ABSTRACT

Title of Thesis: CHINESE PARENTING STYLES AND PARENTAL

INVOLVEMENT ON ADOLESCENTS' SCHOOL SUCCESS

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Academic burnout and engagement are important indicators of students' school success. Studies have revealed that parenting styles and parental involvement have significant influences on students' academic burnout and engagement. However, few studies have explored the mechanism of how parenting styles and parental involvement impact students' academic burnout and engagement, especially among Chinese high school students. This study examined whether parenting styles and parental involvement (based on parental report) influenced high school students' academic burnout and engagement via perceived parental support (based on adolescent report). A total of 285 Chinese high school students and their fathers and mothers participated in the current study. Results indicated that paternal authoritative parenting negatively related to academic burnout, and maternal authoritarian parenting positively related to academic burnout. Additionally, in both paternal and maternal models, perceived parental support mediated the relations between authoritative parenting and knowledge and skills involvement and students' academic engagement. Moreover, the study also indicated that fathers and mothers may influence boys' and girls' academic burnout and engagement

differently. Parents and schools can use the findings to increase high students' academic engagement and decrease students' academic burnout.

# CHINESE PARENTING STYLES AND PARENTAL INVOLVEMENT ON ADOLESCENTS' SCHOOL SUCCESS

By

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## **Chapter 1: Introduction**

In Chinese high schools, students are involved in many structured and required learning activities every day, such as attending classes, completing assignments, and taking examinations. Learning activities are highly valued in Chinese culture and linked to students' later academic and professional prospects (Cadime et al., 2016; Hu & Schaufeli, 2009). Some students feel academic burnout, which describes students feeling exhausted, having a cynical and detached attitude to their learning, and feeling incompetent as a student (Schaufeli et al., 2002). In contrast, some students still display high levels of academic engagement, which describes a positive, fulfilling, and persistent cognitive-affective state while studying (Schaufeli et al., 2002). Academic burnout negatively relates to students' academic achievement and well-being (Cadime et al., 2016; Dyrbye et al., 2008), whereas academic engagement positively associates with students' better self-efficacy and academic achievement (Cadime et al., 2016; Salmela-Aro & Upadyaya, 2014).

What factors contribute to burnout vs. academic engagement among high school students? Although stress, workloads, or academic requirements are main factors (Schaufeli et al., 2002), parenting styles and parental involvement also significantly influence students' academic burnout, academic engagement, and academic performance (Masud et al., 2015; Wilder, 2014). Parenting style is defined as a constellation of parents' attitudes and behaviors to children and an emotional climate in which the

parents' behaviors are expressed and is defined by two dimensions, parental responsiveness and demandingness. (Darling & Steinberg, 1993; Maccoby & Martin, 1983). Parental involvement is defined as parents' investment and commitment to their children, including time, energy, and money, and active interactions with schools (Grolnick & Slowiaczek, 1994; Pomerantz et al., 2012). However, the mechanism of how parenting behaviors impact adolescent learning outcomes are less clear. Perceived parental support may be a key pathway from parents to children's outcomes (Furman & Buhrmester, 1992; Furman & Collibee, 2018; Thoit, 2011). Moreover, mothers and fathers tend to have different parenting practices (Cabrera et al., 2018; Ho et al., 2010; Raley et al., 2012), and to affect their sons and daughters differently (Brown & Tam, 2019; Endendijk et al., 2016; Endendijk et al., 2017). It is crucial to consider that parents' gender, youths' gender, and their interactions when examining the relations between parenting practices and children's academic outcomes.

The current study seeks to investigate (a) the relation between parenting style and parental involvement and children's academic burnout and engagement; (b) the mediating role of perceived parental support in linking parenting style and parental involvement to children's academic burnout and engagement; and (c) the children's and parents' gender differences in the mediation model. High school students completed questionnaires assessing academic burnout, academic engagement, and perceived parental support; their parents completed questionnaires assessing parenting styles and parental involvement.

My hypotheses were that the authoritative parenting (e.g., high responsiveness/warmth

and high demandingness/control) and high parental involvement positively related to adolescents' academic engagement and negatively related to academic burnout. And authoritarian parenting (e.g., low responsiveness/warmth and high demandingness/control) negatively associated with adolescents' academic engagement and positively associated with academic burnout. Moreover, perceived parental support mediated the relation between parenting practices and adolescents' school outcomes. Specifically, authoritative parenting style and parental involvement positively related to perceived parental support, and when adolescents perceived more parental support, they reported more academic engagement and less academic burnout. In contrast, authoritarian parenting style negatively related to perceived parental support. I also expected paternal and maternal parenting practices associated differently with sons and girls.

#### **Chapter 2: Literature Review**

## **Ecological Systems Theory**

Ecological Systems Theory (Bronfenbrenner, 1992; Bronfenbrenner & Ceci, 1993; Darling, 2007) proposes that a child's development takes place through the complex reciprocal interaction between the child and his or her environment. The environment has five layers: the microsystem, the mesosystem, the exosystem, the macrosystem, and the chronosystem. The microsystem is the layer closest to the child and includes the interaction between the child and family, school, neighborhood, or childcare environments. The mesosystem is the layer that includes interactions between microsystems, such as the connection between a child's family and school. The exosystem consists of structures that do not interact with the child directly, such as parents' work schedules. The macrosystem is the outermost layer in the child's larger environment and encompasses cultural values, customs, and laws. The chronosystem includes time as a dimension and influences a child's development and change, such as the death of a parent.

Later, Bronfenbrenner and Morris (2006) further enhanced the original theory to process-person-context-time (*PPCT*) model. The model emphasizes the importance of interactions in the microsystem and macrosystem over an extended period of time, including parent-child, child-child, and teacher-child interactions, and person-environment (such as culture and society) interactions. Moreover, the PPCT model proposes that the microsystem and the macrosystem have close relations, and both of

them have the most significant effect on the child from microtime (day-to-day interactions) to macrotime (within and across generations). For example, cultural norms or values are transmitted to parents' beliefs, goals, and values, and further influence parenting practices and child development, such as child-rearing attitudes and children's emotional regulation (Chen et al., 2019; Chen et al., 2015; Sidebotham & ALSPAC Study Team, 2001). More specifically, Western culture recognizes independence and individualism when educating children (Chen & Stevenson, 1995; Chirkov et al., 2003). Because of these values, Western parents are likely to encourage children to make their own decisions, develop themselves as individuals and have flexible expectations (Dandy & Nettelbeck, 2002; Fu & Markus, 2014; Phillipson & Phillipson, 2007). As a whole, Western students develop a high sense of autonomy (Ng & Wang, 2019). This exemplifies culture working on children's outcomes through parent-child interactions.

## **Attachment Theory**

John Bowlby (1958, 1969) original proposed the conceptualization of attachment which is a "lasting psychological connectedness between human beings" (Bowlby, 1969, p. 194). Infants become attached to their parents or other caregivers who are associated over time with consistent, predictable, and appropriate responses to infants' signals and needs. Attachment indicates "an affective bond between parents and children that endured over time and space" (Cumming & Warmuth, 2019, p. 374) and also the quality of parent-child relationship. Hence, attachment is important to positive development for infants, children, and adolescents. Four patterns of attachment have been distinguished

(one secure pattern and three insecure attachment pattern): secure attachment, avoidant attachment, resistant attachment, and disorganized/disoriented attachment. Moreover, attachment also leads an initial internal working model which will guide an individual's feelings, thoughts, and expectations in later relationships after infancy, such as kindness and compassion toward self and others (Cummings & Cummings, 2002; Mikulincer & Shaver, 2017; Shaver et al., 2016). Therefore, attachment plays a critical role in an individual's functioning throughout the lifespan.

Although attachment is not a parenting style or practice by definition, as a mutual interaction between a parent and a child, attachment is highly related to parenting practices, children's perception of the quality of parent-child relationship, and children's developmental outcomes (Cummings & Cummings, 2002). For example, if parents apply warm parenting, interpret an infant's needs accurately, and respond to the needs quickly, it can increase the probability that the infant views his or her parents as a secure base and then increase the likelihood of secure attachment happening (Ainsworth et al., 1978; Feeney & Woodhouse, 2016; Waters & Cummings, 2000). Children with secure attachment perceives that their parents are supportive and can provide comfort, reassurance, and assistance, which contributes the quality of parent-child relationship. Moreover, the quality of parent-child relationship are shown to predict positive aspects of later psychosocial adjustment (Bakermans-Kranenburg & van IJzendoorn, 2016; Cumming & Warmuth, 2019; Feeney & Woodhouse, 2016). Therefore, based on the attachment theory, parenting practices are closely related to children's perception of the

quality of parent-child relationship which is positively related to children's psychological well-beings.

#### **Academic Burnout**

Academic burnout describes a student feeling exhausted because of study requirements, having a cynical and detached attitude toward one's learning, and feeling incompetent as a student (Schaufeli et al., 2002). There are three key features of academic burnout: exhaustion, cynicism, and inefficacy (Maslach et al., 2001; Schaufeli et al., 2002). *Exhaustion* is characterized as feeling depleted of one's emotional and physical resources. *Cynicism* indicates a negative, callous, and detached attitude towards schoolwork. *Inefficacy* represents a student's feelings of incompetence and losing a sense of accomplishment (Maslach et al., 2001; Schaufeli et al., 2002).

Additionally, exhaustion and cynicism are considered the core burnout dimensions (Cadime et al., 2016; González-Romá et al., 2006). Conceptually, cynicism seems to develop in response to exhaustion, whereas inefficacy seems to develop independently and in parallel (Leiter, 1993; Schaufeli, & Taris, 2005; Lee et al., 2020). Researchers proposed that inefficacy reflects one's personality characteristics rather than a factor of burnout (Shirom, 2003). Inefficacy had a low correlation with the other two burnout dimensions (Lee & Ashforth, 1996). Therefore, exhaustion and cynicism are the mostly used subscales of academic burnout.

Academic stress and burnout are common among adolescents (Cadime et al., 2016; American Psychological Association, 2014). For example, in one study, 41.8% of

333 American high school students felt stressed (Feld & Shusterman, 2015). A study from the American Psychological Association (2014) showed that for teenagers, the most common sources of stress were school (83%) and achieving college admission or deciding what to do after high school (69%). Another study based in Finland indicated that more than 10% of 770 Finnish adolescents suffered severe academic burnout (Salmela-Aro & Tynkkynen, 2012).

Academic stress is even higher in China (Hu & Schaufeli, 2009). For example, 54.9% of 730 Chinese students reported experiencing academic burnout (Zhang et al., 2013). Another survey of 2,000 middle and high school students across China found that students seek mental health services primarily due to interpersonal problems (91.3%), while mental health problems (87%) and academic stress (87%) comprise the secondary reason (Luo, 2010).

Factors affecting academic burnout. Both individual and environmental factors may contribute to burnout. Studies among adults revealed that individual factors including insecure attachment (Leiter et al., 2015; Pines, 2004; Sonnentag et al., 2010), self-efficacy (Yang, 2004), sense of control over events, openness to change, external locus of control, and passive and defensive coping skills (Maslach et al., 2001) significantly influence people's burnout. A meta-analysis of 19 studies across Asian and European countries and the U.S. showed that parental support negatively correlated with students' academic burnout (Kim et al., 2018). Therefore, individual factors, as well as social support, are influential to students' academic burnout.

The influences of academic burnout on students. Academic burnout has significant consequences on students' outcomes. Students experiencing academic burnout hold a cynical and detached attitude toward their learning and perceive themselves as incapable of being competent students (Schaufeli et al., 2002). Additionally, academic burnout harms students' academic performance and their mental health (Cadime et al., 2016; Salmela-Aro et al., 2009; Schaufeli et al., 2002). One study among Korean adolescents found that compared with students who had academic burnout, students without academic burnout had a higher GPA and greater levels of self-esteem (Lee et al., 2010). In another study, academic burnout strongly predicted Finnish adolescents' subsequent depressive symptoms (Salmela-Aro et al., 2009). Considering academic burnout has such a negative effect on students' learning and well-being, studying what factors work as a risk or a protective factor for academic burnout is essential.

#### **Academic Engagement**

At the opposite side of students' burnout, engagement is essential to students' school success (Schaufeli et al., 2002). However, students' engagement is a complex construct, and different researchers have different definitions (Alrashidi et al., 2016; Fredricks et al., 2004; Schaufeli et al., 2002; Skinner et al., 2009). Despite a wide range of definitions, a consensus has formed that students' engagement is a multidimensional concept, including different facets (e.g., behavioral, emotional, and cognitive components) working together to indicate a positive and fulfilling state to learning (e.g., vigor, dedication, and absorption; Alrashidi et al., 2016; Fredricks et al., 2004; Schaufeli

et al., 2002; Skinner et al., 2009). Alrashidi and colleagues (2016) reviewed the current literature on student engagement and found two definition approaches. One approach focuses on behavioral, emotional, and cognitive engagement towards teachers and all school related activities (Fredricks et al., 2004; Roorda et al., 2017; Skinner et al., 2009). Another approach mainly addresses emotional engagement towards learning (Cadime et al., 2016; Schaufeli et al., 2002). Since the current study focuses on academic success, the second approach concerned with academic engagement was chosen.

Schaufeli and colleagues (2002) described academic engagement as a positive, fulfilling, and persistent state while studying. Students who are academically engaged take pride in their academic assignments and experience increased concentration on tasks with the perception of "time flying" (Schaufeli et al., 2002). Academic engagement is considered to consist of three dimensions: vigor, dedication, and absorption (Schaufeli et al., 2002). *Vigor* describes students with high levels of energy and mental resilience while studying, who are willing to devote effort to their learning. *Dedication* refers to students feeling enthusiastic, inspired, and challenged while learning. *Absorption* means that students feel very focused and happy while learning (Schaufeli et al., 2002). Additionally, vigor and dedication are considered the core dimensions of engagement, and absorption was found as a relevant aspect of engagement (Cadime et al., 2016; González-Romá et al., 2006; Salanova et al., 2010).

Academic engagement significantly influences students' academic performance, well-being, and problem behaviors. For example, academic engagement (e.g., vigor)

positively associated with academic performance, and higher levels of academic engagement (e.g., dedication, absorption) related to higher level of emotional, social, and psychological well-being (Cadime et al., 2016). A study among 527 Spanish undergraduate students showed that academic engagement (e.g., vigor, dedication) could mediate the negative relation between performance obstacles (e.g., lack of books and teachers' absence) and students' future academic performance (Salanova et al., 2010). Another longitudinal study among a group of ethnic minority adolescent boys revealed that academic engagement (parents reported; e.g., "he tries in school," "he finishes his homework") predicted lower community violence a year later (youth reported; Elsaesser et al., 2017).

Factors affecting academic engagement. Individual and contextual factors have a significant influence on students' academic engagement. One study found that individual factors such as adequate study skills and high self-efficacy lead to high academic engagement (Bilge et al., 2014). Researchers have also found that contextual factors such as social support contribute to academic engagement. For example, autonomy and supportive teachers as well as teachers' and peers' emotional support facilitate students' engagement (Reeve et al., 2004; Ruzek et al., 2016; Wang & Eccles, 2013). Support from parents, such as high parental involvement and a positive parent-child relationship, also lead to a high level of academic engagement (Fan & Williams, 2010; Wang & Sheikh-Khalil, 2014). Hence, positive individual factors and a high level

of social support (from parents, teachers, and peers) can improve students' academic engagement.

# Parenting style

Parents play an important role in child development (Bornstein, 2019). There are two important elements in parenting: parenting beliefs and parenting behaviors (Putnick, 2019). Parenting beliefs encompass "knowledge of child development and parenting, attributions of child behavior and parenting, attitudes toward parenting, childrearing stress, and parenting goals and values" (Putnick, 2019, *p.* 331). Parenting behaviors include any actions about rearing their child, such as verbal, physical, affective, and psychological actions (Bornstein, 2019; Putnick, 2019).

As an important indicator of parenting beliefs and parenting behaviors, parenting style is defined as a constellation of parents' attitudes and behaviors to children and the emotional climate in which the parents' behaviors are expressed (Darling & Steinberg, 1993). Researchers have found that parenting styles greatly influence children's development by impacting children's attachment, affect, social-emotional development, social competence, academic performance, and risky behaviors (Juffer et al., 2012; Kwon & Wickrama, 2014; Labella et al., 2016; Masud et al., 2015; Ren & Pope Edwards, 2015).

According to Baumrind (1991) and Maccoby and Martin (1983), parenting styles are categorized based on two dimensions: responsiveness/warmth and demandingness/control. Responsiveness or warmth refers to parental receptiveness to the

needs of their children, and the degree of support, warmth, and affection parents display to their children. Demandingness or control refers to parents who have expectations for their children to be mature and responsible and set up rules and limits for their children. Based on parents' level of responsiveness/warmth and demandingness/control, there are four main parenting styles: authoritative, authoritarian, permissive, and disengaged or rejecting-neglecting.

Authoritative style is defined as high responsiveness/warmth and high demandingness/control (Baumrind, 1991). Authoritative parents are warm and supportive, impart clear standards for their child's behavior, and apply inductive reasoning rather than harsh and punitive methods to achieve parental control. Authoritative parents expect their child to be assertive as well as socially responsible, and self-regulated as well as cooperative. *Authoritarian* style, however, comprises low responsiveness/warmth, but high demandingness/control, and authoritarian parents value obedience, respect of authority, tradition, and the preservation of order (Baumrind, 1991). Authoritarian parents prefer to use harsh and punitive practices and try to shape, control, and evaluate their child's behavior and attitudes in accordance with an absolute standard of behavior. *Permissive* parenting style comprises high responsiveness/warmth but low demandingness/control (Baumrind, 1991). Permissive parents take a tolerant, accepting attitude toward the child, exhibit low levels of control and monitoring, and make few demands for mature behavior. Permissive parents are warm in their parenting while avoiding confrontation with the child. Finally, disengaged or rejecting-neglecting

parenting style is characterized as low in responsiveness/warmth and demandingness/control (Baumrind, 1991). Disengaged parents are parent-centered, and they are seldom engaged in child-rearing practices. They neither provide warmth nor set rules for their children.

Other than the parenting styles mentioned above, overprotective parenting or "helicopter parenting" is another parenting style which has drawn researchers' attention (Liss et al., 2013; Root et al., 2016; Rubin et al., 2002; Ungar, 2009). Overprotective parenting describes parents who are too child-centric: overly controlling (overly demandingness), overly warm (overly responsiveness), and overly involved in children's daily life (Liss et al., 2013; Rubin et al., 2002). Overprotective parents tend to provide a safe environment (e.g., avoiding potential risks) but at the cost of their children's well-being (e.g., social anxiety; Chronis-Tuscano et al., 2018; Spokas & Heimberg, 2009).

Compared with the other parenting styles, many studies have revealed that authoritative parenting benefits children's well-being and academic outcomes across. Western and Chinese cultures (Calafat et al., 2014; Masud et al, 2015; Quach et al., 2015). For example, a meta-analysis of 39 studies found that the authoritative parenting style is the most effective practice in promoting students' academic performance across. Western and Asian samples (Masud et al., 2015). Authoritative parents tend to raise children to be more competent, better adjusted emotionally, and highly engaged in school (Li & Gan, 2011). Chinese students who had more academic burnout reported that their parents used less warm but harsher, rejecting, or overprotective parenting practices (Li &

Gan, 2011). Children of authoritative parents were also less likely to have depression and anxiety symptoms and use substances (Calafat et al., 2014; Liem et al., 2010; Mohammadi & Zandasta, 2018; Piko & Balázs, 2012a). Additionally, in a 10-year longitudinal study among 87 American families, when children were preschoolers, parents were classified as directive, democratic, or authoritative (grouped as balanced-committed; Baumrind et al., 2010). Ten years later, adolescents of authoritative parents were competent and well-adjusted relative to adolescents whose parents were classified as authoritarian, permissive, or disengaged (grouped as imbalanced-uncommitted), and adolescents from authoritarian families were notably incompetent and maladjusted (Baumrind et al., 2010). Thus, positive outcomes of authoritative parenting and negative outcomes of authoritarian parenting were consistent after a 10-year period (Baumrind et al., 2010).

#### **Parental Involvement**

As another important indicator of parenting beliefs and parenting behaviors, parental involvement is defined as parents' investment and commitment to their children, including time, energy, and money, and active interactions with schools (Grolnick & Slowiaczek, 1994; Pomerantz et al., 2012). Hoover-Dempsey and Sandler (1995, 2005) proposed a parental involvement theoretical model that includes three main components: First, parents' motivational beliefs, which include parental role construction and parental self-efficacy; second, parents' perceptions of invitations for involvement from others, including general school invitations, specific teacher invitations, and specific child

invitations; third, parents' knowledge and skills, and time and energy related to being involved in children's education. These three components of parental involvement are presented through home- and school-based activities (Walker et al., 2005), such as communicating with children and attending school activities.

Additionally, through home- and school-based activities, parental involvement is an important contributor to children's academic performance (Fan & Chen, 2001; Jeynes, 2007; Wilder, 2014), academic engagement (Fan & Williams, 2010; Ma et al., 2015; Wu & Yao, 2013), and mental health (Wang et al., 2019). Parental involvement also effectively protects children from psychological maladjustment and distress (Flouri & Buchanan, 2003) and academic burnout (Li et al., 2018). For example, a meta-synthesis study of nine meta-analyses found that parental involvement had a positive and consistent relation with students' academic success across different grade levels and ethnic groups (Wilder, 2014). Another meta-analysis of 51 studies across American kindergarten-12thgrade school children found that, as a whole, parental involvement was associated with higher academic achievement by 0.3 of a standard deviation unit (Jeynes, 2012). Furthermore, studies among American and Chinese students showed that parental involvement was positively associated with students' academic engagement (Fan & Williams, 2010; Ma et al., 2015; Wu & Yao, 2013). A study among 2,921 Chinese 5th to 9th grade students showed that high-level parental involvement (e.g., communication between home and school, assisting with homework) was negatively associated with

students' academic burnout (Li et al., 2018). In summary, parental involvement is a fundamental facilitator of students' learning.

Parents' knowledge and skills, and time-energy are two important components parental involvement (Hoover-Dempsey & Sandler, 1995, 2005). For example, parents need some specific knowledge and skills to communicate with children about their school life or to help with children's homework. Parents also need enough time and energy to help children with homework or to attend special events at school. However, parental involvement is constrained by parents' knowledge, skills, schedules, and job demands (Anderson & Minke, 2007; Dodson, 2015; Wang & Sheikh-Khalil, 2014). For example, due to limited knowledge and heavy workload, parental involvement of low income and education families was lower than middle and high income and education families (Dodson, 2015; Lareau, 2011; Wang & Sheikh-Khalil, 2014). Therefore, parents' specific knowledge and skills, as well as their time and energy available to engage in schoolrelated activities, are important indicators of parental involvement (Hoover-Dempsey & Sandler, 2005; Walker et al., 2005). The current study focuses on parents' knowledge and skills and time and energy of parental involvement.

In short, parenting styles and parental involvement greatly influence students' academic outcomes, such as academic burnout, academic engagement, and academic performance. However, what underlying psychological processes account for associations between parenting practices and children outcomes? It is essential to further explore the

mechanisms behind the relation between parenting styles and parental involvement and children's academic outcomes.

#### Perceived parental support

Parental support can be defined as parents providing material and psychological resources to help children (Cohen, 2004). Parents support their children through emotional, informational, and instrumental assistance: parents provide *emotional support* such as love, caring, and encouragement; *informational assistance* such as helping children solve problems and providing life suggestions; and *instrumental support* such as behavioral and material help (Thoits, 2011). However, efforts of parental support are not always perceived by adolescents (Soenens et al., 2019). Adolescents' perceptions of parenting practices affect adolescents' willingness to accept or defy parents' involvement or support (Soenens et al., 2019). For example, studies reveal that adolescents' perceptions of parental support is different from parent-reported support, and sometimes they only have a weak relation (Chu et al., 2010; Furman, 1996; Lakey et al., 2010).

Therefore, perceived parental support is a key pathway from parents to children's outcomes (Chu et al., 2010; Dinkelmann & Buff, 2016; Furman, 1996; Thoit, 2011).

Based on the *attachment theory*, parenting practices are closely associated with children's perception of the quality parent-child relationship, such as perceived parental support and security, and children's outcomes. For example, Soenens and colleagues (2019) concluded that parental acceptance and psychological autonomy positively influenced adolescents' perceived parental support. However, few empirical studies have

explored the relation between parent-reported parenting behaviors and child perceived support. Although some studies revealed that perceived parental involvement had a strong and positive relationship with perceived parental support (e.g., Ruholt et al., 2015), the majority of these studies only used one data source (e.g., only child-reported; Dinkelmann & Buff, 2016). Thus, studies exploring the relations between parent-reported parenting styles, parental involvement, and adolescents perceived parental support are needed.

Researchers have found that perceived parental support benefits children's well-being and school performance (Maiuolo et al., 2019; Luyckx et al., 2014; Sha et al., 2016). For example, perceived parental support improved children's self-efficacy, academic engagement, and learning interest (Sha et al., 2016); Perceived parental support also negatively related to adolescents' general distress and reduced adolescents' help seeking barriers (Maiuolo et al., 2019); A study among African American adolescents indicates that perceived parental support positively related to future education orientation (e.g., "having serious thoughts and plans for the future."). Therefore, perceived parental support plays an essential role in adolescents' learning and well-being.

As a result, it seems that perceived parental support accounts for the relation between parenting practice and their child's outcomes. For instance, researchers found that the effects of parent-reported warmth on children's competence beliefs and intrinsic values were mediated by child-perceived warmth (Dinkelmann & Buff, 2016). Perceived parental support may mediate the relation between parent-reported parenting practices

and children's academic outcomes. Hence, it is crucial to further examine whether perceived parental support statistically mediates the relations of parenting styles and parental involvement to children's learning (academic burnout, academic engagement, and academic performance).

#### **Gender Differences**

According to the social role theory (Eagly et al., 2000), prevailing divisions of gender roles in society lead to different gender functions. Historically, women have been viewed as homemakers, while men have been viewed as economic providers. These divisions of gender roles also lead to different roles by mothers and fathers. For example, mothers are more likely to provide children care and nurturance, and fathers offer social status and income (Cabrera et al., 2018; Ho et al., 2010; McGill, 2014; Raley et al., 2012). Furthermore, mothers spend more time with children and are more sensitive to their needs than fathers (Hallers-Haalboom et al., 2014), and fathers involve themselves less in parenting than mothers (Finley et al., 2008).

Although mothers are considered the primary caregivers, fathers also play an important and irreplaceable role in children's lives (Cabrera, 2020; Hetherington, 1971, 1972). In most families, fathers and mothers raise children together. Coparenting indicates the process that mothers and fathers coordinate parenting responsibilities and serve the needs of children together, and fathers and mothers influence each other directly and indirectly (Feinberg & Kan, 2008; Parke et al., 1979). For example, fathers may moderate or mediate mother-child relationships. Mothers may also influence the quantity

and the quality of father-child interactions. However, there is limited research on fathering, and more research on fathers' involvement is needed (Cabrera, 2020; Cabrera et al., 2018; Cabrera et al., 2014; McGill1, 2014).

Fathers and mothers tend to have different interactions with children. For instance, mothers participate more in caregiving and playing with children than fathers while fathers spent a greater percentage of time available in playing with children (Roopnarine & Hossain, 2013). And for young children, mothers were more likely to play toy-mediated games or role paly with young children but fathers engaged in more physical play (Power & Parke, 1982). As children become adolescents, fathers engage more in verbal playfulness (e.g., humor and sarcasm) instead of physical play, and emotional distance between father and adolescent increases. And compared with fathers, mothers are more emotionally available to and spend more time with adolescents (Larson & Richards, 1994). Additionally, researchers concluded that compared with mothers, fathers may provide a "facilitating environment" for adolescents' autonomy and independence needs (Shulman & Klein, 1993). Hence, father-child relationship is essential to adolescents' development.

Moreover, paternal and maternal parenting practices lead to different effects on adolescents (Milevsky et al., 2007; Quach et al., 2015; Ryan et al., 2010). For example, mother warmth was associated with adolescents' prosocial behavior toward family, while father warmth was associated with prosocial behavior toward friends (Padilla-Walker et al., 2016). Warm paternal parenting had a stronger negative relation with Chinese high

school students' depression and anxiety than warm maternal parenting, possibly because the adolescents perceived more academic pressure from their mothers (Quach et al., 2015). Therefore, the effects of parenting seem different between mothers and fathers (Cabrera et al., 2014; Cabrera et al., 2018). Consequently, it is crucial to study paternal and maternal effects separately.

Additionally, from a transactional perspective, both parents and children are active agents in the parent-child relationship, and they co-create a bidirectional relationship. In other words, while parents impact child outcomes, children can also influence parenting practices (Bornstein, 2009; Sameroff & MacKenzie, 2003; Pinquart, 2017). For example, maternal authoritative parenting predicted adolescents' prosocial behavior toward their mothers, which also predicted more maternal authoritativeness (Padilla-Walker et al., 2012). Maternal authoritarian parenting predicted teens' poor abilities to regulate their emotions and behaviors, and teens' poor self-regulation predicated maternal authoritarian parenting (Moilanen et al., 2015). Hence, children also influence parenting practices.

Furthermore, children's gender influences parenting, and parents often apply different parenting practices on boys and girls. Parents may treat boys and girls differently in order to raise them to fulfil different gender roles in the society. For example, parents are warmer and more empathetic with daughters rather than with sons, and parents more likely to validate daughters' emotions than boys (Lambie & Lindberg, 2016; Mandara et al., 2012; Mascaro et al., 2017). An exception is acknowledging anger

and aggression. Parents were also more likely to discuss anger and accept aggression with boys than with girls because anger is a stereotypically masculine emotion (Brown & Tam, 2019; Morris et al., 2007). Parents encouraged their sons to use active and instrumental strategies and encouraged their daughters to use relationship-oriented strategies for emotional regulation because of expected gender-typic socialization (Morris et al., 2007). Besides children's emotion, parents also have different practices on children's academic performance. For instance, Latino and European American adolescent girls reported hearing more negative comments about their science, technology, engineering, and math (STEM) abilities from their parents than boys because parents held gender-stereotyped beliefs (Leaper & Brown, 2008). These negative comments predicted girls' low perceived competence in math and science later on (Brown & Leaper, 2010).

Boys and girls also have different responses to parenting practices. For instance, Adolescent girls who reported low emotional closeness to their parents were 2.3 times more likely to report high depressive symptoms than girls who reported high emotional closeness with parents, but not for boys because girls valued the quality of the parent-child relationship more (Lewis et al., 2015). Another 5-year longitudinal study found that for 14 - 22 years old, neglectful parenting predicted higher levels of delinquency in boys, and permissive parenting predicted more delinquency in girls (Hoeve et al., 2011). Therefore, parents have different parenting practices on their sons and daughters, and boys and girls also have different sensitivity to parenting (Brown & Tam, 2018; Schiff &

McKay, 2003). It is essential to consider the youth's gender when studying parenting's effects.

As a result, there are interactions between parents' and youth's gender. Specifically, the relationships between different dyads (mother-son, mother-daughter, father-son, and father-daughter) and the effects of these relationships are different (Brown & Tam, 2018). For example, a meta-analysis of 126 studies revealed that mothers used more psychological control and harsh physical discipline with boys than girls because of gender socialization and gender schema (Endendijk et al., 2016). Mothers of 7-16 years old daughters were rated by researchers as more empathetic, encouraging, warm, and accepting and less negative than mothers of sons in observed parent-child interactions (Mandara et al., 2012), whereas there were no differences in father-son and father-daughter interactions (Piko & Balazs, 2012b). Paternal warmth strengthened the negative relation between parental monitoring and school trouble, and the relation was stronger for 6th to 8th grade boys than girls (Lowe & Dotterer, 2013). Thus, interactions between parents' gender and youth's gender are noticeable and should be addressed in parenting studies.

Therefore, parents' gender, youth's gender, and their interactions greatly influence the relations between parenting practices and children's outcomes, but findings are not consistent. Few studies have explored how mother-son, mother-daughter, fatherson, and father-daughter relationships and interactions influenced children's school success other than math or STEM performance. Most extant studies focus on parents'

different expectations for boys' and girls' math or STEM ability (Brown & Tam, 2019). Therefore, it is crucial to investigate how youths' and parents' gender moderate the relation between parenting styles and parental involvement and children's academic burnout and engagement.

#### **Chinese Cultural Context**

The final goal for the current study is to address the shortage of research on high school students' academic burnout and engagement from mainland China. The existing evidence between parents' practices and children's learning (academic burnout and academic engagement) is mainly based on Western samples. Since mainland China has the single largest population of adolescents in the world (World Bank, 2017), Chinese adolescents should not be neglected. Moreover, because of puberty, adolescents experience great physical and psychological changes, and the various changes brings many challenges to parenting (Soenens et al., 2019). For example, compared to younger children, adolescents seek for more autonomy, and their positive and negative emotions oscillate quickly on a moment-to-moment basis. However, adolescents' parents have higher expectations for maturity, behaviors, and academic achievement. Therefore, it is essential to examine the relation between parenting styles and parental involvement and students' learning based on Chinese adolescents.

As addressed in the *PPCT* model, cultural differences can shape different parenting practices and impact how children interpret certain parenting practice. In other words, similar parenting practice may have different meanings for children from different

cultural backgrounds, which has different effects on children's outcomes (Chen et al., 2019; Ng & Wang, 2019; Salili et al., 2001). Because traditional Chinese culture is rooted in Confucianism and is distinct from Western culture, it is essential to study Chinese parenting practices. For example, Confucianism greatly emphasizes social hierarchy (Gabrenya Jr & Hwang, 1996; Zhang et al., 2005). In addition, academic success is regarded as a primary way to pursue upward mobility (Shih, 2015), and personal career success is strongly associated with academic achievement in China (Ang & Huan, 2006; Li, 2001; Tan & Yates, 2011). This emphasis is captured in the old Chinese saying, "only to be a scholar is being the best of all" (Chinese phrase "Wan ban jie xia pin, wei you du shu gao"). Thus, generally, Chinese parents have high academic expectations for their children.

Furthermore, China is a collectivistic society. Collectivism emphasizes interdependence of individuals and connections within groups (e.g., family, tribe, and nation). People are concerned about relationships, give priority to the goals of their ingroups, and shape their behavior primarily on the basis of in-group norms, and behave in a communal way (Mills & Clark, 1982; Triandis, 2001, 2018). Filial piety, which values obedience to parents, is also a core element of Confucianism (Lin & Fu, 1990; Shek, 2002). In a traditional Chinese context, parental authority is highly valued and respected. Children should meet their family's expectations, and their requests for autonomy are discouraged (Fuligni, 1998). Thus, some researchers tend to conclude that due to Confucian culture, Chinese parents tend to apply low warm but high controlling and

harsh (authoritarian) parenting, and these parenting practices are culturally normative and accepted by Chinese children (Dornbusch et al., 1987; Helwig et al., 2014).

However, Chao (1994) argued that for Chinese parents, controlling and highpower parenting were typically associated with parental care and warmth. Explicit
expression of warm parenting (e.g., "hugging and kissing") is inappropriate in traditional
Chinese culture because this expression undermines parental authority (Cheah et al.,
2015; Chen, 2010; Wu & Chao, 2005). Chinese parents tend to express warmth indirectly
through instrumental support (e.g., "I make him his favorite soup") and providing
guidance and educational opportunities (e.g., "I will try to let her go to good schools";
Cheah et al., 2015). Additionally, in an observational study, researchers found that
although Chinese parents used more parental control than Western parents, Chinese and
Western parents were equally warm with their children (Jose, Huntsinger, Huntsinger, &
Liaw, 2000). Thus, it is misleading to label Chinese parenting as authoritarian (Chen et
al., 2019).

With the popularity of *Battle Hymn of the Tiger Mother* by Amy Chua, a heated debate was raised focusing on whether "tiger" parenting (e.g., applying psychological control, harsh discipline, and punishment in parenting practices to force children to have good academic performance) was common in Chinese or Chinese American parenting. Some researchers argue that Chua's self-portrayal of the "tiger mother" typifies Chinese or Chinese American parenting and benefits children (Fu & Markus, 2014; Smetana, 2017). However, empirical research reveals that tiger parenting is not an ideal or actual

style of urban Chinese and Chinese American parenting, nor does it foster children's well-being (Cheah et al., 2013; Kim et al., 2013; Way et al., 2013; Zhang et al., 2017). Many recent studies have found that urban Chinese parents are becoming more supportive and more authoritative. For example, a four-year longitudinal study among 2,173 urban Chinese adolescents demonstrated that the number of authoritative parents was three times more than authoritarian parents (Zhang et al., 2017). Urban Chinese parents' primary goal was to raise social-emotional adjustment, and their strategies were providing children freedom and not forcing children to engage in particular activities (Way et al., 2013). Additionally, authoritative parenting related to children's better emotional adjustment, higher academic engagement, and better academic performance (Li & Gan, 2011).

However, the findings among rural parents in China seem not consistent with that among parents in urban. For instance, based on parental reports, peer evaluation, teacher ratings, and school records, Chinese rural parents were found to be less likely to encourage initiative-taking and self-direction than parents in urban (Chen & Li, 2012). An interview study among parents and teachers showed that parents of urbanized families (rural-to-urban migrant) were less involved in parenting and were perceived as incompetent parents (Yu, 2019). Additionally, rural children were less sociable and had more school problems than their urban counterpart (Chen & Li, 2012). Therefore, when studying Chinese parenting practices, rural parents, urbanized parents, and urban parents should be considered separately.

Three potential reasons can account for Chinese urban parenting practices and the differences of parenting practices among rural parents, urbanized parents, and urban parents. One potential reason for this is that because of the economic reform and opening and rapid urbanization in China, many modern and Western cultures have gradually exerted their influence on Chinese society and the family systems. Another potential reason is that the One-Child Policy was implemented by the government from 1979 until 2016 and led to a significant change in the urban family, often described as the "4-2-1" family structure (four grandparents, two parents, and one child). The One-Child Policy led Chinese parents to be more sensitive to children's feelings and needs (Chang et al., 2003). Parenting strategies and beliefs were child-centered, egalitarian, and warmthoriented rather than control-oriented in the only child families (Lu & Chang, 2013). A third reason is that migrant parents lack time and knowledge to be involved in parenting or left their young children to grandparents or other relatives because of 'strive for survival' (Liu et al., 2009; Yu, 2019).

In conclusion, the contemporary Chinese context is complex, consisting of both Confucianism culture and modern cultures. All of these factors make Chinese parenting practices unique. Hence, the unique relation between Chinese parenting practices and children needs to be further explored. Additionally, no matter how researchers define or describe Chinese parenting practices, Chinese parents consistently have a high level of parental involvement. Therefore, when studying Chinese parenting styles, it is essential to consider parental involvement at the same time.

## **Current Study**

In summary, firstly, many researchers have investigated the relations between parenting styles and parental involvement and students' learning (academic burnout and engagement). However, few researchers have examined students' academic burnout and engagement concurrently (Bilge et al., 2014; Reeve et al., 2004; Salanova et al., 2010). Both academic burnout and engagement are important indicators of school success. Therefore, it is essential to consider the two outcomes together to investigate students' school outcomes completely.

Secondly, to date, little research has been undertaken to reveal how parenting styles and parental involvement were related to students' academic burnout and engagement. According to attachment theory, adolescents' perception of the quality of parent-child relationship may account the relation between parenting practices and children's outcomes. Hence, it is essential to examine further whether perceived parental support statistically mediates the relations between parenting styles and parental involvement and students' school success (academic burnout and engagement).

Third, studies have presented that parents' and youths' gender, and their interactions have many influences on the relations between parenting practices and children's outcomes. Therefore, the associations between paternal and maternal parenting and children should be studied separately. Additionally, it is crucial to consider and study youths' gender sensitivity to parenting, as well as interactions between parents' and youths' gender in the current study.

Fourth, few studies of parents' practices and school success (academic burnout and engagement) are based on Chinese adolescents and their parents. Additionally, Confucianism, the impacts of the One-Child Policy, and rapid urbanization make the Chinese context complex, which makes Chinese parenting unique. Therefore, it is valuable to study the relations between Chinese parenting styles and parental involvement and high school students' academic burnout and engagement.

The current study addressed three main research questions (RQs).

*RQ1*: Do parenting styles and parental involvement relate to students' academic burnout and engagement?

Hypotheses 1 a: I hypothesized that authoritative parenting style and parental involvement (parental time and energy and knowledge and skills) negatively related to students' academic burnout and positively related to academic engagement.

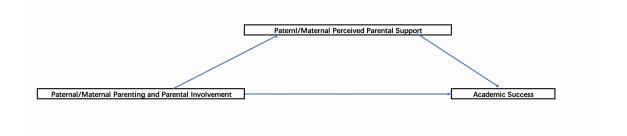
Hypotheses 1 b: I hypothesized that authoritarian parenting style positively related to students' academic burnout and negatively related to academic engagement.

*RQ2:* Does perceived parental support mediate the association between parenting styles and parental involvement and students' academic burnout and engagement?

Hypotheses 2: I hypothesized that perceived parental support mediated the association between parenting styles and parental involvement and students' academic burnout and engagement, see Figure 1.

Figure 1

Simple Mediation Model



RQ3: Do paternal and maternal parenting styles and parental involvement have different relations with boys' and girls' academic burnout and engagement? (an exploratory research question)

Hypotheses 3: Although this is an exploratory research question, I hypothesized that boys and girls perceived paternal or maternal support differently, and paternal and maternal parenting and parental involvement were associated with boys' and girls' academic burnout and engagement differently.

## **Chapter 3: Method**

### **Procedures**

The current study used a secondary database. The data were collected in 2016.

Fathers and mothers completed the parenting style and parental involvement scales.

Students completed perceived parental support, academic burnout, and academic engagement scales. The school provided students' academic grades at the end of school year.

## **Participants**

The current study used a secondary database collected in China. A total of 285 high school students (27.4%  $10^{th}$  graders, 42.5%  $11^{th}$  graders, and 30.2%  $12^{th}$  graders, M = 15.93 years, SD = 1.06 years, 51.9% boys) from one school in Beijing, China, and their parents participated in this study. Parents gave active consent to participate in this study. For fathers, 84.9 % had high school/junior college or less education background, 9.8% have a Bachelor's Degree, and 1.4% have a Master's Degree. For mothers, 89.1% have high school/junior college or less education background, 7.0% have a Bachelor's Degree, and 0.4% have a Master's Degree. Approximately,92.6% fathers and 88.4% mothers had a job. Fathers worked 8.62 hours (SD = 2.74 hours) a day, and mother worked 8.04 hours (SD = 3.39 hours) a day. Fathers reported that they spent 1.10 hours (SD = 1.03) studying with their adolescents, and mothers reported that they spent 1.15 hours (SD = 0.92) studying with their adolescents. Additionally, 58.94% (n = 168) of adolescents reported that fathers and mothers were equally involved in their schooling; 12.59% (n = 36) or

22.81% (n = 65) of adolescents reported fathers or mothers mainly involved in their schooling; 3.86% (n = 11) of adolescents reported the other guardian (e.g., grandparents) involved in their schooling.

### Measures

Academic burnout. The Maslach Burnout Inventory-Student Survey Chinese version (MBI-SS) was used to assess students' academic burnout. Two core dimensions were assessed, exhaustion (e.g., "I feel emotionally drained by my studies." 5 items) and cynicism (e.g., "I have become less enthusiastic about my studies." 4 items; Hu & Schaufeli, 2009; Schaufeli et al. 2002; Schaufeli, & Taris, 2005). Students responded to items on a 7-point scale (1 = Never, 2 = Rarely, 3 = Occasionally, 4 = Sometimes, 5 = Frequently, 6 = Usually, and 7 = Every Time). In the analysis, I used exhaustion and cynicism subscales separately.

Academic engagement. The Utrecht Work Engagement Scale-Student Chinese version (UWES-S) was used to measure students' academic engagement. Two core dimensions were assessed, vigor (e.g., "When studying I feel strong and vigorous." 5 items) and dedication (e.g., "I am enthusiastic about my studies." 5 items; Li & Huang, 2010; Schaufeli et al. 2002). Students' responses ranged from 1 (Never) to 7 (Every Time). I used vigor and dedication subscales separately.

Parenting style. The Parental Authority Questionnaire Chinese version (PAQ; Buri, 1991; Zhou et al., 2010) was used to measure parenting styles. Authoritative (e.g., "My children know what I expect from them, but feel free to talk with me if they feel my

expectations are unfair." 5 items) and *authoritarian* (e.g., "It is for my children's own good to require them to do what I think is right, even if they don't agree." 5 items) styles were assessed. Fathers and mothers responded separately to items on a 7-point scale (1 = *Strongly Disagree*, 2 = Disagree, 3 = Somewhat Disagree, 4 = Neither Agree or Disagree, 5 = Somewhat Agree, 6 = Agree, and 7 = *Strongly Agree*). Paternal and maternal authoritative and authoritarian parentings were analyzed separately.

Parental involvement. Parents' Perceptions of Personal Knowledge and Skills Scale and Parents' Perceptions of Personal Time and Energy Scale (Walker et al., 2005), which includes two scales: knowledge and skills (e.g., "I know effective ways to contact my child's teacher." 9 items) and time and energy (e.g., "I have enough time and energy to communicate effectively with my child about the school day." 6 items). Fathers and mothers responded separately to items on a 7-point scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). Paternal and maternal knowledge and skills involvement and time and energy involvement were analyzed separately.

Perceived parental support. The scale was revised from Survey of Perceived Organizational Support (Eisenberger et al., 1986; Eisenberger et al., 2002), which includes five items (e.g., "My father does care about my well-being."). Adolescents responded to perceived paternal and maternal support separately, ranging from 1 (Strongly disagree) to 7 (Strongly agree). Perceived paternal and maternal support were analyzed separately.

## **Analysis Approach**

**Missing data.** A total of 285 students and their parents participated in the current study. A limited number of the participants skipped a few items. In order to look at whether the missing data had a pattern, the Little's MCAR test was performed using the SPSS 26 software. The Little's MCAR test is used to test at whether the data are missing completely at random (Myers, 2011). The result revealed that the missing data were random, and there was no pattern in the missing data,  $\chi^2$  (183687) = 59820.637, p = 1.000. I used series means to replace missing data. Thus, the total number for analyses was 285.

Measurement Fit. In order to ensure whether the items fit well for Chinese adolescents and parents in our sample, confirmatory factor analysis (CFA) was used to test the measurement model fit of parenting styles, parental involvement, perceived parental support, academic burnout, and academic engagement, using Mplus 7.4. The loading of items on the factors decided whether items were retained. Items that had a loading of .40 or greater were retained on the factor. Table 1 presented retained items and loadings on each factor and also reliability of each scale in paternal and maternal models, including Cronbach's  $\alpha$  and Omega  $\omega$ .

For parenting style, I applied the scales for fathers and mothers separately, both paternal and maternal models' fit were poor. One item's loading on maternal authoritative factor was below .40 to improve model fit. To keep paternal and maternal models consistent, the item was deleted in both paternal and maternal parenting model. Similar steps were also used for other measures: parental knowledge and skills

involvement, time and energy involvement, and perceived parental support. The parental knowledge and skills involvement was analyzed among fathers and mothers separately. One item's loading on paternal knowledge and skill involvement was below .40 so this item was deleted. Paternal time and energy involvement were also analyzed among fathers and mothers separately. All items' loadings on paternal and maternal time and energy involvement were above .40. When perceived paternal and maternal support was analyzed, all items' loadings on factors were above .40.

When the academic burnout model was analyzed among boys and girls together, items' loadings on factors were above .40. When the academic burnout model was applied in boys' and girls' samples separately, all items' loadings were above .40. For academic engagement, when the model was applied in boys and girls together, one item on dedication was deleted because the loading was below .40.

The final measurement model included paternal/maternal authoritarian and authoritative parenting styles, paternal/maternal knowledge and skill and time and energy involvement, perceived paternal/maternal support, academic exhaustion, cynicism, vigor, and dedication. The fit indexes of paternal measurement model was  $\chi^2 = 1815.409$ , df = 909, CFI = .839, RMSEA = .059, SRMR = .065. The fit indexes of maternal measurement model was  $\chi^2 = 1859.812$ , df = 909, CFI = .823, RMSEA = .061, SRMR = .064.

According to the cutoff criteria for fit indexes for model fit (CFI > .95, RMSEA < .65, and SRMR < .85; Hancock & Mueller, 2013; Hu & Bentler, 1999), both measurement fit was good, although CFI of both models were below .95. Because CFI evaluates a

model's absolute fit which is compared with the null model, and low correlations among items (parents reported parenting practices, and adolescents reported academic outcomes) in current study interfere the absolute model fit (Hancock & Mueller, 2013). However, RMSEA and SRMR indicate the fit of the measurement was good. Additionally, Cronbach's  $\alpha$  and Omega  $\omega$  of all scales were above .70, indicating the reliability of scales were acceptable, see Table 1.

Mediation and multi-group analysis. To answer the first and second research questions, I conducted the Structural Equation Modeling in Mplus 7.4, and bootstrap was 5000. I ran two separate models for fathers and mothers. I conducted the multi-group path analysis in Mplus 7.4 and bootstrap was 5000 to examine *RQ*3 that whether paternal or maternal parenting practices associated with boys' and girls' school outcomes differently. I did not use the latent variables in multi-group comparisons because the sample size of boys or girls was small in relation to the complexity of the model (e.g., many parameters). I compared father-son and father-daughter dyads in the paternal model and mother-son and mother-daughter in the maternal model.

## **Chapter 4: Results**

# **Descriptive Analyses**

Approximately, 46.3% of students in this sample frequently felt exhausted ( $Mean_{exhaustion} > 4.00$ ), and 29.5% of students had a cynical attitude towards study frequently ( $Mean_{exhaustion} > 4.00$ ). On the other hand, 29.1% of students frequently felt vigorous while studying ( $Mean_{vigor} > 4.00$ ), and 51.2% of students frequently felt dedicated ( $Mean_{dedication} > 4.00$ ). Additionally, 18.25% (n = 52) of students frequently experienced both academic engagement (total score) and academic exhaustion (total score). Table 2 presents the means, standard deviations, and bivariate correlation for the variables of interest. As expected, paternal and maternal authoritative parenting style, time and energy involvement, and knowledge and skills involvement positively and significantly correlated to each other. Academic vigor, dedication, and cynicism significantly associated with each other. However, both paternal and maternal authoritarian parenting were not significantly associated with authoritative parenting.

### **Preliminary Analyses**

Independent-Samples t-test was used to test youth gender differences on academic outcomes, parenting practices (parenting styles and parental involvement), and perceived parental support, see Table 3. Boys reported a higher level of academic exhaustion and cynicism than girls. Fathers involved more time and energy for boys than girls. There were no differences in the scores of paternal and maternal parenting styles and perceived

parental support between boys and girls. Paired-Sample t-test (Table 4) showed that mothers reported higher scores on authoritative parenting and parental involvement (time and energy and knowledge and skills). Both fathers and mothers reported higher scores on authoritative parenting style than authoritarian parenting style. Adolescents perceived more maternal support than paternal support. Additionally, compared with the other categories, students who reported fathers and mothers equally involved in their studying, perceived more paternal and maternal support (t(283) = 2.663/2.438, p = .008/.015) and had higher dedication (t(283) = 2.173, p = .031; See Table 5).

One-Way ANOVA was used to test grade differences in parenting practices and academic outcomes. There were grade differences on both paternal and maternal time and energy involvement and knowledge and skills involvement (F (2, 282) = 3.421/4.484, p = .034/.021; F (2, 282) = 3.378/5.003, p = .035/.007). There were also grade differences on perceived paternal support (F (2, 282) = 5.789, p = .003) and academic engagement: vigor (F (2, 282) = 6.021, p = .003) and dedication (F (2, 282) = 5.789, p = .020), but no differences on academic burnout. The results of post hoc analyses are shown in Table 6. Mothers and fathers of  $10^{th}$  graders reported the highest scores on parental time and energy and knowledge and skills involvement. The  $10^{th}$  graders also perceived most paternal and maternal support. Additionally, the 10th graders had the highest scores on academic vigor and dedication ( $10^{th}$  grade is the first year of three years in Chinese high school).

### Mediation

To test the role of perceived parental support, paternal and maternal mediation models were analyzed separately, using Mplus 7.4 and bootstrap 5000. Additionally, I added a residualized factor for parental time and energy and knowledge and skills involvement. Because strong relations among items of parental time and energy and knowledge and skills involvement generate a great amount of covariances. First, in Hoover-Dempsey's and Sandler's parental involvement model, parental time and energy and knowledge and skills belong to parents' perceived life context (Hoover-Dempsey's & Sandler, 2005). Second, the two scales share a similar syntactical structure (e.g., "I have enough time and energy to communicate effectively with my child about the school day" and "I know how to communicate effectively with my child about the school day", see

The paternal mediation model yielded a good fit,  $\chi^2 = 1596.461$ , df = 896, CFI = .876, RMSEA = .052, SRMR = .073. The maternal mediation model also fit well,  $\chi^2 = 1756.208$ , df = 896, CFI = .840, RMSEA = .058, SRMR = .059. Compared with measurement fit, both paternal and maternal mediation models' fit are significantly better  $(\Delta \chi^2 = 218.948/103.604, \ \Delta df = 13/13, \ p < .001)$ . The results of direct and indirect effects are shown in Table 7, Table 8, Figure 2, and Figure 3.

**Direct effects.** In the paternal model, paternal authoritative parenting style negatively associated with adolescents' academic exhaustion  $\beta$  = -.337, [95% CI -.937, -.045]. In the maternal model, authoritative parenting style negatively related to

adolescents' academic exhaustion  $\beta$  = -.232 ([95% CI -1.345, -.003]) and cynicism  $\beta$  = -.323 ([95% CI -2.776, -.122]). Maternal time and energy involvement negatively related to academic vigor,  $\beta$  = -.237 ([95% CI -3.840, -.041]) and dedication,  $\beta$  = -.238 ([95% CI -1.976, -.048]).

Indirect effects. Figure 2 and Figure 3 provided the results of the indirect effects of parenting on adolescents' academic outcomes via perceived parental support. Paternal authoritative parenting style and knowledge and skills involvement had positive indirect effects on academic vigor (indirect effect = .069/.055 [90% CI .009, .188]/ [95% CI .005, .181]) and dedication (indirect effect = .080/.064 [95% CI .001, .231]/ [95% CI .007, .182]) via perceived paternal support. Since paternal authoritative parenting style and knowledge and skills involvement did not have direct effects on adolescents' vigor and dedication, the effects of authoritative parenting style and knowledge and skills involvement on vigor and dedication were fully mediated by perceived paternal support. Paternal authoritative parenting style and knowledge and skills involvement positively related to perceived paternal support, and when adolescents perceived more paternal support, they reported more academic vigor and dedication.

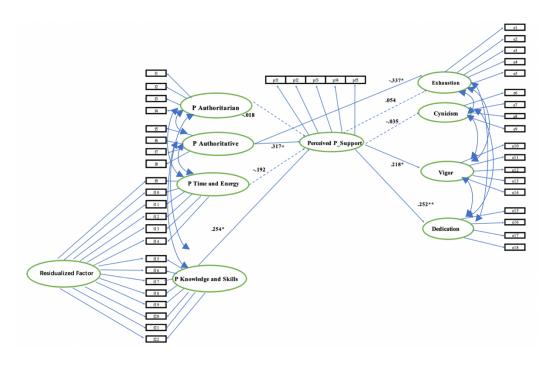
Maternal authoritative parenting style had positive indirect effects on academic vigor (indirect effect = .052, [95% CI .000, 1.290]) and dedication (indirect effect = .058, [95% CI .000, 1.590]) via perceived maternal support. Additionally, maternal time and energy involvement had negative indirect effect on academic vigor (indirect effect = -.054 [90% CI -1.299, -.003]) and dedication (indirect effect = -.052 [90% CI -1.629,

-.001]) via perceived maternal support. Since maternal time and energy involvement also had direct effects on academic vigor and dedication, the path from maternal time and energy involvement to academic vigor and dedication were partially mediated by perceived maternal support. The indirect effects of maternal authoritative on academic vigor and dedication were fully mediated by perceived maternal support. Maternal authoritative parenting positively related to perceived maternal support, and when adolescents perceived more maternal support, they reported more academic vigor and dedication. However, when mothers involved more time and energy in parenting, adolescents perceived less maternal support.

Figure 2

Indirect Effects of Paternal Parenting Styles and Involvement on adolescents' Academic

Outcomes

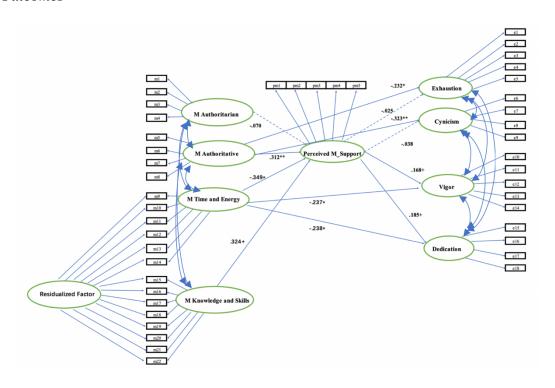


*Note.*  $.05 < {}^+p < .10$ ; \* p < .05; \*\*\* p < .01; \*\*\*\* p < .001; Only significant direct effects were shown; Items' loadings were showed in Table 1.

Figure 3

Indirect Effects of Maternal Parenting Styles and Involvement on adolescents' Academic

Outcomes



*Note.*  $.05 < {}^+p < .10$ ; \* p < .05; \*\*\* p < .01; \*\*\* p < .001; Only significant direct effects were shown; Items' loadings were showed in Table 1.

## **Gender Differences**

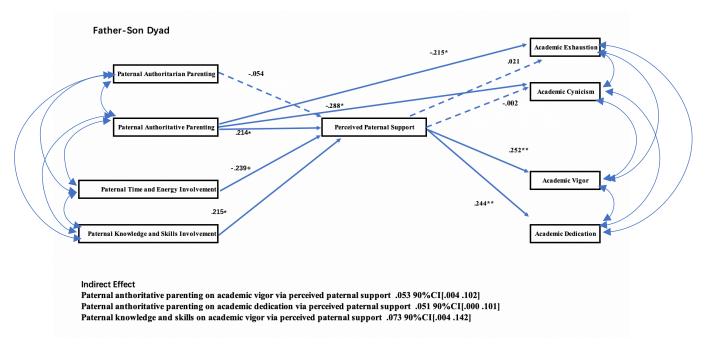
I hypothesized that paternal and maternal parenting styles and parental involvement would have different effects on boys' and girls' academic outcomes. To test the hypothesis, I used the multi-group structural equation model analysis in Mplus 7.4, using bootstrap 5000. More specifically, father-son and father-daughter dyads in paternal

models and mother-son and mother-daughter dyads in maternal models were compared. Fit statistics indicated a good fit of proposed statistical models (paternal model: CFI = 1.000, RMSEA = .000, SRMR = .000; maternal model: CFI = 1.000, RMSEA = .000, SRMR = .000).

First, I compared father-son and father-daughter dyads, see Figure 4 and Figure 5. Fathers' parenting practices had different relations with sons' and daughters' school outcomes. Fathers' authoritative parenting directly negatively related to their sons' academic exhaustion and cynicism, while paternal knowledge and skills involvement positively related to their daughters' academic vigor and dedication. Additionally, paternal authoritative parenting and knowledge and skills involvement positively associated with boys' academic vigor and dedication via perceived paternal support. The indirect effects were .053 [90% CI .004, .102], .051 [90% CI .000, .101], and .073 [90% CI .004, .142], respectively. In contrast, only paternal authoritative parenting associated with girls' academic dedication via perceived paternal support, and the indirect effect was .074 [95% CI .010, .138].

Figure 4

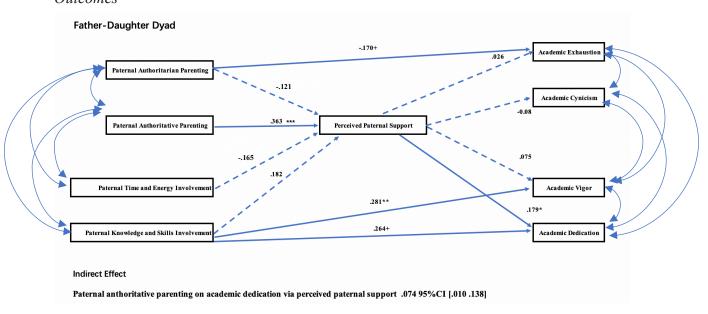
Indirect Effects of Paternal Parenting Styles and Involvement on Boys' Academic Outcomes



*Note.*  $.05 < {}^+p < .10$ ; \* p < .05; \*\*\* p < .01; \*\*\*\* p < .001; Significant direct effects were also shown.

Figure 5

Indirect Effects of Paternal Parenting Styles and Involvement on Girls' Academic
Outcomes

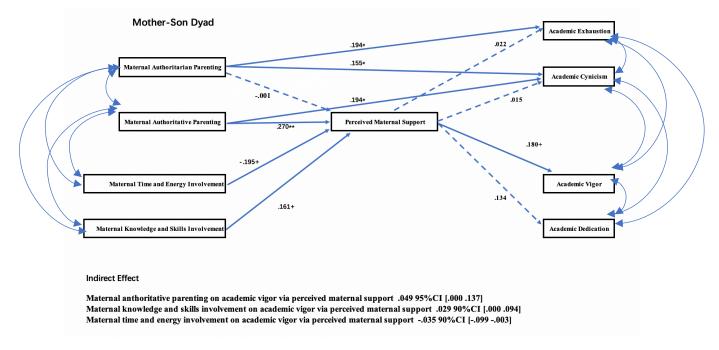


*Note.*  $.05 < {}^+p < .10$ ; \* p < .05; \*\*\* p < .01; \*\*\*\* p < .001; Significant direct effects were also shown.

Second, I compared mother-son and mother-daughter dyads, see Figure 6 and Figure 7. Maternal authoritarian parenting positively related to boys' academic exhaustion and cynicism, and maternal authoritative parenting negatively associated with boys' academic cynicism. But only maternal time and energy involvement negatively related to girls' academic exhaustion. In addition, maternal authoritative parenting, knowledge and skills involvement, and time and energy involvement were related to boys' academic vigor via perceived maternal support. The indirect effects were .049 [95% CI .000, .137], .029 [90% CI .000, .094], and -.035 [90% CI -.099, -.003], respectively. Maternal authoritarian parenting, authoritative parenting, and knowledge and skills involvement associated to girls' academic dedication via perceived maternal support. The indirect effects were -.017 [90% CI -.053, -.001], .042 [90% CI .004, .105], and .063 [90% CI .006, .159], respectively.

Figure 6

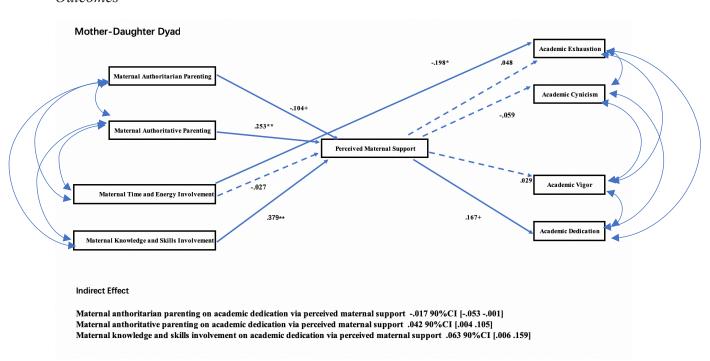
Indirect Effects of Maternal Parenting Styles and Involvement on Boys' Academic Outcomes



*Note.*  $.05 < {}^+p < .10$ ; \* p < .05; \*\*\* p < .01; \*\*\*\* p < .001; Significant direct effects were also shown.

Figure 7

Indirect Effects of Maternal Parenting Styles and Involvement on Girls' Academic
Outcomes



*Note.*  $.05 < {}^+p < .10$ ; \* p < .05; \*\*\* p < .01; \*\*\* p < .001; Covariances were not shown; Significant direct effects were also shown.

# **Chapter 5: Discussion**

The overall goal of the current study was to examine the relations between parenting practices, perceived parental support, and adolescents' academic burnout and engagement. This study examined whether paternal and maternal parenting styles and parental involvement predicted adolescents' academic burnout and engagement via perceived parental support. Additionally, the current study also analyzed whether fathers and mothers predicted boys' and girls' academic burnout and engagement differently. Results from this study provide important implications for parents and schools regarding how to promote student engagement and reduce academic burnout.

## **Academic Burnout and Engagement**

The current study found that 46.3% of students frequently reported feeling exhausted about schoolwork, and 29.5% of students had a detached attitude towards learning frequently. These percentages are similar to a previous study among Chinese middle school students, 36.8% of 730 students experiencing academic exhaustion and cynicism (Zhang et al., 2013). The percentage of exhaustion is similar to a study among American high school students, 41.8% of 333 students feeling stressed (Feld & Shusterman, 2015). On the other hand, 29.1% of students frequently felt vigorous, and 51.2 % of students frequently felt dedicated while learning. Our results suggest that both academic burnout and engagement are prevalent among Chinese urban adolescents.

In addition, 18.25% (n = 52) of students experienced academic vigor and exhaustion at the same time. It seems that for Chinese high school students, a high level

of academic engagement does not necessarily mean a low level of academic burnout. This finding is somewhat consistent with research done in Finland showing that 28% of 979 Finnish high school students were engaged and exhausted (Tuominen-Soini & Salmela-Aro, 2014). At first, both engaged and engaged—exhausted students were engaged and doing well in high school. However, six years later, the engaged students were more likely to stay in the engaged group, but the engaged—exhausted students were more likely to move into a disengaged group (Tuominen-Soini & Salmela-Aro, 2014). Therefore, the identification of the engaged—exhausted students is essential.

Engaged—exhausted students have been described as students who are committed to studying and have positive academic motivation but are susceptible to exhaustion, feelings of inadequacy, and fear of failure (Tuominen-Soini et al., 2008, 2012).

Researchers found that achievement goal orientation may explain engaged—exhausted students' performances (Tuominen-Soini et al., 2008, 2012; Tuominen-Soini & Salmela-Aro, 2014). Most engaged—exhausted students are success-orientated. Success-orientated students performed high-levels of both mastery and performance orientation, and they strived for both absolute and relative success. Engaged—exhausted students had positive motivational profile, high commitment, and excellent academic achievement but also high fear of failure. Engaged—exhausted students were very susceptible to psychological distress and likely to become disengaged in the future. Therefore, it is important to support engaged—exhausted students to prevent future disengagement.

### **Grade Differences**

Compared with 11<sup>th</sup> and 12<sup>th</sup> graders, 10th graders reported the highest level of paternal and maternal support and had the highest scores on academic vigor and dedication. These findings are consistent with previous studies that academic engagement decreased from 9<sup>th</sup> grade to 11<sup>th</sup> grade, and when students got older, they needed less parental support and sought more independence from parents (Chen, 2008; Furman & Buhrmester, 1992; Soenens et al., 2019; Xu, 2004). Additionally, we also found that both mothers and fathers of 10th graders reported higher scores on parental time and energy and knowledge and skills involvement compared with parents of 11<sup>th</sup> and 12<sup>th</sup> graders.

The first explanation is that parents tend to be more involved in the transition to high school, which is 10<sup>th</sup> grade in Chinese school systems (Hill & Wang, 2015). The transition from middle school to high school is an essential time in the lives of adolescents (Wigfield et al., 1991; Eccles et al., 1996). Good high school transition works as a positive factor to high school success, such as grades, engagement, high school graduation, and socioemotional well-being (Allensworth & Easton, 2007; Benner, 2011). Both 9<sup>th</sup> graders and their parents were concerned about the difficulty of the classes and the amount of homework in high school during the transition (Akos & Galassi, 2004). Parents tend to apply more parental involvement as a strategy to help their adolescents' transition (Hill & Wang, 2015; Juang & Silbereisen, 2002). And parental involvement is a protective factor during the transition to high school (Chen & Gregory, 2010).

The second explanation is from a transactional perspective. As adolescents become young adults during high school, they require considerable autonomy and less parental control (Padilla-Walker & Nelson, 2019). As a result, parents face challenges in balancing parental involvement or monitoring and autonomy support to meet the needs of adolescents (Padilla-Walker & Nelson, 2019). Parental autonomy support is adaptive while psychological control is less adaptive and leading to negative adolescents' outcomes (e.g., depression, anxiety, low level of emotional regulation and social competence; Nelson et al., 2011; Reed et al., 2015; Zimmer-Gembeck et al., 2011). Parents tend to provide more autonomy for their adolescents and reduce controlling techniques. Therefore, in the current study, compared with 9th graders' fathers and mothers, 10th and 11th graders' fathers and mothers reported less time and energy and knowledge and skills involvement. Parents were less involved in helping or supervising adolescents' homework, communicating about their school day, and helping out adolescents' schools or communicating with teachers. Thus, 10th and 11th graders' fathers and mothers reported less parental involvement.

The third explanation is that parents' and children's homework management strategies have changed. First, as adolescents progress to higher grade levels, the school curriculum becomes challenging for parents to be involved if they want to help their adolescents with homework. Parents may feel they do not have enough knowledge to comprehend the material and also feel inadequate in their ability to support or supervise high school students' homework (Chen, 2008). In the current study, only approximately

10% of fathers and mothers have a Bachelor's Degree or above. Second, as high school students got into higher grade levels, they were more engaged in self-motivation and self-reward and made fewer efforts to avoid distractions while studying (Xu, 2004).

Therefore, parents in the sample may be less involved in helping with schoolwork.

#### **Mediation Model**

The mediation models showed that both fathers and mothers have significant direct and indirect effects (via perceived parental support) on adolescents' academic burnout and engagement. When fathers and mothers applied authoritative parenting, adolescents were less likely to experience exhaustion and have a cynical attitude toward learning. Additionally, when fathers and mothers used authoritative parenting or were involved more (knowledge and skills involvement), adolescents perceived more paternal and maternal support, and students also reported more academic engagement (Soenens et al., 2019). Therefore, parents still affect adolescents' learning in both direct and indirect ways. Moreover, since most indirect effects were fully mediated by perceived paternal or maternal support, adolescents' perceived parental support is a crucial connection between parenting practices and their school outcomes.

Authoritarian and authoritative parenting styles on adolescents. Although parents who use authoritative or authoritarian parenting style both set clear rules for expected behaviors, authoritative parents provide children a warm and supportive climate and are open to communication. However, authoritarian parents require obedience and respect for authority and do not allow children to negotiate (Baumrind, 1991).

Adolescents gradually seek more independence and autonomy and take distance from their parents. Research suggests that warm and supportive parenting, rather than harsh parenting, can balance the autonomy and connectedness in the parent-adolescent relationship and contribute to the quality of parent-child relationship (Wuyts et al., 2018). Our results extend previous research and suggest that authoritative, instead of the authoritarian parenting, fosters adolescents' academic engagement and reduces burnout.

Additionally, there has been a heated debate over Chinese parenting, which mainly focuses on whether Chinese culture makes a difference in the relation between parenting styles and children's outcomes. Many researchers tended to conclude that Chinese parents used harsher and less warm parenting because of Chinese traditional cultures, such as Collectivism and filial piety (Dornbusch et al., 1987; Helwig et al., 2014). However, many researchers have argued that labeling Chinese parenting as authoritarian parenting is a stereotype (Chao, 1994; Chen et al., 2019). For example, although Chinese parents are less likely to express warmth explicitly (e.g., hug and kiss), they tend to use indirect ways to show supports and warmth (e.g., "making soup for kids" and "let kids go to good schools"; Cheah et al., 2015; Chen, 2010; Wu & Chao, 2005). Moreover, many studies have already shown that compared with authoritarian parenting, Urban Chinese parents use authoritative or warm parenting more in the contemporary context, which benefit children's psychological and academic outcomes (Chang et al., 2003; Chen & Li, 2012; Li & Gan, 2011; Zhang et al., 2017). Parents in the current study also reported significantly higher authoritative parenting than authoritarian parenting. The result enhances the existing literature that authoritative or warm parenting is normative and accepted by Chinese children.

During the four decades of reform and opening-up, Chinese society has experienced great changes, including fast industrialization and urbanization, One-Child Policy, and globalization. Therefore, the contemporary Chinese context is complex, consisting of both Confucianism culture and modern cultures (Faure & Fang, 2008; Hwang, 1998). Both traditional values and modern western values influence Chinese people's daily life and define Chinese family identity (Yang et al., 2006; Yeh et al., 2013). Therefore, when interpreting Chinese parenting, it is necessary to keep in mind Chinese parenting is influenced by both cultures, not only using Confucianism perspective.

Parental involvement on adolescents. The results showed that when fathers and mothers were more involved (through more knowledge and skills), adolescents perceived more paternal and maternal support, and adolescents also had higher academic vigor and dedication. However, when mothers were more involved (through spending more time and energy in parenting), adolescents tended to perceive less paternal support and reported lower academic vigor. Maternal knowledge and skills and time and energy seem to have opposite effects on adolescents' academic outcomes. The relation between parental involvement and children's school outcomes has been frequently debated and studied over the past decades. Most studies confirmed the positive effects of parental involvement on children's outcomes (Fan & Williams, 2010; Jeynes, 2012; Wang et al.,

2019; Wilder, 2014). However, researchers also found that the results are not always consistent (Gonida & Vauras, 2014; Núñez et al., 2017). Because many factors may contribute to different findings, such as different parental involvement measurement (e.g., general or specific involvement), data source (e.g., child-reported or parent-reported), children' outcomes (e.g., psychological or academic outcomes), children's age (e.g., young child or adolescent) and cultural or ethnical background (Cooper et al., 2006; Dumont et al., 2012; Gonida & Vauras, 2014; Huntsinger & Jose, 2009). Therefore, when explaining the relation between parental involvement and children's academic outcomes, it is essential to consider the factors above.

The current study used parental time and energy and knowledge and skills to measure parental involvement (parent-reported) to examine its effects on adolescents' burnout and academic engagement (child-reported). However, adolescents seek autonomy and take distance from their parents. They prefer spending time with peers rather than parents and are less likely to confide in parents about their daily life (Keijsers et al., 2009; Laird et al., 2013). When parents are involved, such as spending more time in supervising adolescents' homework, adolescents may feel less independent and feel being psychologically and behaviorally controlled. Adolescents' need for autonomy may not be satisfied when parents are too involved or micromanaging. Hence, they perceive less parental support and reported less vigor for learning. In contrast, if parents demonstrate more parental involvement skills and knowledge (not just spending time), they are more likely to acknowledge adolescents' perspectives, and adolescents feel more

supportive (Soenens et al., 2019). Therefore, parental involvement is not always beneficial to adolescents' outcomes, and parents should pay more attention on the quality of parental involvement, rather than the quantity of parental involvement (e.g., time).

The mediation role of perceived parental support. In the current study, as an essential mediator, perceived parental support accounts for associations between parenting practices and adolescents' academic outcomes. Consistent with prior research (Soenens et al., 2019), we also found that adolescents' perception of parental support plays an important role in how parenting practices impact youth outcomes. That is to say, even if parents report that they are involved and supportive, it does not necessarily mean adolescents perceive their parents are involved and supportive. Therefore, parents should value adolescents' perspectives and address their needs. Additionally, based on transactional perspectives, parent-adolescent relationship is reciprocal, and parents need to adjust their parenting practice based on adolescents' needs which are likely to change over time (Bornstein, 2009). Therefore, it is important for parents to redefine and renegotiate their parenting practices in the parent-adolescent relationship.

In summary, although the parent-adolescent relationship faces various challenges, parents still greatly influence adolescents. The influences are conveyed by the quality of general parenting practices, including parenting style and parental involvement.

Additionally, adolescents' perception of parental support plays an important role in determining the effects of parenting practice on adolescent outcomes. Parents need to adjust parenting to show their support in order to meet adolescents' needs. Moreover,

authoritative parenting and parental knowledge and skills involvement are more effective parenting practices and benefit adolescents most.

#### **Gender Differences**

Paternal and maternal parenting. The results showed that compared with fathers, mothers were more likely to apply authoritative parenting and are more involved (through spending more time and energy, and demonstrating knowledge and skills). Additionally, adolescents also reported they perceived more maternal support than paternal support. However, students who reported both fathers and mothers equally involved in their learning, perceived higher paternal and maternal support and also reported higher academic vigor and dedication than students whose parents were not involved. In addition, in the paternal and maternal mediation models, both fathers and mothers had direct and indirect influences on adolescents. Fathers and mothers had different effects on adolescents' academic outcomes. The results echo the idea that both mothers and fathers play important roles, and they make unique contributions in certain ways (Cabrera et al., 2014; Root & Rubin, 2010; Jeynes, 2016). Therefore, when studying the influence of parenting on children, it is important to analyze paternal and maternal effects separately, not assuming "sameness" of the two or only focusing on maternal effects.

Additionally, I think two factors contribute to this unique finding. The first factor is that 88.4% of mothers in our sample had a job and worked full time (on average, 8.04 hours a day). Additionally, mothers (1.15 hours) and fathers (1.10 hours) spend similar

amounts of time studying with adolescents. Maternal labor force participation influences paternal and maternal roles and encourages fathers to be involved in parenting (Lemmon et al., 2018). The second factor is the unique paternal role in Chinese families, and this study only focused on academic burnout and engagement among high school students, an area that fathers are supposed to play an important role. Ho (1987) indicated that as an authority figure in the family, Chinese fathers take the most responsibility to maintain and enhance family reputation, namely "mianzi." Chinese fathers are expected and required to help children learn social values, develop appropriate behaviors, and achieve academic success. As it is stated in an Old Chinese saying "It is the father's fault if a child is not well educated" (Mo, 1996). Additionally, academic burnout and engagement in high school closely relate to adolescents' school and future success, such as college admission. As a result, the paternal role is as important as maternal role. Both fathers and mothers make unique contributions to adolescents' school outcomes.

Youth gender differences. The multi-group analysis showed that fathers' and mothers' parenting practices influenced boys and girls in many different ways. The first finding is that compared with girls, boys' academic burnout was sensitive to paternal authoritative parenting and maternal authoritarian parenting. When both fathers and mothers used authoritative parenting, boys reported a low level of academic exhaustion. When mothers used authoritarian parenting, boys reported a high level of academic exhaustion and cynicism. However, these relations were not found among girls.

Additionally, boys reported higher academic exhaustion and cynicism than girls.

The potential explanation is that fathers and mothers use different parenting styles for boys and girls. One the one hand, fathers and mothers are more likely to set rules for boys' behaviors. For example, parents tend to use more corporal punishment and controlling parenting with boys than with girls (Deater-Deckard & Lansford, 2016; Endendijk et al., 2017). One the other hand, parents show less autonomy-supportive strategies with boys than with girls (Endendijk et al., 2016). For instance, parents are less likely to use supportive speech with boys than with girls (Lambie & Lindberg, 2016; Leaper et al., 1998). Although fathers and mothers did not report any differences of parenting styles on boys and girls, fathers and mothers somewhat were more likely to apply authoritarian parenting and less likely to apply authoritative parenting on boys than girls.

Second, girls seem more sensitive to parental involvement than boys. When fathers were involved (through more knowledge and skills), girls reported higher academic engagement. When mothers were involved (through more time and energy), girls reported less academic burnout. However, parental involvement did not influence on boys directly. It seems that parental involvement is more important to girls than to boys. It maybe because parental involvement for girls is more supportive than for boys. Compared with boys, parents are more encouraging, warm, and empathetic with daughters than with sons, using more emotional words and validating girls' emotions (Lambie & Lindberg, 2016; Mandara, 2012; Mascaro et al., 2017). Therefore, parental

involvement improves the quality of the parent-daughter relationship and benefit girls' academic success.

In short, both fathers and mothers make a unique contribution to adolescents.

Additionally, the paternal effect on adolescents cannot be replaced by maternal effect and also cannot be ignored by researchers. Moreover, both parent's and youth's gender influence the parent-child relationship. Father-son, father-daughter, mother-son, and mother-daughter relationships are different.

### **Limitations and Future Directions**

First, the current study only collected data from one high school in Beijing, China. The school factors may influence the result. Future studies may collect data in different high schools and regions. Second, the current study only focused on Chinese urban parents and adolescents. The findings of current study cannot be generalized to Chinese rural counterparts. Third, this study only analyzed two parenting styles and two types of parental involvement (time and energy and knowledge and skills involvement). In the future, researchers may study other types of parenting (e.g., permissive and disengaged parenting) and measure different types of parental involvement. But researchers should be cautious when selecting parental involvement measures. It is important to consider assessing specific or general parental involvement and children's age and cultural or ethnical background. Fourth, the current study is a cross-sectional research design, not a longitudinal design. If future studies can collect data across different waves, researchers

can make a more robust mediation model, and a longitudinal study can better explain the mediation model.

# **Implications**

First, one third to half of Chinese high school students are experiencing academic burnout. Additionally, some students are both burned out and engaged in their learning, and research suggest that this group of students is more likely to be totally burnout in the future (Feld & Shusterman, 2015). Therefore, teachers and parents must identify the students who are burned out. Additionally, boys and 11th to 12th graders reported less academic engagement than their counterparts. Teachers and parents should work together to support the exhausted students, boys, and 11th to 12th graders to relieve their academic stress. For example, school psychologists and school counselors can provide some workshops about learning strategies and time management for high school students as well as parenting workshops for parents.

Second, there are three ways to improve the overall quality of the relationship.

First, it is important for parents to consider and appreciate adolescents' needs. Second, parents should use warm parenting to support adolescents' needs. Third, it is essential for parents to improve the quality of parental involvement (e.g., by improving their communication skills), not the quantity of parental involvement (e.g., time). Therefore, schools can provide parenting workshops on adolescents' psychological changes, warm parenting skills, and parent-child communication skills. Additionally, both fathers and mothers are important to adolescents. Therefore, mothers should encourage fathers to be

more involved in parenting, and schools can invite fathers to attend PTA meetings or to be volunteers on school events.

#### **Conclusions**

In conclusion, this study examined the relationships among parenting styles. parental involvement, perceived parental support, and academic burnout and engagement with a Chinese high school sample. The model provides support that authoritative parenting and parental knowledge and skills are positively associated with academic engagement and negatively related to academic burnout, and authoritarian parenting is negatively related to academic engagement. Moreover, perceived parental support mediated the relation between parenting practices (parenting style and parental involvement) and students' academic engagement. The results indicate that parents should value adolescents' perspectives and address their needs, and based on transactional perspectives, parents need to adjust their parenting practices to meet adolescents' needs. The quality of parental involvement (e.g., communication skills) is much more important than the quantity of parental involvement (e.g., time). Furthermore, the study shows that fathers is equally important as mothers for adolescents and also supports the notion that fathers and mothers apply different parenting practices on boys and girls. Parents and schools can use the findings to increase high students' academic engagement and decrease students' academic burnout.

Table 1

Items and Loadings on Each Factor and Scales' Reliability

/ariables	Items	Loading for father	Loading for mother
was good for child's.			
2. When I told my child to do something, I expected my child to do it immediately	.749	.724	
without asking any questions.			
3. I felt that more force should be used by parents in order to get their children to	.530	.543	
behave the way they are supposed to.			
4. I did not allow my child to question any decision I had made.	.702	.731	
Cronbach's α	.727	.702	
Omega ω	.710	.700	
Authoritative	1. I directed the activities and decisions of the children in the family through	.509	.541
	reasoning and discipline.		
	2. I gave my child direction for my behavior and activities and I expected my child	.594	.719
	to follow my direction, but I was always willing to listen to my child's concerns		
	and to discuss that direction with my child.		
	3. I gave my child clear direction for behaviors and activities, but I was	.708	.531
	understanding when my child disagreed with me.		
	4. If I made one decision in my family that hurt my child, I was willing to discuss	.756	.697
	that decision with my child and to admit it if I had made a mistake.		
	Cronbach's α	.747	.744
	Omega ω	.748	.734
Time and energy involvement	I have enough time and energy to		
	1. communicate effectively with my child about the school day.	.672	.565

	2. help out my child's school.	.662	.595
	3. communicate effectively with my child's teacher.	.681	.696
	4. attend special events at school.	.782	.805
	5. help my child with homework.	.681	.704
	6. supervise my child's homework.	.895	.619
	Cronbach's $\alpha$	.838	.811
	Omega ω	.836	.815
Knowledge and skills involvement	1. I know about volunteering opportunities my child's school.	.746	.621
	2. I know about special events at my child's school.	.666	.642
	3. I know effective ways to contact my child's teacher.	.529	.658
	4. I know how to communicate effectively with my child about the school day.	.646	.666
	5. I know how to explain things to my child about his or her homework.	.630	.538
	6. I know enough about the subjects of my child's homework to help him or her.	.533	.412
	7. I know how to communicate effectively with my child's teacher.	.625	.690
	8. I know how to supervise my child's homework.	.638	.588
	Cronbach's α	.851	.740
	Omega ω	.852	.840
Perceived parental support	My father/mother really cares about my well-being.	.724	.708
	2. My father/mother takes pride in my accomplishment in learning.	.770	.690
	3. My father/mother cares about my opinions and suggestions.	.786	.821
	4. My father/mother is willing to extend itself in order to help me perform the best	.834	.730
	of my ability.		
	5. My father/mother really cares about the progress I made.	.729	.764
	Cronbach's $\alpha$	.879	.868
	Omega ω	.879	.860
		Loading for boy	Loading for girl
Vigor	1. When I study, I feel like I am bursting with energy.	.785	.662

	2. When studying I feel strong and vigorous.	.836	.775
	3. When I get up in the morning, I feel like going to class.	.769	.706
	4. I can continue for a very long time when I am studying.	.720	.679
	5. When I'm studying, I feel mentally strong.	.652	.644
	Cronbach's $\alpha$		.848
	Omega ω		.850
Dedication	1. I find my studies to be full of meaning and purpose.	.720	.613
	2. I am enthusiastic about my studies.	.849	.791
	3. My studies inspire me.	.758	.709
	4. I am proud of my studies.	.731	.745
	Cronbach's $\alpha$		.834
	Omega ω		.835
Exhaustion	1. I feel emotionally drained by my studies.	.524	.549
	2. I feel used up at the end of a day at school.	.502	.525
	3. I feel tired when I get up in the morning and I have to face another day at the	.808	.824
	school.		
	4. Studying or attending a class is really a strain for me.	.751	.682
	5. I feel burned out from my studies.	.682	.644
	Cronbach's α		.800
	Omega ω		.802
Cynicism	1. I have become less interested in my studies since my enrollment at the school.	.717	.626
	2. I have become less enthusiastic about my studies.	.661	.703
	3. I doubt the significance of my studies.	.548	.571
	4. I have become more cynical about the potential usefulness of my studies.	.652	.702
	Cronbach's $\alpha$		.746
	Omega ω		.733

Table 2

Mean, SD, and Correlations for Variables of Interest

										10	G 1	12	1.2	
	1	2	3	4	5	6	7	8	9	10	Grad	12	13	14
P_authoritarian														
P_authoritative	107													
P_time	048	.392**												
P_skills	117*	.341**	.751**											
M_authoritarian	.447**	092	.069	016										
M_authoritative	070	.374**	.148*	.140*	106									
M_time	103	.118*	.363**	.384**	063	.390**								
M_skills	110	.178**	.349**	.432**	043	.406**	.727**							
P_support	122*	.291**	.100	.202**	025	.218**	.160**	.232**						
M_support	105	.268**	.112	.185**	082	.308**	.204**	.304**	.777**					
Exhaustion	040	141*	.001	017	.134*	100	159**	099	007	031				
Cynicism	.026	186**	103	076	.092	202**	137*	142*	098	101	.582**			
Vigor	012	.017	.105	.177*	038	.069	.121*	.155**	.223**	.187**	114	269**		
Dedication	.024	.204**	.107	.182**	022	.069	.109	.173**	.272**	.193**	112	328**	.795**	
Mean	3.753	4.693	3.918	4.088	3.669	4.821	4.084	4.272	5.119	5.377	3.986	3.719	3.709	4.111
SD	1.102	1.027	1.156	1.041	1.059	1.014	1.060	0.978	1.164	1.081	0.967	0.972	0.892	0.950
Minimum	1.000	1.400	1.000	1.000	1.200	1.600	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Maximum	7.000	7.000	7.000	6.670	7.000	7.000	7.000	6.780	7.000	7.000	7.000	7.000	7.000	7.000

*Note.* \* *p* < .05; \*\* *p* < .01; \*\*\* *p* < .001.

Table 3

Gender Differences on Academic Outcomes, Parenting Styles, Parental Involvement

	Вс	oys	Gi		
	M	SD	M	SD	t
Exhaustion	4.148	0.998	3.810	0.903	2.994**
Cynicism	3.878	0.987	3.547	0.929	2.917**
Vigor	3.634	0.987	3.790	0.770	-1.480
Dedication	4.025	1.005	4.204	0.881	-1.594
P_authoritarian	3.750	1.130	3.755	1.076	-0.042
P_authoritative	4.665	0.988	4.722	1.070	-0.459
P_time	4.041	1.100	3.785	1.203	$1.877^{+}$
P_skills	4.170	0.999	4.000	1.120	1.382
M_authoritarian	3.713	1.009	3.622	1.113	0.723
M_authoritative	4.812	1.062	4.830	1.006	-0.149
M_time	4.101	0.999	4.066	1.125	0.280
M_skills	4.311	0.975	4.230	.983	0.699
P_support	5.105	1.189	5.134	1.142	-0.211
M_support	5.345	1.111	5.412	1.050	-0.521

*Note.* df = 283;  $.05 < ^+p < .10$ ; \* p < .05; \*\* p < .01; \*\*\* p < .001.

Table 4

Differences Between Paternal and Maternal Parenting and Involvement

	$M_{\it difference}$	SD	t
P – M support	-0.258	0.754	-5.782***
P – M authoritarian	0.083	1.137	1.244
P – M authoritative	-0.128	1.142	-1.893 <sup>+</sup>
P - M  time	-0.166	1.253	-2.234*
P – M skills	-0.184	1.077	-2.882**
P authoritarian- authoritative	-0.940	1.584	-10.017***
M authoritarian- authoritative	-1.152	1.543	-12.604***

*Note.* df = 284;  $.05 < ^+p < .10$ ; \* p < .05; \*\* p < .01; \*\*\* p < .001.

Table 5

Parental Involvement Differences on Academic Outcomes

	Fathers and	Mothers Equally	Only Fathers, Only Mothers, or Other					
	involved in	involved in Children's studying		Guardians involved in Children's studying				
	M	SD	M	SD	t			
Exhaustion	3.933	.905	4.062	1.049	-1.105			
Cynicism	3.699	.951	3.748	1.005	419			
Vigor	3.768	.873	3.624	.915	1.344			
Dedication	4.213	.901	3.966	1.002	2.173*			
P_authoritarian	3.682	1.113	3.855	1.083	-1.307			
P_authoritative	4.776	1.019	4.573	1.031	1.643			
P_time	4.000	1.162	3.801	1.143	1.428			
P_skill	4.177	1.042	3.960	1.030	$1.741^{+}$			
M_authoritarian	3.631	1.081	3.724	1.030	729			
M_authoritative	4.860	1.039	4.765	.981	.782			
M_time	4.138	1.047	4.006	1.078	1.031			
M_skill	4.317	.982	4.208	.973	.925			
P_support	5.270	1.126	4.901	1.188	2.663**			
M_support	5.506	1.093	5.191	1.040	2.438*			

*Note.* df = 283;  $.05 < ^+p < .10$ ; \* p < .05; \*\* p < .01; \*\*\* p < .001.

Table 6

Grades Differences on Academic Outcomes, Parenting Styles, Parental Involvement

	Grade 10th	– Grade 11th	Grade 10th	– Grade 12th	Grade 11th	– Grade 12th
	$M_{difference}$	t	$M_{difference}$	t	$M_{\it difference}$	t
Exhaustion	-0.159	-1.136	0.093	0.604	0.252	$1.890^{+}$
Cynicism	0.021	0.147	0.253	1.631	0.232	$1.797^{+}$
Vigor	0.415	3.271**	0.118	.846	-0.296	-2.434*
Dedication	0.382	2.782**	0.188	1.266	-0.194	-1.481
P_authoritarian	-0.147	-0.936	0.060	0.344	0.207	1.322
P_authoritative	0.088	0.550	0.148	0.934	0.060	0.443
P_time	0.123	0.728	0.446	2.470*	0.323	2.034*
P_skill	0.313	2.096*	0.396	2.557*	0.083	0.568
M_authoritarian	-0.190	-1.289	0.035	0.205	0.225	1.478
M_authoritative	0.045	0.305	0.296	$1.826^{+}$	0.251	$1.822^{+}$
M_time	0.180	1.193*	0.481	2.828**	0.301	2.094*
M_skill	0.329	2.338*	0.464	2.516*	0.135	1.013
P_support	0.489	3.031**	0.550	3.051**	0.061	0.369
M_support	0.333	2.118*	0.229	1.378	-0.104	-0.679

*Note.*, df = 197;  $.05 < {}^{+}p < .10$ ; \* p < .05; \*\* p < .01; \*\*\* p < .001.

Table 7

Direct and Indirect Effects of the Paternal Parenting Styles and Parental Involvement on Academic Outcomes via Perceived

Paternal Support

		Exhaustion				Cynicism			Vigor			Dedication		
			959	% CI		95%	6 CI		9	95% CI		95% CI		
P_authoritarian	Direct Effect	048	[222	.159]	026	[258	.197]	.115	[.077	.294]	.099	[083	.279]	
	Indirect Effect	003	[049	.009]	.002	[011	.037]	012	[074	.023]	014	[072	.027]	
P_ authoritative	Direct Effect	337*	[937	045]	004	[353	.815]	.235	[070	.659]	.200	[175	.540]	
	Indirect Effect	.017	[032	.140]	011	[122	.046]	$.069^{+}$	[001	.216]	.080*	[.001	.231]	
P_time	Direct Effect	.178	[106	.640]	257	[976	.047]	042	[200	.009]	087	[418	.225]	
	Indirect Effect	010	[133	.019]	.007	[022	.106]	183	[652	.080]	048	[223	.012]	
P_skill	Direct Effect	.038	[286	.330]	.190	[730	.136]	041	[328	.252]	.015	[228	.319]	
	Indirect Effect	.014	[027	.082]	009	[074	.031]	.055*	[.005	.181]	.064*	[.007	.182]	

Note.  $.05 < {}^{+}p < .10; *p < .05; **p < .01; ***p < .001.$ 

Table 8

Direct and Indirect Effects of the Maternal Parenting Styles and Parental Involvement on Academic Outcomes via Perceived

Maternal Support

Exhaustion			n	Cynicism				Vigor			Dedication			
			95	% CI		95% CI			95% CI			95% CI		
M_authoritarian	Direct Effect	.087	[077	.331]	.145	[083	.518]	.045	[134	.249]	048	[246	.129]	
	Indirect Effect	.002	[011	.050]	.003	[021	.062]	012	[128	.011]	013	[125	.012]	
M_ authoritative	Direct Effect	232*	[-1.345	003]	323**	[-2.776	122]	.140	[059	2.059]	.155	[049	2.326]	
	Indirect Effect	008	[240	.033]	012	[211	.033]	.052*	000.]	1.290]	.063*	000.]	1.590]	
M_time	Direct Effect	136	[415	.143]	.141	[112	1.165]	237*	[-3.840	041]	238*	[-1.976	048]	
	Indirect Effect	.007	[024	.198]	.013	[044	.276]	054+	[-1.299	.004]	052*	[-1.629	001]	
M_skill	Direct Effect	.143	[196	2.658]	062	[973	.906]	.077	[-1.422	.320]	.109	[-1.300	.405]	
	Indirect Effect	013	[309	.095]	025	[272	.173]	.054	[034	.199]	.101	[023	.411]	

Note.  $.05 < {}^{+}p < .10; *p < .05; **p < .01; ***p < .001.$ 

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