disorder, and Major Depressive Disorder. Since Major Depressive Disorder is not a topic of concern in the current study, 10 items related to Major Depressive Disorder were removed from the original scale. Ultimately, a total of 37 items were administered. On the 37-item RCADS, youth rated their perceived anxiety using the following four response options: *Never* (0), *Sometimes* (1), *Often* (2), *or Always* (3). Higher scores indicate higher levels of anxiety. Potential sum of raw scores ranges from 0 to 111. A total mean of the sum of raw scores ranges from 0 to 3.

A parents' report was also adapted from the youth RCADS instrument to give an estimate of parents' perceptions of their child's anxiety. The RCADS was previously translated into Chinese and has been used in several prior studies that involved youth and parent reports (Law & Wolpert, 2014; Lu et al., 2021).

Based on data collected by Chorpita et al. (2000), the data gathered from students attending 13 public and private schools in Hawaii, Cronbach's alpha for RCADS is .93. Data were analyzed and reported to demonstrate good structural, convergent, and discriminant validity (Chorpita et al., 2000). See Appendix F for the complete list of items that were included in this measure.

Procedure

Procedures for the current study was approved by Brigham Young University Institutional Review Board for Human Subjects. Principals of two high schools in Eastern China were approached. They provided the consent forms to permit current study to occur, and to waive parents' consent forms for their youth to participate in this study. Twelve classes of 10th grade students were randomly chosen to participate. School type was marked on all of the surveys. Due to the pandemic, instead of a researcher coming to each class to deliver the survey and assent forms, two psychology teachers from each school collected the data. Therefore, the current study used previously collected data with permission from two school principals. All of the data have been de-identified prior to being received for data analysis. In the current study, 1,044 individuals were recruited. This included 522 students and the associated 522 parents (one selected parent per participating student, either the mother or the father), making 522 student-parent dyads.

Data Analysis

With the data we have, we used SPSS to analyze and describe the data with descriptive statistics. Incomplete data was still used for data analysis. Our research question is an inferential question and includes parents' and youth demographic data. We made histograms for each item to ensure all of the data, except demographics and RCADS, will be continuous. We checked the distribution of the data to see if it's normal or skewed. This has been repeated for both parents' reports and youth reports.

Confirmatory factor analysis (CFA) was then run in MPLUS to establish the psychometric properties (reliability, model fit) of each of the latent variables of interest (parent academic achievement goals, parents' responsiveness, parents' psychological control, and youth anxiety). In terms of the fit statistics, RMSEA should be less than .08, CFI should be more than .9, TLI should be more than .9, and SRMR should be less than .08 to be regarded as a good model of fit (Wang & Wang, 2019). If model fit was not achieved, an EFA was run.

Finally, a structural equation modeling (SEM) approach examined how parents' achievement-oriented goals factor/parents' self-development goals in context associates with youth anxiety factor via parents' psychological control factor and parents' responsiveness factor. To analyze the moderation effects of key vs. typical school, single-child family vs. multiple-child family, multi-group modeling approach was used to see the differences of the association between the latent constructs across the groups (Figures 1 and 2 are shown below to demonstrate different models under groups). Correlation tables of the latent variables were checked, and high correlation between parents' achievement goals and parents' self-development in context goals was found. therefore, parents' achievement goals and parents' self-development in context goals were needed to be combined into parents' achievement goals and self-development goals. In order to do multi-group modeling, assumptions of measurement invariance were checked across

groups. Delta CFI was calculated from the configural, metric, and scalar CFI of each measurement. In order to meet measurement invariance, Delta CFI has to be greater than -.01(Chen, 2007). All of the measurement invariance across groups were met, except for parents' achievement goals and self-development goals (key vs. typical). We attempted to delete item 4(PACH4) from parents' achievement goals and self-development goals and were not able to achieve measurement invariance for parents' achievement goals and self-development goals across the key and typical school.

Therefore, we analyzed the groups separately and cannot compare results between groups. The assumptions of structural equation modeling of linearity, equality of variance, normality, multicollinearity, independence, and outliers were checked.

CHAPTER FOUR

Results

Descriptive Statistics and Correlations

Means and standard deviations of demographic variables are presented in Table 1. Three hundred and eighty-eight (90.7%) of primary caregivers identified as the participating adolescent's biological parent, 28 (6.5%) identified as a stepparent, and 6 (1.1%) identified as a foster parent. In regard to the highest level of completed education, 122 (28.3%) primary caregivers reported having less than a high school education, 85 (19.7%) reported earning a high school degree, 104 (24.1%) reported having some college education, 107 (24.8%) reported earning a college degree, and 13 (3%) reported earning a graduate school degree. In regard to annual household income, 70 (16.7%) primary caregivers reported earning less than 50,000CNY ($7,855 US dollars), 118 (28.2%) reported earning between 51,000 CNY ($8,012 US dollars) and 100,000CNY ($15,710 US dollars), 78 (18.7%) reported earning between 110,000CNY ($12,281 US dollars) and 150,000CNY ($23,565 US dollars), 62 (14.8%) reported earning between 151,000CNY ($23,722 US dollars) and 250,000CNY ($39,275 US dollars), and 90 (21.5%) reported earning over 250,000CNY ($39, 275 US dollars).

Among participating youth, 72.9% ($n = 314$) reported living in households with no cohabitating grandparents, 27.1% ($n = 117$) reported living in households with one or more cohabitating grandparents. Participating youth also reported whether or not their family included siblings: 76.9% ($n = 332$) reported not having siblings and 23.1% ($n = 100$) reported having one or more siblings. Of the two types of schools included in this study, 212 students (40.6%) reported attending a typical high school and 310 (50.4%) attended a key school.

Range of the means of indicators ranged from 0.43-1.71 for RCADS (0 to 3-point scale), and

1.77-4.00 for all other indicators (5-point Likert scale). *SDs* ranged from 0.62-1.01 for RCADS

(0 to 3-point scale), and 0.84-1.53 for all other indicators (5-point Likert scale), and missing data

ranged from (0.2% - 18.4%). Missing data were typically noted in the parent-reported data,

specifically more from the key school group.

Table 1

Demographics of Participating Youth and Parents of Youth

	N	Range	Mean	SD	Percent missing	Skewness	Kurtosis
Youth age (Youth reported)	521	15–18	16.06	0.645	0.2%	.376	1.028
Parent age (Parent reported)	423	16–65	42.87	4.729	19%	.505	8.712
Number of siblings in family (Parent reported)	432	0–2	0.26	0.492	17.2%	1.744	1.638
Number of grandparents (Parent reported)	431	0–2	0.46	0.788	17.4%	1.087	-0.620
In addition to the youth and parent, number of other family members living in household (Parent reported)	434	0–6	1.1	1.234	16.9%	1.230	1.241

Since there was a strong correlation ($r = 0.975$, $p < 0.001$) between parents' reported self-development in context goals and parents' reported achievement-oriented goals, discriminant validity cannot be met between these two constructs. Because of this high correlation, parents' reported self-development in context goals were then combined with parents' reported achievement-oriented goals into a single construct. The new construct was identified as parents' achievement and self-development goals. Correlations of the latent variables are displayed in Table 2. Youth reported psychological control was positively correlated with youth reported Anxiety ($r = 0.377$, $p < 0.001$).

Table 2

Correlation Table of Latent Variables for Multigroup SEM Analyses ($N = 522$)

	1	2	3	4
1. Achievement and self-development goals (parents)	—			
2. Psychological control (youth)	0.066	—		
3. Responsiveness (youth)	0.051	0.003	—	
4. Anxiety (youth)	0.044	0.377***	-0.039	—

Note. "Parents" in parenthesis indicates parents' report, and "youth" in parenthesis indicates youth report.

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

Preliminary Analyses

Prior to running the multigroup SEM models, the confirmatory factor analysis (CFA) was run for each individual instrument. Measurement invariance (Wang & Wang, 2019) was also tested for all of the instruments across groups (key vs. typical school; single-child family vs. multiple-child family), to ensure the same model structure and factor loadings were being measured across different groups. As a process to test measurement invariance, a model with

constant factor loadings across groups was compared to a model with freely estimated factor loadings. Measurement invariance is met when the constrained model does not fit significantly worse than the freely estimated model. That is determined according to Wang and Wang (2019), by the cutoff of Delta -.01 of the CFI between freely estimated and constrained models. This testing was repeated for all of the instruments across two groups (key vs. typical school; single-child family vs. multiple-child family) that were included in the final multigroup SEM models.

Parents' Reported Achievement and Self-Development Goal

Due to high correlation between parents' reported self-development in context goals and parents' reported achievement-oriented goals ($r = .978$), in order to meet discriminant validity, we combined these two measures to create Parents' reported Achievement and Self-Development Goal as a single measure. The newly formed Parents' reported Achievement and Self-Development Goal includes eight items. Fit statistics (RMSEA = 0.077, CFI/TLI= 0.948/0.909, SRMR = 0.046) met the cutoff (Wang & Wang, 2019) for CFA to proceed with further analyses, after correlating residual errors of the following items: PACHG 5 ("I want my child to be very unique and be his/her own individual") and PACHG 6 ("I want my child to be good at exploring and adventuring"); PACHG 3 ("I want my child to meet people from other cultures") and PACHG 13 ("I want my child to be the top student"); PACHG 16 ("I want my child to know the role he/she should play in a social group") and PACHG 13 ("I want my child to be the top student"); and PACHG 16 ("I want my child to know the role he/she should play in a social group") and PACHG 10 ("I want my child to achieve academic success"). Typically, to achieve good fit statistics, one to two correlations of residual errors are more common for an instrument, instead of four correlations that were identified in the current study. This is an

unusually high number of correlations of residual errors and may reflect the need to further refine this construct.

For measurement invariance across (a) key vs. non key school and (b) single-child family vs. multiple-child family, delta CFI was more than -.01 (Wang & Wang, 2019) for key vs. non key school, and less than -.01 for single-child family vs. multiple-child family. Item deletion was attempted to resolve the measurement invariance issue, but even with these efforts, the desired cutoff was not met. Therefore, parents' reported achievement and self-development goals could not be used to compare between group results for multigroup SEM model analyses.

CFA models of current instruments for key school (RMSEA = 0.108, CFI/TLI= 0.905/0.834, SRMR = 0.060), non key school groups (RMSEA = 0.032, CFI/TLI = 0.990/0.983, SRMR = 0.042), single-child family (RMSEA = 0.080, CFI/TLI = 0.946/0.905, SRMR = 0.048), and multiple-child family (RMSEA = 0.012, CFI/TLI= 0.998/0.997, SRMR = 0.053) were displayed and listed in Figure 3. Cronbach's alpha, standardized factor loadings, and corresponding items were also included in Figure 3.

Youth Reported Parents' Psychological Control

Similar to the previous studies and the hypothesized model, 18 items were included under the latent variable of youth reported parents' psychological control. Fit statistics (RMSEA = 0.076, CFI= 0.909, SRMR = 0.051) met the cutoff (Wang & Wang, 2019) for CFA to proceed with further analyses, after correlating residual errors of YPSYCH 1 ("I feel that my parents tell me about all the things they have done for me") and YPSYCH 2 ("My parents say, if I really cared for them, I would not do things that cause them to worry"); YPSYCH 17 ("My parents say, when I grow up, I will appreciate all the decisions they make for me"), and YPSYCH 18 ("My parents answer my arguments by saying things like, 'You'll know better when you grow up'"); YPSYCH 16 ("My parents tell me that what they want me to do is the best for me and I should

not question it") and YPSYCH 17 ("My parents say, when I grow up, I will appreciate all the

decision they make for me"). For measurement invariance across (a) key vs. non key school and

(b) single child family vs. multiple-child family, delta CFI was less than -.01.

Figure 3

Cronbach's Alpha, Standardized Factor Loadings, and Corresponding Items
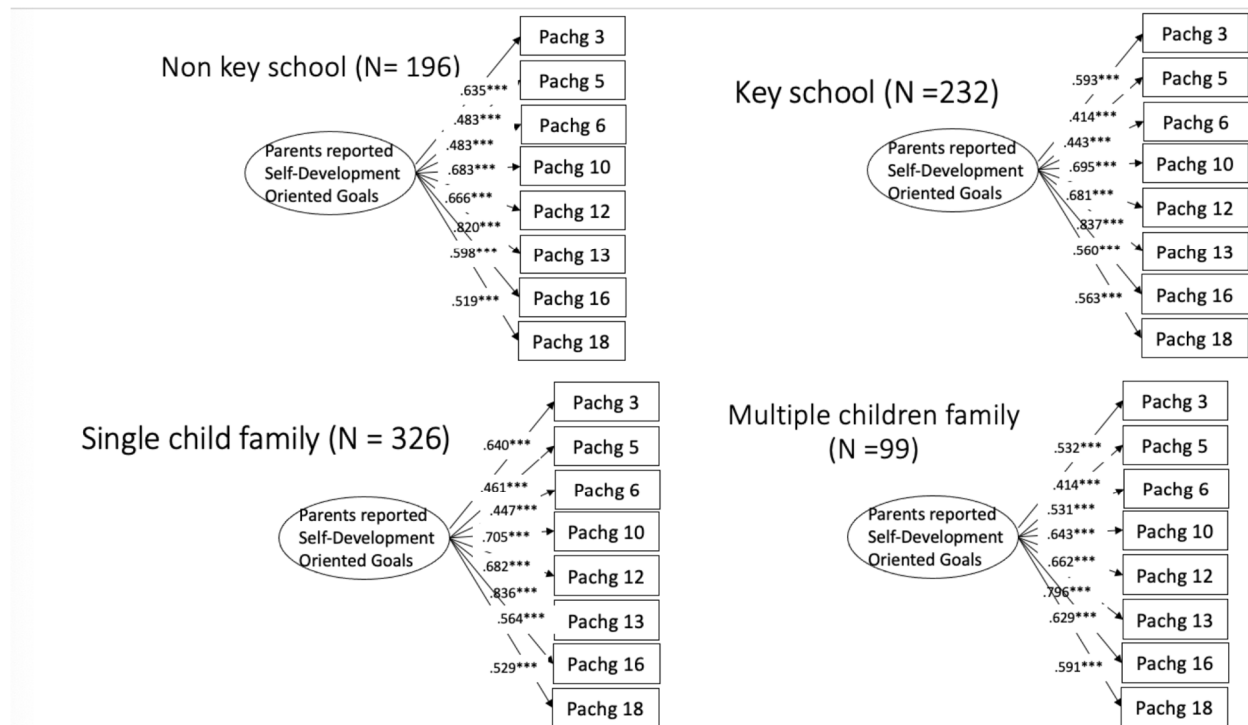
*Cronbach's alpha is 0.821(single-child family); 0.815(multiple-child family); 0.822(non key school); 0.814 (key school). All factor loadings are standardized.
*** .001 level of statistical significance.
PACHG 3: I want my child to meet people from other cultures.
PACHG 5: I want my child to be very unique and be his/her own individual.
PACHG 6: I want my child to be good at exploring and adventuring.
PACHG 10: I want my child to achieve academic success.
PACHG 12: I want my child to compete with classmates.
PACHG 13: I want my child to be the top student.
PACHG 16: I want my child to know the role he/she should play in a social group.
PACHG 17: I want my child to become involved in non-academic activities at school.
PACHG 18: I want my child to be aware of other people's expectations.

Therefore, youth reported parents' psychological control can be used to compare between

results for multigroup SEM model analyses. Cronbach's alpha, standardized factor loadings, and

corresponding items were included in Figure 4.

Youth Reported Parents' Responsiveness

Youth reported parents' responsiveness was a newly added variable, and an Exploratory Factor Analysis (EFA) has suggested a one factor model according to the scree plot. Fit statistics of the CFA one factor model met the cutoffs (RMSEA = 0.062, CFI/TLI= 0.918/0.904, SRMR = 0.047). For measurement invariance across (a) key vs. non key school and (b) single-child family vs. multiple-child family, delta CFI was less than -.01. Therefore, youth reported parents' psychological control can be used to compare between results for multigroup SEM model analyses. Cronbach's alpha, standardized factor loadings, and corresponding items were included in Figure 5.

Figure 4

Youth Reported Parents' Psychological Control (18 items)
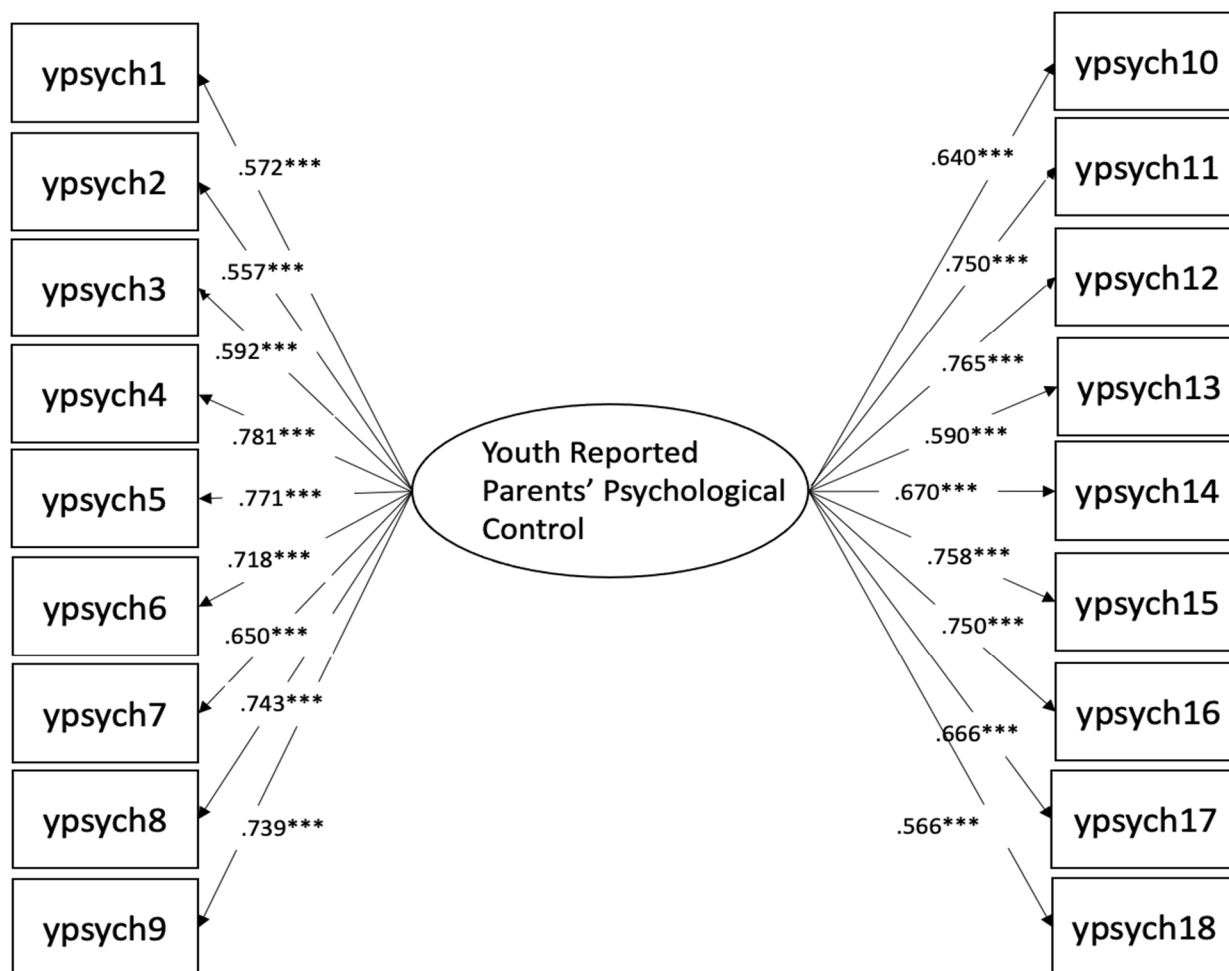
*Cronbach's alpha is 0.942. All factor loadings are standardized.

*** .001 level of statistical significance.

See Appendix D: Children's Report.

Figure 5

Youth Reported Parents' Responsiveness (15 items)
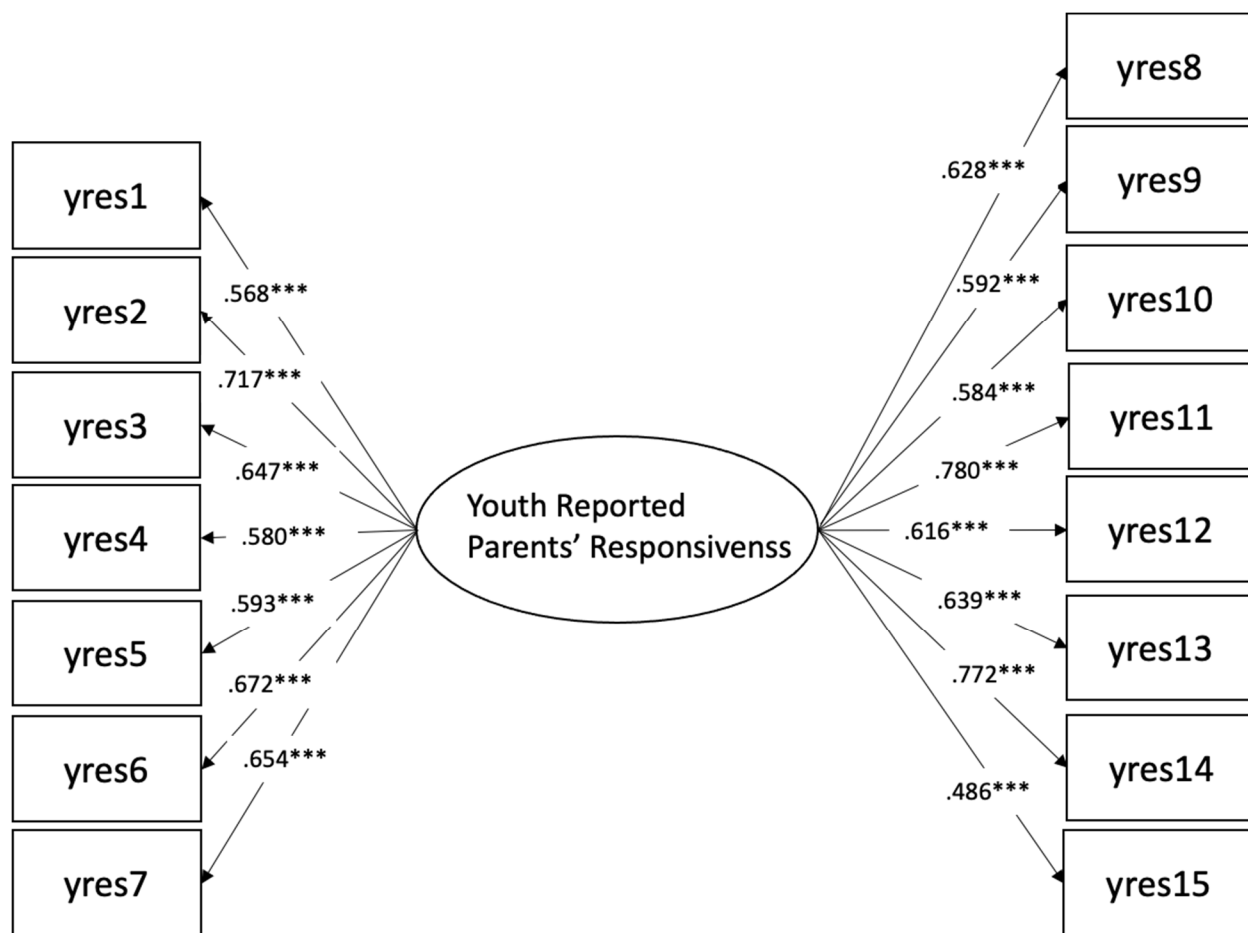
*Cronbach's alpha is 0.914. All factor loadings are standardized.

*** .001 level of statistical significance.

See Appendix E, Children's Report.

Youth Reported Anxiety

Similar to the previous study and hypothesized model, 37 items were included under one latent variable of youth reported anxiety initially. Fit statistics (RMSEA = 0.057, CFI/TLI= 0.837/0.826, SRMR = 0.059) did not meet the cutoff for CFA to proceed with further analyses, even after correlating several residual errors and various item deletions. Thus, item parceling

(Wang & Wang, 2019) was then used based on previously defined subscales: Social Phobia (nine items), Panic Disorder (nine items), Separation Anxiety (seven items), Generalized Anxiety (six items), Obsessive Compulsive Disorder (six items). Fit statistics (RMSEA = 0.071, CFI/TLI= 0.987/0.975, SRMR = 0.020) met the cutoffs (Wang & Wang, 2019) for the models with the parcels.

For measurement invariance across (a) key vs. typical school and (b) single-child family vs. multiple-child family, delta CFI was less than -.01. Therefore, youth reported Anxiety can be used to compare between results for multigroup SEM model analyses. Cronbach's alpha, standardized factor loadings, and corresponding items are included in Figure 6.

Figure 6

Revised Child Anxiety and Depression Scale (RCADS)
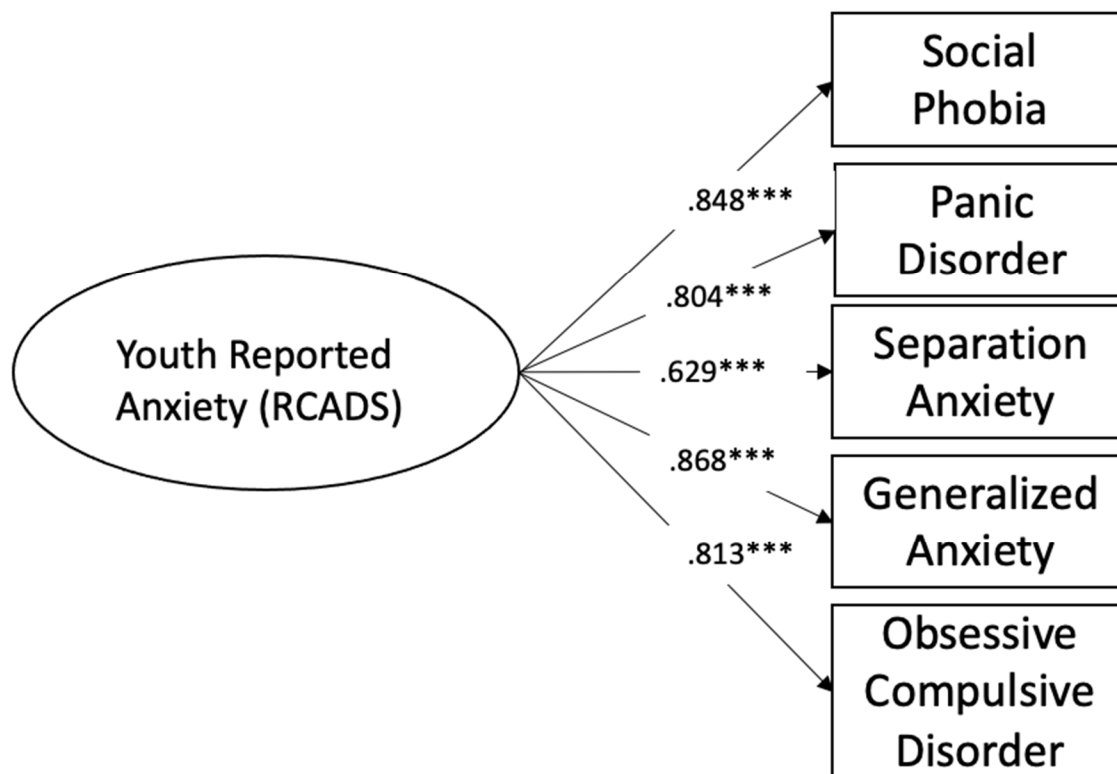
*Cronbach's alpha is 0.947. All factor loadings are standardized.
*** .001 level of statistical significance.

Figure 6 continued…

Social phobia:
3. I worry when I think I have done poorly at something.
5. I feel scared when I have to take a test.
6. I feel worried when I think someone is angry with me.
9. I worry that I will do badly at my school work.
15. I worry I might look foolish.
22. I worry about making mistakes.
24. I worry what other people think of me.
30. I feel afraid if I have to talk in front of my class.
34. I feel afraid that I will make a fool of myself in front of people.

Panic disorder:
2. When I have a problem, I get a funny feeling in my stomach.
11. I suddenly feel as if I can't breathe when there is no reason for this.
18. When I have a problem, my heart beats really fast.
19. I suddenly start to tremble or shake when there is no reason.
21. When I have a problem, I feel shaky.
26. All of a sudden I feel really scared for no reason at all.
28. I suddenly become dizzy or faint when there is no reason for this.
31. My heart suddenly starts to beat too quickly for no reason.
32. I worry that I will suddenly get a scared feeling when there is nothing to be afraid of.

Separation anxiety:
4. I would feel afraid of being on my own at home.
7. I worry about being away from my parents.
13. I feel scared if I have to sleep on my own.
14. I have trouble going to school in the mornings because I feel nervous or afraid.
25. I am afraid of being in crowded places (like shopping centers, the movies, buses, busy playgrounds).
36. I worry when I go to bed at night.
37. I would feel scared if I had to stay away from home overnight.

Generalized Anxiety:
1. I worry about things.
10. I worry that something awful will happen to someone in my family.
16. I worry that bad things will happen to me.
20. I worry that something bad will happen to me.
27. I worry about what is going to happen.
29. I think about death.

Obsessive-Compulsive:
8. I get bothered by bad or silly thoughts or pictures in my mind.
12. I have to keep checking that I have done things right (like the switch is off, or the door is locked).
17. I can't seem to get bad or silly thoughts out of my head.
23. I have to think of special thoughts (like numbers or words) to stop bad things from happening.
33. I have to do some things over and over again (like washing my hands, cleaning or putting things in a certain order).
35. I have to do some things in just the right way to stop bad things from happening.

Structural Equation Modeling Analyses

As measurement invariance criteria were not met for Parents' reported Achievement and Parents' reported self-development goals across two groups of school types (typical and key) and family size (single-child and multiple-child families), multigroup SEM results could not be interpreted and compared across groups. Therefore, each model was run and listed separately. Because we did not have measurement invariance for the construct across the groups of the key school and the non key school, in the SEM we looked at four separate permutations: (a) typical school and single-child family, (b) typical school and multiple-child family, (c) key school and single-child family, and (d) key school and multiple-child family. Direct and indirect paths and levels of significance are displayed in Figures 7, 8, 9, and 10.

Typical School and Single-Child Model

Youth reported parents' psychological control is positively related to youth anxiety for youth from a typical school and living in a single-child home living with other siblings ($\beta = 0.388$, $p<.001$). Therefore, for each standard deviation ($SD=1$) increase in youth reported psychological control, there is a 0.388 standard deviation increase in youth reported anxiety for children from the typical school and living in a single-child family ($p< .001$). There is also a marginally significant effect from parents' reported achievement and self-development goals on youth reported responsiveness ($\beta = 0.169$, $p=.053$). None of the other paths (including indirect paths) were significant as seen in Figure 7.

Typical School and Multiple-Child Model

There are no paths (including all direct and indirect paths) that are considered significant. See the path analysis in Figure 8.

Key School and Single-Child Model

Youth reported parents' psychological control is positively related to youth anxiety for youth from a key school and living in a single-child home ($\beta = 0.453$, $p<.001$). Therefore, for each standard deviation ($SD=1$) increase in youth reported psychological control, there is a 0.453 standard deviation increase in youth reported Anxiety for youth from the typical school and living in a single-child home ($p< .001$). None of the other paths (including indirect paths) were significant as indicated in Figure 9.

Key School and Multiple-Child Model

Youth reported parents' psychological control is positively related to youth anxiety for youth attending a key school and living in a multiple-child home ($\beta = 0.595$, $p<.001$). To place this path in context, for youth from the key school and multiple-child family ($p< .001$) for each standard deviation ($SD=1$) increase in youth reported psychological control, there is an associated 0.595 standard deviation increase in youth reported anxiety. This path is 0.142 higher than the corresponding path in the key school and single-child families. None of the other paths (including indirect paths) were significant as seen in Figure 10.

Figure 7

Typical School and Single-Child Model

Typical school and single children

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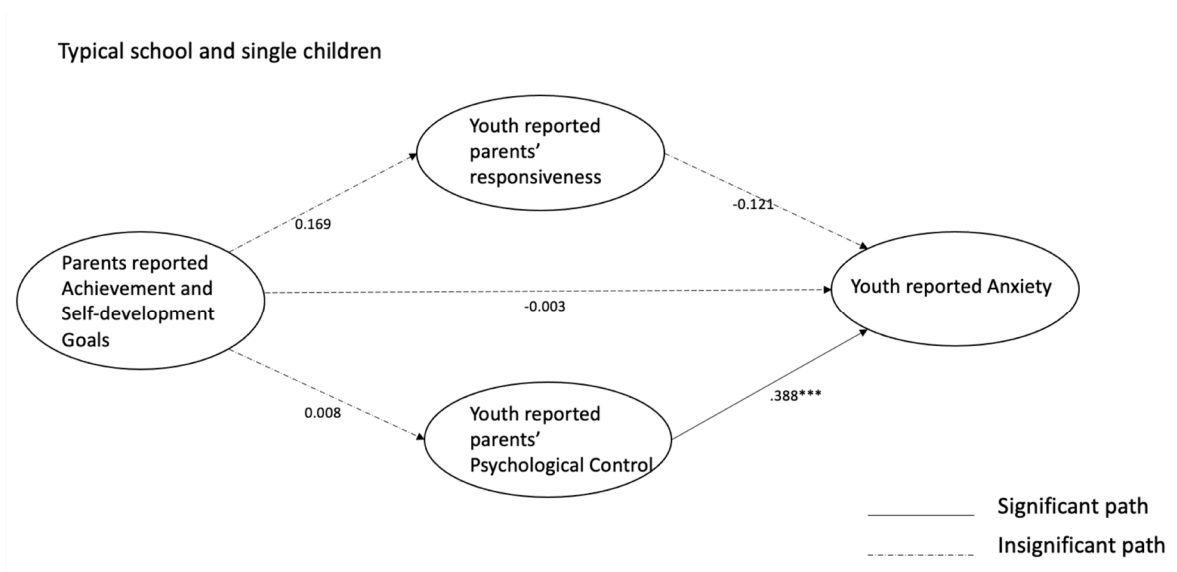
.05, **p < .01, *** p < .001

Figure 8

Typical School and Multiple-Child Model

Typical school and multiple children
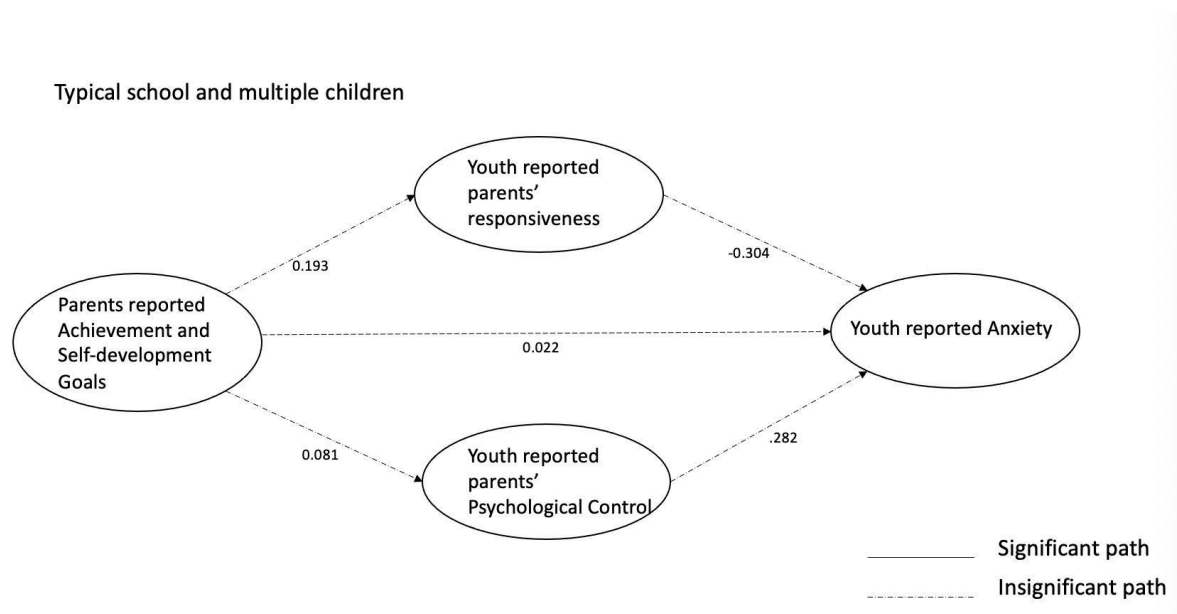
*p < .05, **p < .01, *** p < .001

Figure 9

Key School and Single-Child Model

Key school and single child
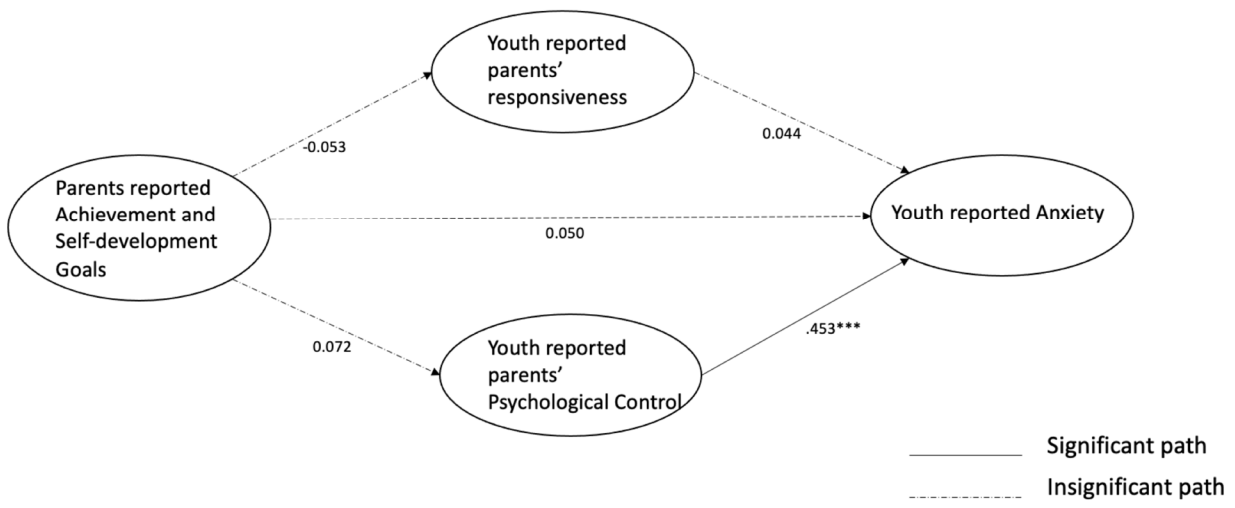
*p < .05, **p < .01, *** p < .001

Figure 10

Key School and Multiple-Child Family

Key school and multiple child
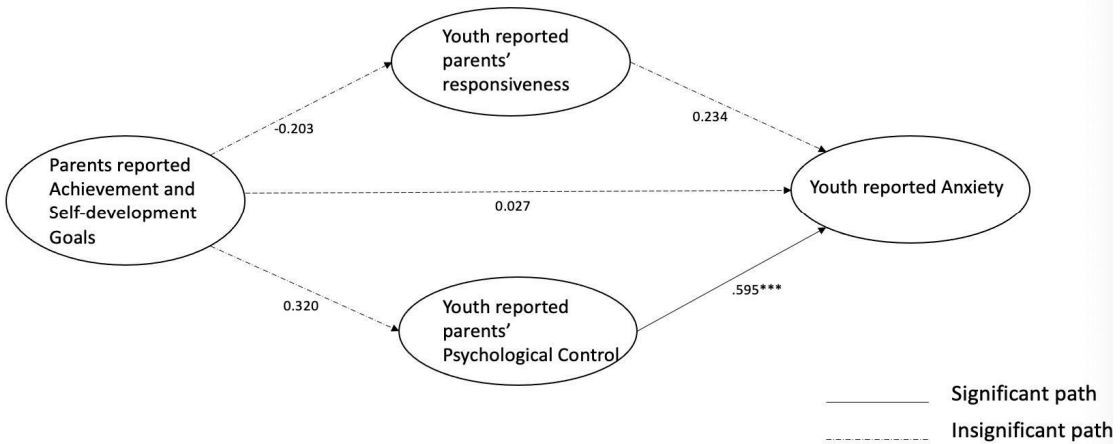
*p < .05, **p < .01, *** p < .001

CHAPTER FIVE

Discussion

This study involves 1,044 participants in Mainland China (522 student-parent dyads). The purpose of the study is to investigate the mediating relationship of parents' achievement-oriented goals (for their children) and self-development goals (for their children) on youth anxiety, while taking parents' psychological control and parents' responsiveness into account as other mediating factors. The current study also included school types (key school or typical school) and family composition (single-child or multiple-child) as moderators to youth anxiety.

In general, we found two major findings: (a) positive relationships between parents' psychological control and youth anxiety when youth attended the typical school and lived in a single-child family, and in the key school, regardless of family types (single-child or multiple child family); and (b) a marginally significant ($p = 0.053$) relationship between parents' reported achievement and self-development goals and youth reported parents' responsiveness. Due to the high correlations of parents' achievement-oriented goals and parents' self-development goals ($r = 0.975, p < 0.001$), we combined and created one new variable—parents' achievement and self-development goals. Therefore, in the final multigroup SEM analyses we used this new variable in place of the previously hypothesized two variables. However, in the SEM analysis, this newly created variable only had one pathway that approached significance (see Figure 7). In this model (Typical School and Single-Child Model), this variable predicted youth reported parents' responsiveness. Due to constricting limitations in the data, we were limited in only being able to make comparisons between single-child and multiple-child families, not between the two types of schools.

Indirect Effect Across Groups

Because of data limitations, we were not able to replicate prior research findings (Luebbe et al., 2018). We did not find *indirect* positive paths of parents' achievement-oriented goals on youth anxiety through psychological control for youth attending key and typical schools, without considering the moderator of family composition (single-child vs. multiple-child family). We also did not find the indirect positive path of parents' self-development goals on youth anxiety through psychological control in the typical school, without considering the moderator of family composition (single-child vs. multiple-child family).

However, instead of indirect positive paths, we found part of the hypothesized relationships from parents' psychological control on youth anxiety across certain groups that included students attending the key school—regardless of family composition. In the youth who attended the typical school, we only found this hypothesized relationship for those who lived in a single-child family.

Additionally, for the path between parents' psychological control and youth anxiety, we did not find a significant path for the youth that attended the typical school and were from a multiple-child family. In addition to that, we also found a marginally significant effect of parents' achievement and self-development goals on parents' responsiveness ($p = 0.053$).

Due to construct limitations, parents' reported achievement-oriented goals and parents' reported self-development goals could not be tested separately to determine the potential associations with parents' responsiveness, parents' psychological control, and youth anxiety. Analysis of parents' reported achievement-oriented goals and parents' reported self-development goals indicated no significant path with parents' responsiveness, parents' psychological control, and youth anxiety. Two previous studies did not investigate pathways to parent responsiveness (Luebbe et al., 2018; Zhou et al., 2021).

Investigation of Direct Paths From Parental Goals to Parenting Styles

Due to the current study's combination of the two parent goal variables, the multi-group SEM analyses were altered from the originally proposed models. The current study's data analyses did not replicate a relationship between parents' goals (parents' reported achievement-oriented and self-development goals) on parents' responsiveness and/or parents' psychological control. However, in the group of single-child families in the typical school, we found a marginally significant ($p = 0.053$) relationship between (a) parents' reported achievement and self-development goals and (b) parents' responsiveness. However, if the sample size were larger, there may be a statistically significant relationship between these variables.

Zhou et al. (2021) suggested that stronger endorsement of parents' self-development in context goals, which was identified in the current study as one of the pieces in the combined parents' achievement and parents' self-development goals, would likely increase parenting style that supports children's autonomy. The same association is not significant in other groups. Since research studies that have focused on the intensity of Chinese parents' goals/expectations for their children and the relationship of these goals to parents' responsiveness and psychological control are scarce in previous literature, future exploration of these relationships is needed (Zhou et al., 2021).

Investigation of Direct Paths From Parenting Styles to Youth Anxiety

The strong relationship between parental psychological control and youth anxiety has been replicated in previous research (Barber, 1996; Barber et al., 2005; Luebbe et al., 2018; Xu et al., 2020) and in the current study. However, in the current study we did not find this association for the youth attending the typical school and who were from a multiple-child family. The current research reiterated that parents' psychological control is a strong predictor of Chinese youth anxiety. When comparing youth attending the key school, there is a stronger

association between parents' psychological control and youth anxiety for youth living in a multiple-child home. This suggests that youth attending the key school and living in a multiple-child home report experiencing higher levels of anxiety when compared to youth attending the key school and living in a single-child home. Regarding elevated anxiety, this emphasizes the importance of recognizing the potential negative influence of siblings in a Chinese family. Hafford (2010) defined sibling caretaking as the transfer of parental authority and responsibilities over younger children to older siblings. Additionally, siblings' influence can be bidirectional and reciprocal among siblings (Kramer & Hamilton, 2019). In some situations, siblings may assume more power than their parents would prefer (McHale et al., 2012) and incorporate highly controlling behaviors towards siblings when that authority has not been granted by primary caregivers (Kramer & Hamilton, 2019). Therefore, in addition to parental control, the controlling and negative behavior among siblings can possibly contribute to heightened anxiety.

However, the insignificant ($p = 0.157$) connection between parents' psychological control and youth anxiety in the group of typical school and multiple-child model suggested the exceptional case, that parents' psychological control does not lead to youth anxiety when youth attend a typical school and live in multiple-child families. This finding runs counter to previous studies that have found an association between more psychological control and youth anxiety both in typical school and key school in general (Luebbe et al., 2018). Since it has only been five years since China's urban one-child policy's gradual replacement by a two-child policy, the current study is the first to investigate the combination of school type and family size, in relation to the connection between parents' psychological control and youth anxiety. Future exploration of factors related to youth anxiety must consider this growing population of youth, the type of school they attend, and the implications of educating multiple-child families in Chinese urban areas.

One strength of the current study is that we used the data with weighted means in SEM analysis. Previous SEM-based studies that specifically looked into the indirect effect of parents' socialization goals on youth anxiety/depression through parenting styles in Chinese high schools have created their own composite means of parents' and youth reports on psychological control (Luebbe et al., 2018); means of anxiety scores, psychological control scores, and autonomy support scores (Luebbe et al., 2018; Zhou et al., 2021); summed up depression scores (Zhou et al., 2021); or did not mention how they determined scores for parent socialization goals (Zhou et al., 2021).

Post Hoc Analyses

We re-ran the data analyses with three items in the parents' reported achievement and self-development goals with the hypothesized model and renamed the new variable as parents' reported achievement goals. Measurement invariance was met across all groups for all variables. These 3 items were: "10) I want my child to achieve academic success. 12) I want my child to compete with classmates. 13) I want my child to be the top student."

In the overall model, youth reported parents' psychological control is positively related to youth anxiety ($\beta = 0.376$, $p<.001$). Therefore, for every one standard deviation increase in youth reported psychological control, there is a 0.376 standard deviation increase in youth reported Anxiety ($p< .001$). There is also a marginally significant indirect effect from parents' achievement goals on youth anxiety via youth reported parents' psychological control ($\beta = 0.051$, $p=.073$). None of the other paths (including indirect paths) were significant as seen in Figure 11.

In the single child/ multiple child/ typical school/ key school model (see Figures 12–15), youth reported parents' psychological control is positively related to youth anxiety ($\beta = 0.398$,

$p<.001$; $\beta = 0.368$, $p<.001$; $\beta = 0.341$, $p<.001$; $\beta = 0.420$, $p<.001$). In the multiple child model, there is a significant indirect effect from parents' achievement goals on youth anxiety via youth reported parents' psychological control ($\beta = 0.097$, $p=.001$).

In the single child and typical school (see Figure 16), parents reported achievement goals are negatively related to youth reported parents' responsiveness ($\beta = -0.195$, $p<.05$), and positively related to youth reported parents' psychological control ($\beta = 0.230$, $p<.01$). Youth reported parents' psychological control is positively related to youth anxiety ($\beta = 0.420$, $p<.001$). There is a significant indirect effect from parents' achievement goals on youth anxiety via youth reported parents' psychological control ($\beta = 0.097$, $p=.01$).

In the single child and key school model (see Figure 17), youth reported parents' responsiveness is negatively related with youth reported anxiety ($\beta = -0.195$, $p=.021$). Youth reported parents' psychological control is positively related to youth reported anxiety ($\beta = 0.341$, $p<.001$).

In the multiple child and typical school model (see Figure 18), youth reported parents' responsiveness is negatively related with youth reported anxiety ($\beta = -0.195$, $p=.021$). Youth reported parents' psychological control is positively related to youth reported Anxiety ($\beta = 0.341$, $p<.001$).

In the multiple child and key school model (see Figure 19), parents' reported achievement goals are negatively related to youth reported parents' responsiveness ($\beta = -0.195$, $p<.05$), and positively related you youth reported parents' psychological control ($\beta = 0.230$, $p<.01$). Youth reported parents' psychological control is positively related to youth anxiety ($\beta = 0.420$, $p<.001$). There is a significant indirect effect from parents' achievement goals on youth anxiety via youth reported parents' psychological control ($\beta = 0.097$, $p=.01$).

In conclusion, youth reported parents' psychological control is positively related to youth anxiety in all of the models in post hoc analyses. Parents' reported achievement goals are negatively related to youth reported parents' responsiveness only in (a) typical school and single child model and (b) key school and multiple child model. Parents' reported achievement goals are positively related to youth reported parents' psychological control only in (a) typical school and single child model and (b) key school and multiple child model. Youth reported parents' responsiveness is negatively related with youth reported anxiety only in (a) key school and single child model and (b) typical school and multiple child model. The statistically significant indirect effect from parents' achievement goals on youth anxiety via youth reported parents' psychological control were only found in (a) multiple child model, b) multiple child and key school model, and (c) single child and typical school model. Although there is no indirect effect from parents' reported achievement goals to youth reported anxiety through youth reported parents' responsiveness, youth reported parents' responsiveness was found to be related with Parents' reported achievement goals and youth reported anxiety separately in different models.

Figure 11

Overall Model

Overall Model
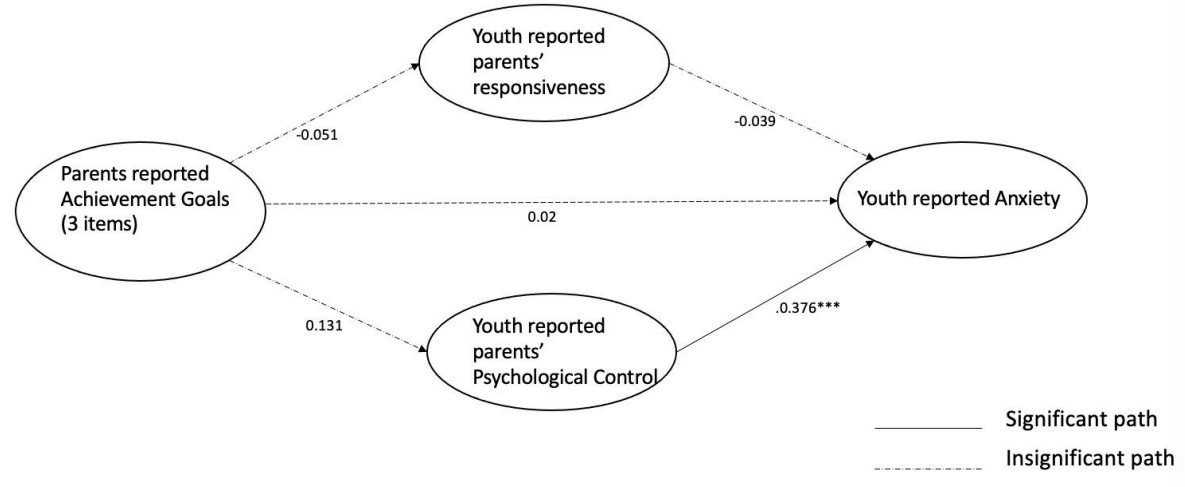
*p < .05, **p < .01, *** p < .001

Figure 12

Single Child Model

Single Child Model
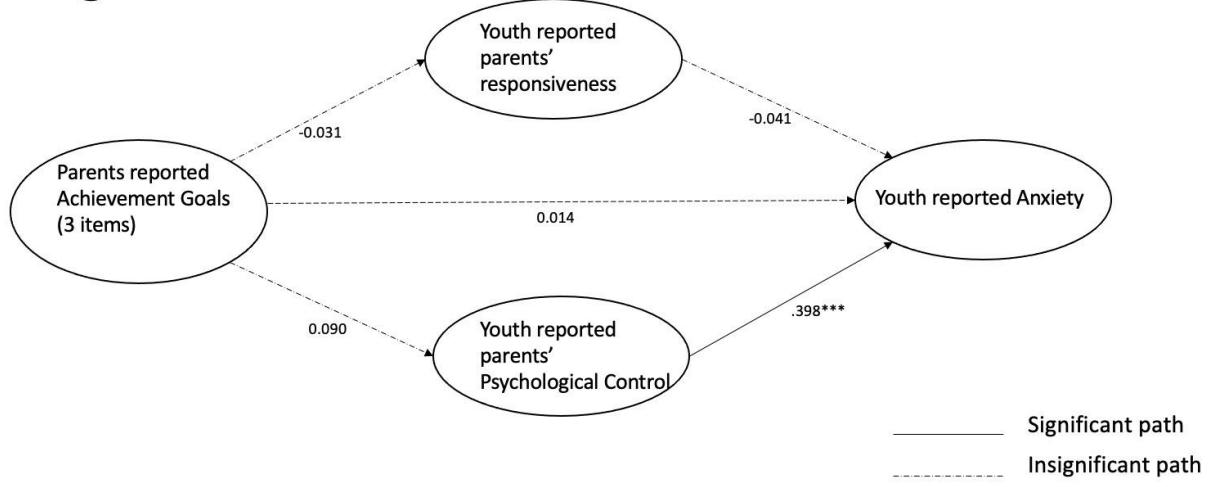
*p < .05, **p < .01, *** p < .001

Figure 13

Multiple Children Model

Multiple Children Model
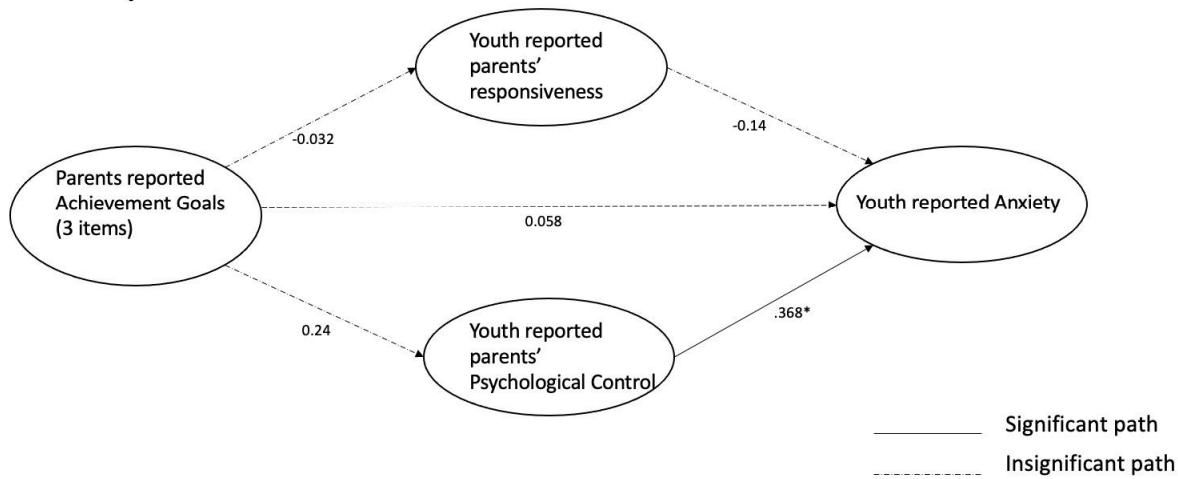
*p < .05, **p < .01, *** p < .001

Figure 14

Typical School Model

Typical School Model
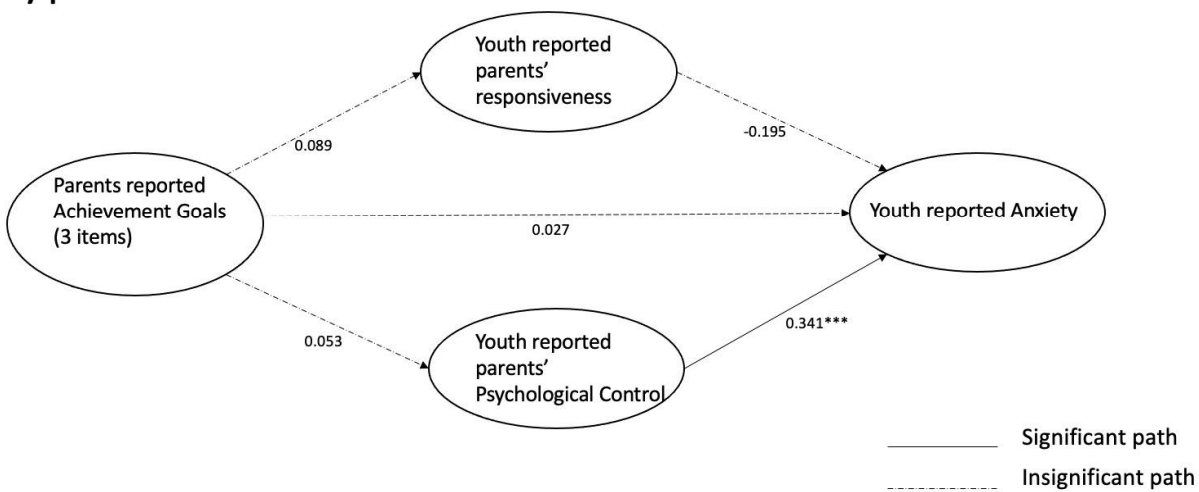
*p < .05, **p < .01, *** p < .001

Figure 15

Key School Model

Key School Model
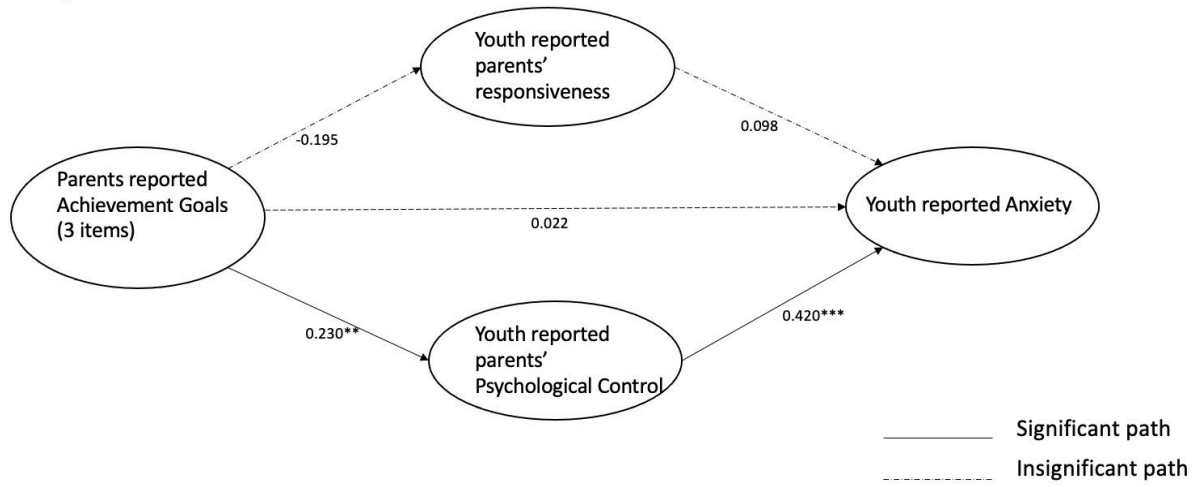
*p < .05, **p < .01, *** p < .001

Figure 16

Single Child and Typical School Model

Single Child and Typical School Model
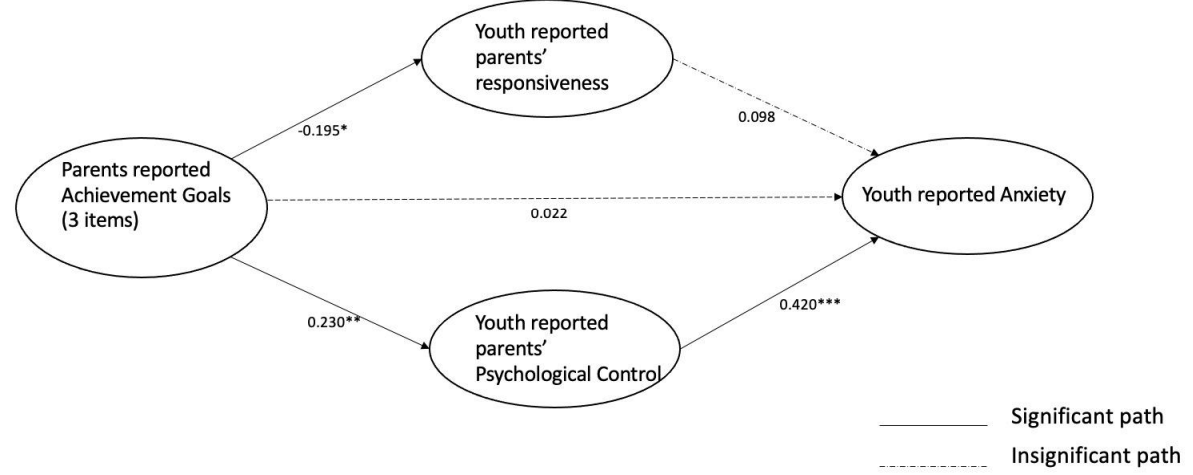
*p < .05, **p < .01, *** p < .001

Figure 17

Single Child and Key School Model

Single Child and Key School Model
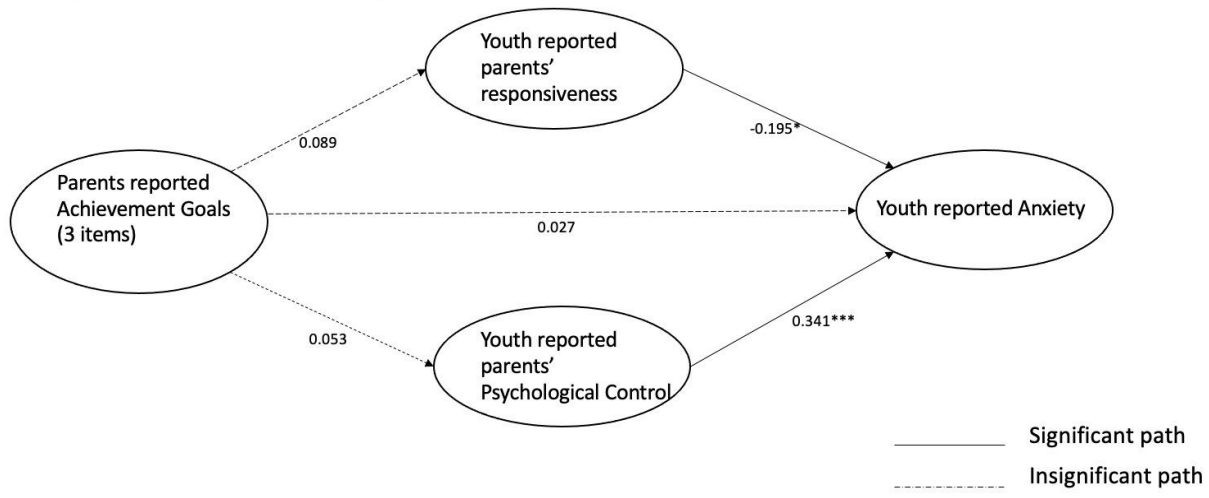
*p < .05, **p < .01, *** p < .001

Figure 18

Multiple Child and Typical School Model

Multiple Child and Typical School Model
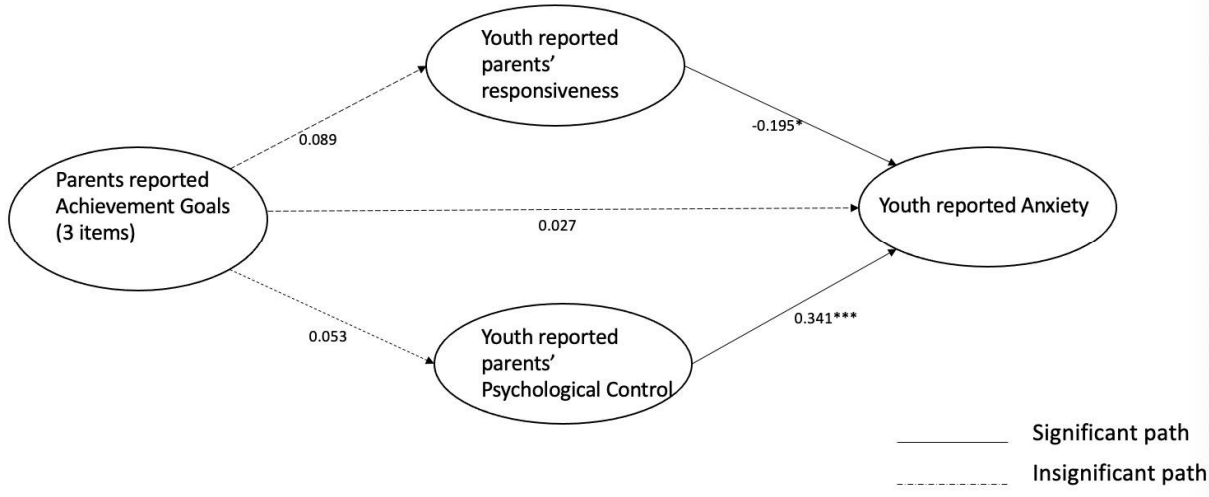
*p < .05, **p < .01, *** p < .001

Figure 19

Multiple Child and Key School Model

Multiple Child and Key School Model
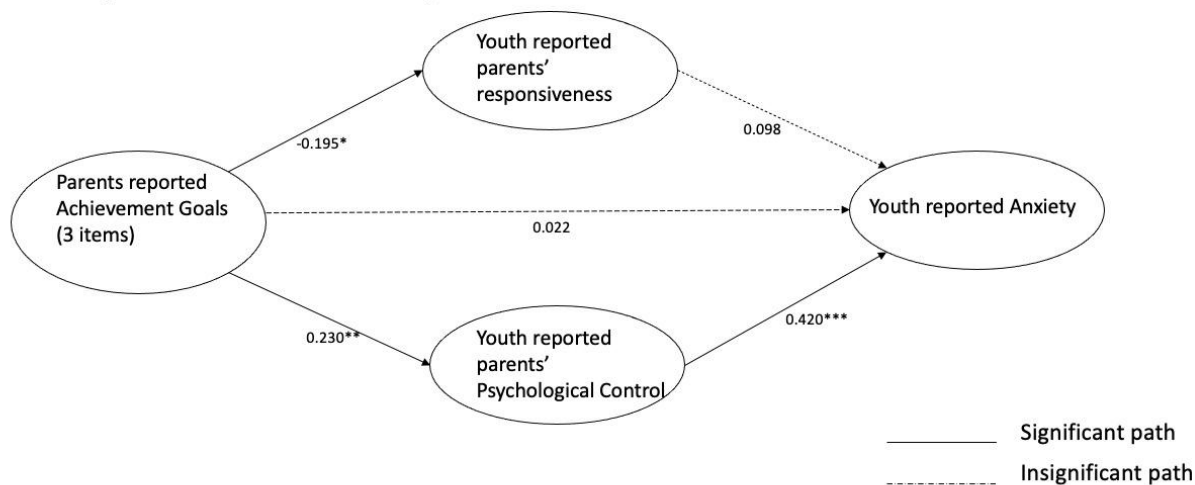
*p < .05, **p < .01, *** p < .001

Limitations and Future Research

There were several limitations in the current study. First, not all of the hypotheses were able to be tested and compared in the current study. Due to high correlation between two factors (parents' reported achievement-oriented goals and parents' reported self-development goals), one variable, Parents' reported achievement and self-development goals, was created as the combination of these two goals to meet discriminant validity. One reason that may or may not have contributed to this high correlation was high missing data (18%) across all parent-reported instruments. Essentially this high proportion of missing parent data (more key school than typical school) created response bias. Parents from the key school were less likely to complete the study's measures, yet they still turned in their surveys. Due to the Covid-19 pandemic, the data from this study were collected by teachers from each school instead of researchers. Teachers may not have read the scripted introduction to the students that explained the participation and

data collection. Limited communication and follow-up with parents may have also played a role in the limited parent completion of parent-surveys.

Another reason that could contribute to high correlation between parents' reported achievement-oriented goals and parents' reported self-development goals is the potential need for further work on these constructs. The combined instrument (Parents' reported Achievement and Self-Development Goals) has an unusually high number of correlating residual errors, and has not been used in previous research. Although it appeared to have good fit statistics (RMSEA = 0.077, CFI/TLI= 0.948/0.909, SRMR = 0.046) that met the cutoff (Wang & Wang, 2019), parents reported achievement-oriented goals and parents' reported self-development goals have differential effects on parenting styles and subsequent effects on youth internalized symptoms, respectively (Zhou et al., 2021). In order to explore the effects of parent goals on parenting styles and subsequent youth anxiety, further refinement needs to be done on the specific items included in the parents' reported achievement and self-development goals.

The data of the current study were collected during the COVID-19 pandemic. Studies have shown that youth reported more perceived anxiety during the pandemic than prior to the pandemic (Barendse et al., 2021; Chen et al., 2021). With different social and political contexts in which the data were collected, future studies may consider comparing data collected prior to, during, and post-COVID-19. When investigating parental influence on youth anxiety, collection of data during these time frames must account for environmental factors.

We used a combination of both parent and youth reports in the current study, which differs from how research was conducted in previous studies (Luebbe et al., 2018; Zhou et al., 2021). In previous studies, Cronbach's alpha was used as an important criterion for selecting either youth or parent reports in data analyses. In some cases, to have consistency across the study's varied instruments, researchers used either all youth or all parent reports (Zhou et al.,

2021). As youth appraisals of parenting practices may vary from parents' appraisals of their own parenting practices (De Los Reyes & Kazdin, 2005; Korelitz & Garber, 2016; Reidler & Swenson, 2012), data based on different perspectives might generate different findings. A previous study that also used the same measurement for socialization goals showed discrepancies for parents' and children's report when it comes to parents' self-development goals, but not in achievement-oriented goals (Zhou et al., 2021). Future research may consider looking into how discrepancies can lead to different findings within the same models.

Correlations between parents' responsiveness and psychological control could be further investigated to inform treatment for youth anxiety. The current study did not find any significant level of correlation between parents' responsiveness and youth anxiety, whereas previous research has consistently shown the relationship between higher levels of parents' responsiveness/autonomy granting and lower youth anxiety (Pinquart, 2017; Zhou et al., 2021). To further investigate parents' responsiveness and its connections with youth anxiety, future research should consider more sensitive instruments that capture the various aspects of parenting style.

Post Hoc Analyses has shown that youth reported parents' responsiveness is negatively related with youth reported anxiety only in (a) key school and single child model and (b) typical school and multiple child model. It suggested that more parental responsiveness youth perceived from their parents, youth will have less anxiety. Similar to prior research findings (Baumrind, 1968; Doepke & Zilibotti, 2017; Yang & Schaninger, 2010), authoritative parenting, with high parental responsiveness and demandingness, will lead to better psychological well-being for youth. Additionally, in previous studies conducted in western cultures (Hummel & Gross, 2001; Morris & Oosterhoff, 2016), youth anxiety is alleviated when youth experience higher parental responsiveness. As such, the current research looked into how parental responsiveness could

alleviate youth-perceived anxiety in China (eastern culture). By strengthening the parent-child relationship, especially incorporating more parental responsiveness, Chinese youth may benefit from having less anxiety symptoms.

Conclusion

The purpose of this study was to further investigate and to either confirm or disconfirm the direct/indirect effects of (a) parents' reported achievement-oriented goals on youth anxiety via parental psychological control in both key and typical schools; and (b) parents' reported self-development goals on youth anxiety via parental psychological control in key and typical schools. The current study also introduced parents' responsiveness as a new mediator and single-child/ multiple-child as a new moderator to investigate their effect on the overall model as related to youth anxiety. Study hypotheses were partially supported. Results indicated a direct effect from parents' psychological control on youth anxiety in the key school regardless of family composition (single-child and multiple-child families), and in youth attending the typical school and from a single-child family. Future research should further explore parenting styles and sibling relationships that may alleviate or exacerbate youth anxiety.

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APPENDIX A

Institutional Review Board (IRB) Approval

Memorandum

To: Melissa Heath
Department: BYU - EDUC - Counseling, Psychology, & Special Education
From: Sandee Aina, MPA, HRPP Associate Director
    Wayne Larsen, MAcc, IRB Administrator
Date: September 28, 2021
IRB#: IRB2021-294
Title: Effects of Parents' Academic Achievement Goals, Responsiveness, and Psychological Control on Chinese Adolescents anxiety

Brigham Young University's IRB has approved the research study referenced in the subject heading as exempt level, Category 4. This study does not require an annual continuing review. Each year near the anniversary of the approval date, you will receive an email reminding you of your obligations as a researcher and to check on the status of the study. You will receive this email each year until you close the study.

The study is approved as of 09/28/2021. Please reference your assigned IRB identification number in any correspondence with the IRB.

Continued approval is conditional upon your compliance with the following requirements:

1. A copy of the approved informed consent statement can be found in iRIS. No other consent statement should be used. Each research subject must be provided with a copy or a way to access the consent statement.
2. Any modifications to the approved protocol must be submitted, reviewed, and approved by the IRB before modifications are incorporated in the study.
3. All recruiting tools must be submitted and approved by the IRB prior to use.
4. Instructions to access approved documents, submit modifications, report adverse events, can be found on the IRB website, iRIS guide: https://irb.byu.edu/iris-training-resources
5. All non-serious unanticipated problems should be reported to the IRB within 2 weeks of the first awareness of the problem by the PI. Prompt reporting is important, as unanticipated problems often require some modification of study procedures, protocols, and/or informed consent processes. Such modifications require the review and approval of the IRB. Please refer to the IRB website for more information.

APPENDIX B

Demographics

PARENT DEMOGRAPHICS

DEMOGRAPHICS (Parents complete this form)

YOUR AGE: **RELATION TO YOUR CHILD:**
☐ Natural   ☐ Step   ☐ Adoptive
☐ Foster   ☐Other

MARITAL STATUS OF PARENT(S) WITH WHOM THE CHILD LIVES:

___ Married   ___ Divorced   ___ Widowed   ____ Separated

___ Never Married   ___ Other (please explain):_____

APPROXIMATE
FAMILY   ___ $0 – 20, 000
INCOME   ___ $20,001 – 40,000
                    ___ $40,001 – 60,000
                    ___ $60,001 – 80,000
                    ___ $80,001 – 100,000
                    ___ $100,001 – 120,000
                    ___ $120,001 – 140,000
                    ___ $140,000 - or more

PLEASE LIST ANY OTHER ADULTS LIVING IN THE HOME

(sex, age, relationship to the child): _____

_____

YOUTH DEMOGRAPHICS

AGE:_____   **BIOLOGICAL SEX:**   ___ FEMALE

                                                           ___ MALE

D.O.B: _____ / _____ / _____   ___ OTHER

 YOUR GRADE: _____

 YOUR ETHNICITY:

      ___   HAN

      ___ ZHUANG

      ___ HUI

      ___ MAN

      ___ OTHERS (please specify)_____

APPENDIX C

Socialization Goals

PARENT

1. **Socialization goals**

Instruction: Parents always hope their kids to be the best. However, different parents emphasize on different things. The following questions have listed the general goals that parents usually have to raise their kids. Please follow the standard provided here and tell us how much you and your parents are willing to achieve these goals. Please check under the appropriate number. **(Please complete by one parent)**

You are _____ (Mom or Dad)

```
   1          2          3          4          5
   |          |          |          |          |
Not at all important                    Very important
```
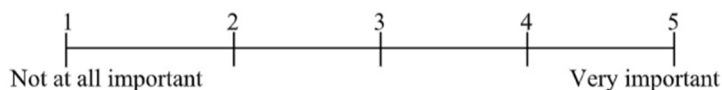
1. I want my child to have strong sense of self-respect.
2. I want my child to be very unique and be his/hers own individual.
3. I want my child to be self-explanatory.
4. I want my child to be good at exploring and adventuring.
5. I want my child to honor the family
6. I want my children to respect their elders.
7. I want my child to be the top student.
8. I want my child to have harmonious relationships with people around him/her.
9. When in a group, I want my child to be cooperative with people.
10. When my child succeeds, I want him/her to think about the help he/she received from others.
11. I want my child to be modest and learn from others.
12. I want my child to know the role he/she should play in a social group.
13. I want my child to become involved in non-academic activities at school.
14. I want my child to compete with classmates.
15. I want my child to be popular amongst his/her classmates.
16. I want my child to achieve academic success.
17. I want my child to meet people from other cultures.
18. I want my child to be aware of other people's expectations.

YOUTH

1. Socialization goals

Instruction: Parents always hope their kids to be the best. However, different parents emphasize different things. The following questions have listed the general goals that parents usually have to raise their kids. Please follow the standard provided here and tell us how much you think your parents want you to achieve these goals. Please check under the appropriate number.

```
       1            2            3            4            5
       |            |            |            |            |
  Not at all desire                      strongly desire
```
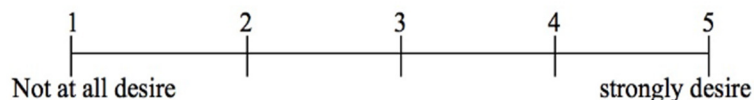
1. I feel that my parents want me to have strong sense of self-respect.
2. I feel that my parents want me to be very unique and be his/hers own individual.
3. I feel that my parents want me to be self-explanatory.
4. I feel that my parents want me to be good at exploring and adventuring.
5. I feel that my parents want me to honor the family.
6. I feel that my parents want me to respect their elders.
7. I feel that my parents want me to be the top student.
8. I feel that my parents want me to have harmonious relationships with people around him/her.
9. I feel that my parents want me to be cooperative with people when I am in a group.
10. When I succeed, I feel that my parents want me to think about the help I received from others
11. I feel that my parents want me to be modest and learn from others.
12. I feel that my parents want me to know the role I should play in a social group.
13. I feel that my parents want me to become involved in non-academic activities at school.
14. I feel that my parents want me to compete with classmates.
15. I feel that my parents want me to be popular amongst his/her classmates.
16. I feel that my parents want me to achieve academic success.
17. I feel that my parents want me to meet people from other cultures.
18. I feel that my parents want me to be aware of other people's expectations.

APPENDIX D

Psychological Control

PARENT

2. **Psychological Control (18 items)**

Please indicate how much each statement is true regarding your parenting style. Circle the appropriate number using the following scale:

```
1              2              3              4              5
not at all true                                      very true
```

1. I remind my child all that I have done for them
2. I tell my child that, if they really cared for me, they would not do things to cause me worry.
3. I tell my child how disappointed I am in them when they do things their way instead of my way.
4. I tend to be less friendly with my child when we do not agree on things.
5. I do not let my child do things with me if they do something I do not like
6. I tend to bring up past mistakes my child has made when I am teaching them.
7. I remind my child of all the sacrifices I have made for them.
8. I tell my child to feel guilty if they did not meet my expectation.
9. I tell my child that if he/she does something against my wish, then he/she is not a good member of the family.
10. I don't look at my child when they disappointed me.
11. I tell my child to feel ashamed when he/she does not behave as I wish.
12. I tend to act cold and unfriendly if my child does something I do not like.
13. I stopped talking to my child if he/she hurts my feelings until he/she please me again.
14. I tell my child that if he/she loves me, he/she would do his/her best for the sake of the family.
15. I tell my child that when he/she falls short of my expectations, he/she is not as good as other children.
16. I tell my child that what I want him/her to do is the best for him/her and he/she should not question it.
17. I tell my parents that when my child grow up, he/she will appreciate all the decisions I make for him/her.
18. I answer my child's argument by saying things like, "You'll know better when you grow up".

YOUTH

2. Psychological Control

Please indicate how much each statement is true regarding your parents. Circle the appropriate number using the following scale:

```
      1             2             3             4             5
      |             |             |             |             |
  |---+-------------+-------------+-------------+-------------|
not at all true                                      very true
```
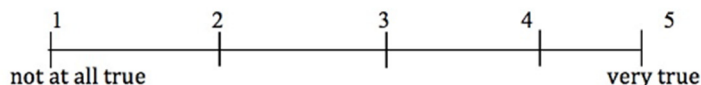
1. I feel that my parents tell me about all the things they have done for me.
2. My parents say, if I really cared for them, I would not do things that cause them to worry.
3. My parents tell me how disappointed they are in me when I do not do things their way.
4. My parents are less friendly with me, if I do not see things their way.
5. My parents will not let me do things with them if I do something they do not like.
6. My parents bring up my past mistakes when they criticize me.
7. My parents tell me of all the sacrifices they have made for me.
8. My parents tell me that I should feel guilty when I do not meet their expectations.
9. My parents tell me that I am not a good member of the family when I do something that is against their wishes.
10. My parents avoid looking at me when I have disappointed them.
11. My parents tell me that I should feel ashamed when I do not behave as they wish.
12. My parents act cold and unfriendly if I do something they do not like.
13. If I have hurt their feelings, my parents stop talking to me until I please them again.
14. My parents say, if I really loved them, I would do my best for the sake of the family.
15. My parents tell me that I am not as good as other kids when I fall short of their expectations.
16. My parents tell me that what they want me to do is the best for me and I should not question it.
17. My parents say, when I grow up, I will appreciate all the decisions they make for me.
18. My parents answer my arguments by saying things like, "You'll know better when you grow up".

APPENDIX E

Parent Responsiveness

PARENT

3. Parents Responsiveness

Please indicate how much each statement you agree with regarding your parents. Circle the appropriate number using the following scale:
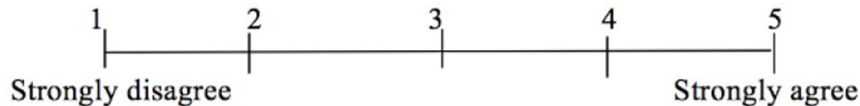
1. My child will tell me if he/she/they thinks a rule is unfair.
2. I encourage my child to look at both sides of an issue.
3. I encourage my child to talk with me about things.
4. I would let my child do things he/she/they want to do without judging their decisions.
5. I will explain to my child when I ask him/her/them to do things.
6. I often spend time to chat with my child.
7. I would allow my child to make friends freely.
8. I would allow my child to decide what is right or wrong freely.
9. I would allow my child to wear whatever he/she/they want.
10. I take my child's ideas seriously, when making family decisions.
11. I respect my child's opinion and encourage him/her/them to express it.
12. I talk it over and reason with my child when he/she/they misbehave.
13. I praise my child if he/she/they do things well.
14. I often tell my child the reason of having certain family rule.
15. If my child encounters some problems, he/she/they knows they could count on me.

YOUTH

3.Parents Responsiveness

Please indicate how much each statement you agree with regarding your parenting style. Circle the appropriate number using the following scale:
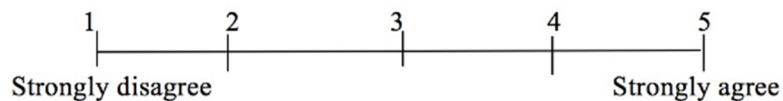
```
   1          2          3          4          5
   |----------|----------|----------|----------|
Strongly disagree                    Strongly agree
```

1. My parents expect me to tell them when I think a rule is unfair.
2. My parents encourage me to look at both sides of an issue.
3. My parents encourage me to talk with them about things.
4. My parents would let me do things I want to do without judging my decisions
5. My parents will explain to me when asked me to do things
6. My parents often spend time to chat with me
7. My parents would allow me to make friends freely
8. My parent would allow me to decide what is right or wrong freely.
9. My parents would allow me to wear whatever I want
10. My parents take my ideas seriously, when making family decisions.
11. My parents respect my opinion and encourage me to express it.
12. My parents talk it over and reason with me when I misbehave.
13. My parents praise me if I do things well.
14. My parents often tell me the reason of having certain family rule.
15. If I encounter some problems, I could count on my parents.

APPENDIX F

Revised Children Anxiety and Depression Scale (RCADS)

PARENT RCADS

4. Anxiety and depression (from RCADS-P) (Parents)

ID: _____   Relationship to Child: _____

Please put a circle around the word that shows how often each of these things happens for your child.

1. My child worries about things	Never	Sometimes	Often	Always
2. When my child has a problem, he/she gets a funny feeling in his/her stomach	Never	Sometimes	Often	Always
3. My child worries when he/she thinks he/she has done poorly at something	Never	Sometimes	Often	Always
4. My child feels afraid of being alone at home	Never	Sometimes	Often	Always
5. My child feels scared when taking a test	Never	Sometimes	Often	Always
6. My child worries when he/she thinks someone is angry with him/her.	Never	Sometimes	Often	Always
7. My child worries about being away from me	Never	Sometimes	Often	Always
8. My child is bothered by bad or silly thoughts or pictures in his/her mind	Never	Sometimes	Often	Always
9. My child worries about doing badly at school work	Never	Sometimes	Often	Always
10. My child worries that something awful will happen to someone in the family	Never	Sometimes	Often	Always
11. My child suddenly feels as if he/she can't breathe when there is no reason for this.	Never	Sometimes	Often	Always

12. My child has to keep checking that he/she has done things right (like the switch is off, or the door is locked)	Never	Sometimes	Often	Always
13. My child feels scared to sleep on his/her own	Never	Sometimes	Often	Always
14. My child has trouble going to school in the mornings because of feeling nervous or afraid.	Never	Sometimes	Often	Always
15. My child worries about looking foolish	Never	Sometimes	Often	Always
16. My child worries that bad things will happen to him/her	Never	Sometimes	Often	Always
17. My child can't seem to get bad or silly thoughts out of his/her head.	Never	Sometimes	Often	Always
18. When my child has a problem, his/her heart beats really fast	Never	Sometimes	Often	Always
19. My child suddenly starts to tremble or shake when there is no reason for this	Never	Sometimes	Often	Always
20. My child worries that something bad will happen to him/her	Never	Sometimes	Often	Always
21. When My child has a problem, he/she feels shaky	Never	Sometimes	Often	Always
22. My child worries about making mistakes	Never	Sometimes	Often	Always
23. My child has to think of special thoughts (like numbers or words) to stop bad things from happening	Never	Sometimes	Often	Always
24. My child worries what other people think of him/her	Never	Sometimes	Often	Always

25. My child is afraid of being in crowded places (like shopping centers, the movies, buses, busy playgrounds)	Never	Sometimes	Often	Always
26. All of a sudden my child will feel really scared for no reason at all	Never	Sometimes	Often	Always
27. My child worries about what is going to happen	Never	Sometimes	Often	Always
28. My child suddenly becomes dizzy or faint when there is no reason for this	Never	Sometimes	Often	Always
29. My child thinks about death	Never	Sometimes	Often	Always
30. My child feels afraid if he/she have to talk in front of the class	Never	Sometimes	Often	Always
31. My child's heart suddenly starts to beat too quickly for no reason	Never	Sometimes	Often	Always
32. My child worries that he/she will suddenly get a scared feeling when there is nothing to be afraid of	Never	Sometimes	Often	Always
33. My child has to do some things over and over again (like washing hands, cleaning, or putting things in a certain order)	Never	Sometimes	Often	Always
34. My child feels afraid that he/she will make a fool of him/herself in front of people	Never	Sometimes	Often	Always
35. My child has to do some things in just the right way to stop bad things from happening	Never	Sometimes	Often	Always
36. My child worries when in bed at night	Never	Sometimes	Often	Always
37. My child would feel scared if he/she had to stay away from home overnight	Never	Sometimes	Often	Always

YOUTH RCADS

4. Anxiety and depression (from RCADS)

ID: _____   **GRADE:** _____   **AGE:** _____   **BOY/GIRL (circle one)**

RCADS

Please put a circle around the word that shows how often each of these things happen to you.

There are no right or wrong answers.

		Never	Sometimes	Often	Always
1.	I worry about things	Never	Sometimes	Often	Always
2.	When I have a problem, I get a funny feeling in my stomach	Never	Sometimes	Often	Always
3.	I worry when I think I have done poorly at something	Never	Sometimes	Often	Always
4.	I would feel afraid of being on my own at home	Never	Sometimes	Often	Always
5.	I feel scared when I have to take a test	Never	Sometimes	Often	Always
6.	I feel worried when I think someone is angry with me	Never	Sometimes	Often	Always
7.	I worry about being away from my parents	Never	Sometimes	Often	Always
8.	I get bothered by bad or silly thoughts or pictures in my mind	Never	Sometimes	Often	Always
9.	I worry that I will do badly at my school work	Never	Sometimes	Often	Always
10.	I worry that something awful will happen to someone in my family	Never	Sometimes	Often	Always
11.	I suddenly feel as if I can't breathe when there is no reason for this	Never	Sometimes	Often	Always
12.	I have to keep checking that I have done things right (like the switch is off, or the door is locked)	Never	Sometimes	Often	Always
13.	I feel scared if I have to sleep on my own.	Never	Sometimes	Often	Always
14.	I have trouble going to school in the mornings because I feel nervous or afraid	Never	Sometimes	Often	Always
15.	I worry I might look foolish	Never	Sometimes	Often	Always
16.	I worry that bad things will happen to me	Never	Sometimes	Often	Always

	Never	Sometimes	Often	Always
17. I can't seem to get bad or silly thoughts out of my head ...	Never	Sometimes	Often	Always
18. When I have a problem, my heart beats really fast	Never	Sometimes	Often	Always
19. I suddenly start to tremble or shake when there is no reason for this	Never	Sometimes	Often	Always
20. I worry that something bad will happen to me	Never	Sometimes	Often	Always
21. When I have a problem, I feel shaky	Never	Sometimes	Often	Always
22. I worry about making mistakes	Never	Sometimes	Often	Always
23. I have to think of special thoughts (like numbers or words) to stop bad things from happening......................	Never	Sometimes	Often	Always
24. I worry what other people think of me	Never	Sometimes	Often	Always
25. I am afraid of being in crowded places (like shopping centers, the movies, buses, busy playgrounds)	Never	Sometimes	Often	Always
26. All of a sudden I feel really scared for no reason at all	Never	Sometimes	Often	Always
27. I worry about what is going to happen	Never	Sometimes	Often	Always
28. I suddenly become dizzy or faint when there is no reason for this	Never	Sometimes	Often	Always
29. I think about death	Never	Sometimes	Often	Always
30. I feel afraid if I have to talk in front of my class	Never	Sometimes	Often	Always
31. My heart suddenly starts to beat too quickly for no reason .	Never	Sometimes	Often	Always
32. I worry that I will suddenly get a scared feeling when there is nothing to be afraid of	Never	Sometimes	Often	Always
33. I have to do some things over and over again (like washing my hands, cleaning or putting things in a certain order)	Never	Sometimes	Often	Always
34. I feel afraid that I will make a fool of myself in front of people	Never	Sometimes	Often	Always
35. I have to do some things in just the right way to stop bad things from happening	Never	Sometimes	Often	Always
36. I worry when I go to bed at night	Never	Sometimes	Often	Always
37. I would feel scared if I had to stay away from home overnight	Never	Sometimes	Often	Always