DOES MIND-MINDEDNESS MATTER? UNDERSTAND THE CONNECTION BETWEEN PARENTING STYLES AND PRESCHOOLERS' INTERNALIZING AND EXTERNALIZING BEHAVIOR PROBLEMS FROM A CULTURAL LENS

A Thesis Submitted to the Committee of Graduate Studies in Partial Fulfillment of the Requirements for the Degree of Master of Science in the Faculty of Arts and Science

TRENT UNIVERSITY
Peterborough, Ontario, Canada

Psychology M.Sc. Graduate Program
January 2024

ABSTRACT

Does Mind-Mindedness Matter? Understand the Connection Between Parenting Styles and Preschoolers' Internalizing and Externalizing Behavior Problems from a Cultural Lens

Yuke Fu

Despite the extensive application of Baumrind's parenting style typology, some argue that it may not adequately capture the implicit warmth Chinese parents embrace. This study attempted to examine whether mind-mindedness could be a key indicator for helping children understand the benevolent intentions behind their mothers' authoritarian parenting practices. Specifically, this study investigated the variations in parenting styles, mind-mindedness, and children's behavior problems in Canada and China, the relationship among these variables, and the moderating effect of mind-mindedness on the relationship between authoritarian parenting and children's behavior problems. Participants were 83 Canadian and 136 Chinese mother-child dyads. Data on parenting styles, mind-mindedness, and problem behaviors were collected from maternal reports and lab observations. As expected, while Chinese mothers exhibited more authoritarian tendencies than Canadian mothers, their mind-mindedness buffer against the negative effect of maternal high-power strategies on children's behavior problems after controlling for maternal age and education. These results provide new perspectives on understanding Chinese parenting.

Keywords: parenting styles, culture, mind-mindedness, internalizing behaviors, externalizing behaviors, preschoolers

Acknowledgements

First and foremost, I would like to express my sincere gratitude to my mentor and supervisor, Dr. Mowei Liu, for her unwavering support, mentorship, and wisdom since my undergraduate study. Dr. Liu has made my thesis journey a truly rewarding experience. She has consistently encouraged me to pursue my passion and provided valuable resources and constructive feedback to ensure my future success. Without her patience and guidance, this paper would not have been possible, and for that, I am forever grateful.

I would also like to extend my gratitude to my thesis committee members, Dr. Michael Chan-Reynolds and Dr. Jeffry Quan, for their dedicated time and efforts in supporting and guiding me to become a better researcher.

Special thanks are also due to Dr. Fergal O'Hagen, Dr. Elaine Scharfe, Dr. Floria Chio, and Mr. Jinghuai Zhang for providing valuable statistical knowledge and insights for my paper. I am appreciative of their patience in spending time with me addressing all my inquiries.

Furthermore, I wish to express my appreciation to Dr. Neil M. Fournier. Dr. Fournier has provided opportunities to expand my academic network and learn more about scholarship applications. I am thankful for his support during this busy period of my academic journey.

I would like to take this opportunity to express my gratitude to my family. There are no words to describe how fortunate I am to have such a loving family that supports me unconditionally. I hold them close to my heart.

Finally, I would like to thank my friends and colleagues, Nathan Johnson and Mariana Margarita Soutter, for their assistance in proofreading and providing insights into my works. Rebecca Robertson and Tiana Vandendort for their involvement in coding the Canadian sample. My graduate experience is more manageable and vibrant because of them.

Table of Contents

List of Figures

List of Tables

List of Appendices

The Role of Parents in Child Development

In the historical trajectory of child psychology, developmental theorists and researchers have acknowledged the importance of parents and their roles in parent-child interactions, especially in early childhood. Research has shown that parental child-rearing beliefs and practices are predictive of their children's later social, cognitive, and behavioral outcomes. One landmark theory is Diana Baumrind's conceptualization of parenting styles (1966, 1971; Maccoby & Martin, 1983; Orlansky, 1949; Sears et al., 1957). Her theory has raised countless debates among non-Western countries, China in particular.

Many researchers have found empirical support indicating that Chinese parents are often perceived as more controlling and indifferent toward their children compared to Western parents (e.g. Kim & Fong, 2013; Lim & Lim, 2004). However, it's important to recognize that the same parenting practices may carry different cultural meanings, given the variety of cultural norms and social expectations (Bornstein, 2002). As a logical extension, parenting practices that are proposed as socially appropriate are shaped by the cultural contexts in which they occur, which, in turn, influence children's later socialization. For example, high-controlling behaviors and low affection expression, which can be considered hostile and vicious in Western societies, might not hold the same underlying meaning in Chinese cultural contexts. Chao (1994) argued that the cultural emphasis on parental authority and group harmony might not only discourage Chinese parents from explicitly expressing affection, but also obscure their benevolent intention behind their controlling behaviors. As a result, researchers have struggled to establish a consistent pattern of relations between various parenting styles and child developmental outcomes in Chinese society, as they have in the Western societies. This raises questions about the applicability of Baumrind's parenting style framework in the Chinese context. To address this issue, it is necessary to introduce a

moderator to make sense of these mixed results. Mind-mindedness, which refers to the parental proclivity to treat children as independent mental agents (Meins, 1997), could potentially serve as moderator to help us gain a better understanding of Chinese parenting practices beneath their seemingly "harsh" exterior.

The main purpose of the current study is to investigate the moderating effect of mind-mindedness on the relationship between parenting styles and children's behavioral problems in Canada and China. To achieve this goal, it is necessary to provide a detailed explanation of Baumrind's parenting typology.

The Conceptualization of Baumrind's Parenting Styles

Initially, psychologists and researchers attempted to construct parenting styles from two theoretical perspectives (see Darling & Steinberg, 1993, for a detailed review of the historical formation of parenting styles). Researchers who studied in the field of psychodynamics approached parenting styles by emphasizing the emotional relationship between parents and children (e.g., Orlansky, 1949). Conversely, researchers who emphasize social learning concentrated on the influence of parents' behaviors and practices on child development, rather than parental attitudes (e.g., Sears, Maccoby & Levin, 1957). Although both groups of psychologists recognized the antecedent nature of parental belief systems in interpreting parental emotional and behavioral processes, these components had not been systematically studied together in parenting styles, until Baumrind (Darling & Steinberg, 1993).

Diana Baumrind (1966; 1971) defines parenting styles as the naturally occurring patterns of parental attitudes and practices that are anchored around their belief systems. In Baumrind's (1968) early work, she distinguished three types of parenting styles based on the variation of parental authority — parents' endeavor to demand children's compliance by

integrating into the family as a whole and into society. These parenting styles are authoritative, authoritarian, and permissive.

Authoritative parenting emphasizes children's autonomy growth. Authoritative parents make requests to children within a reasonable scope. Rules and discipline are firm but negotiable. When parents' and children's interests or ideas conflict, authoritative parents request children's compliance through reasoning and negotiation (Baumrind, 1968). They encourage children's independent thinking by facilitating children's willingness to engage in verbal give-and-take (Baumrind, 1989).

Authoritarian parenting aims to consolidate children's obedience and compliance. Harsh and punitive control is considered a necessary force to maintain parental authority within a family. Authoritarian parents expect their children to accept their views of right and wrong and believe their children need to follow their rules and regulations, even when no reasoning is provided (Baumrind, 1968, 1989).

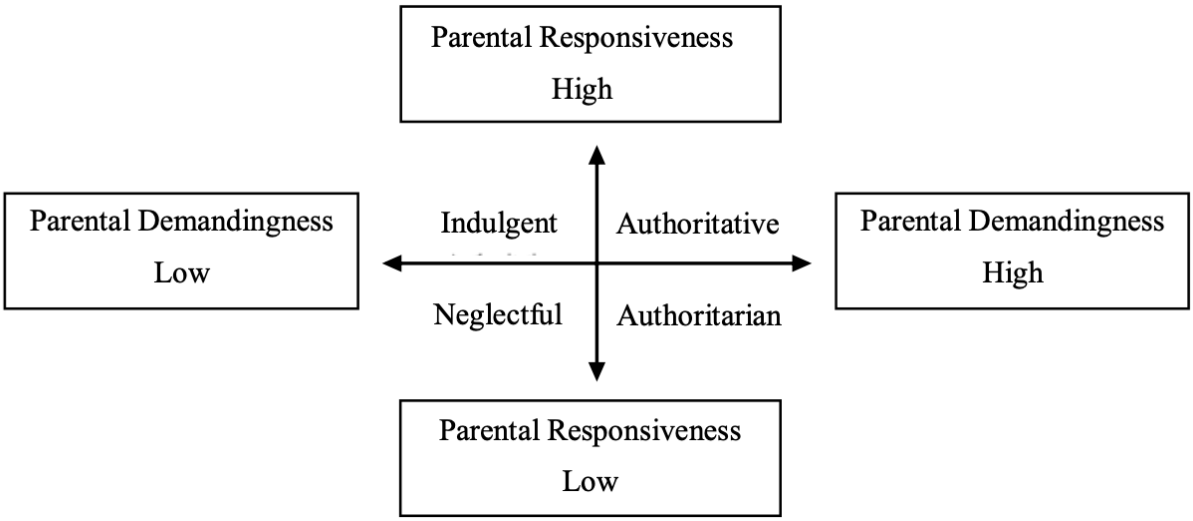
Permissive parents perceive themselves as a friend of the child, rather than a role model or authority figure. They believe in children's self-regulation and act as resources for the child if needed. Rules and regulations are barely provided to facilitate children's proper behaviors and inhibit their misconduct (Baumrind, 1968).

Baumrind's parenting typology was subsequentially divided into four categories based on two orthogonal dimensions: parental responsiveness and parental demandingness (see Figure 1). Parental responsiveness refers to the degree to which parents are emotionally and behaviorally supportive of their children's needs and interests (Baumrind, 1989). Common means include emotional support, acceptance, and nurturance (Baumrind, 1996). Meanwhile, parental demandingness refers to the extent of expectation and restrictiveness parents place on children to behave in accordance with socially desirable manners (Maccoby & Martin, 1983).

Authoritative parents are identified as high in both responsiveness and demandingness. Whereas authoritarian parents adopt a low level of responsiveness but a high level of demandingness (Baumrind, 1989; Maccoby & Martin, 1983). In comparison, indulgent and neglectful parents set low demands for children's behavior, but the former parents have a high response toward their children's needs while the latter ones have a low response instead (Baumrind, 1989; Maccoby & Martin, 1983). Due to the rising interest in the meanings of authoritative and authoritarian parenting and their impact on child development under cultural contexts, only these two will be the focus of this study.

Figure 1

The Orthogonal Two-dimension Model of Baumrind's Parenting Typology (Adapted from Baumrind, 1989 and Maccoby & Martin, 1983)



Both authoritative and authoritarian parents value the use of demandingness; however, the types of power asserted are different. Baumrind et al. (2012) classify the types of parental demandingness in terms of parental openness to bidirectional communication (i.e., reciprocal communication). In other words, both authoritative and authoritarian parents expect their children to conform to social norms. However, the former tends to use more confrontive

control, such as negotiation and give-and–take (Baumrind et al., 2012), to grant children a sense of personal autonomy by allowing them to participate in family rule creation and modification. The latter prefers unilateral parent-to-child coercive control, which can include verbal abuse, corporal punishment, and psychological control (e.g., shaming and love withdrawal) to reassure their absolute authority, regardless of whether children's sense of autonomy is fulfilled or not (Baumrind, 2013).

In general, researchers have reported an exceptionally consistent pattern of authoritative parenting associated with positive child outcomes in an individualistic dominant culture milieu. For example, in many Western societies, children and adolescents raised by authoritative parents experienced fewer internalizing behavior problems (e.g., depression; Gimenez-Serrano et al., 2021; Rose et al., 2018); displayed fewer externalizing behavior problems (e.g., drug abuse or delinquency; Baumrind, 1991; Trinkner et al., 2012; Olivari et al., 2018); achieved outstanding school performance (Areepattamannil, 2010; Chao, 2001; Dornbusch et al, 1987; Heaven & Ciarrochi, 2008; Pinquart & Kauser, 2018); and maintained a higher level of emotional adjustment (Baumrind et al., 2010; Shen, et al., 2018).

As for authoritarianism, a consistent yet detrimental association is observed between this parenting style and child developmental outcomes. Specifically, it was found that higher endorsement of authoritarian parenting is significantly associated with increased internalizing and externalizing behavior problems (Baumrind et al., 2010; Camras et al, 2017; Gimenez-Serrano et al., 2021; Greenlee et al., 2021; Marcone et al. 2020; Olivari et al., 2018; Shen, et al., 2018; Vučković et al., 2021) and maladjusted school performance (Areepattamannil, 2010; Dornbusch et al., 1987; Pinquart & Kauser, 2018). Arguably, authoritativeness is considered as the optimal parenting style in the West, fostering the proper socialization of children's social behaviors and emotional well-being.

The Importance of Culture on Parenting

Parenting is a culturally bound practice with the paramount purpose of preparing offspring to become acceptable members of society (Bronfenbrenner, 1977; Costigan & Su, 2008; Harkness & Super, 1995). The function of parenting is to transmit culturally specific values to children (Costigan & Su, 2008; Harkness & Super, 1995). When specific aspects of parenting patterns are more emphasized in a cultural setting, it is probably because such patterns, to some extent, reflect embodied cultural norms and goals with which children are socialized.

The meaning of parenting behavior may vary based on its cultural contexts. When cultural commonalities are assumed without careful evaluations, culturally specific behaviors are likely to be misunderstood (Berry, 1989). To avoid this pitfall, it is critical to understand that the formation and elaboration of a theoretical framework occur within its corresponding cultural niche. For example, Western individualistic societies prioritize independence and autonomy, focusing on the growth of self-expression and individual success (Li et al., 2010). Therefore, when Baumrind (1966, 1971, 2012) developed the construct of authoritative parenting style, she devoted a significant effort to densely describing parenting behaviors and attitudes that advocate such values, such as, overt affection, mutual communication, and give-and-take. Subsequently, during the formation of Baumrind's theory, authoritative parenting was considered the most optimal parenting among the rest due to its child-centered rearing nature in facilitating children's self-regulation, self-resilience, and self-control (Baumrind, 1983). In contrast, parent-centered authoritarian practices, which can be viewed as hostile toward a child and "[break] of a child's will" by imposing absolute commands with no explanation or adequate emotional support, are deliberated as negative and maladaptive to children's autonomy growth (Chao, 1994, pg. 1113). As a result, Baumrind's (1971) parenting

model proposed that authoritarianism is less valued in individualistic contexts. However, the harsh controlling attitudes and behaviors driven by parental authoritarianism could be perceived differently in collective countries, where interdependence is mainstream, and autonomy is considered expendable in exchange for group harmony (Chao 1994; Chao & Tseng, 2002).

Culture Variation on Parenting Styles

Some previous research has depicted Chinese parents as more controlling, hostile, coercive, and authoritarian than their North American counterparts (Chiu, 1987; Dornbusch et al., 1987; Leung et al., 1998; Su & Hynie, 2011). Indeed, with respect to parental practices and attitudes, it was found that compared with American mothers, Chinese parents hold more acceptant attitudes toward verbal abuse and physical punishment (Hong & Hong, 1991; Leung et al., 2013; Wu et al., 2002) and rely more heavily on psychological control by manipulating children's feeling of anxiety, exclusion, and guilt, such as shaming and love withdrawal (Barber, 2002), to shape children's behaviors, thoughts, and self-esteem, (Camras et al., 2017; Fung, 1999; Ng et al., 2014). Furthermore, it was found that Chinese mothers are more reserved in their displays of affection toward children than American mothers, as they express less overt affection (e.g., hugging, kissing, and verbally expressing love) when interacting with children (Deater-Deckard et al. 2011; Lim & Lim, 2004) and barely celebrate children's academic achievement (Kim & Fong, 2013). Accordingly, these pieces of empirical evidence appear to confirm the notion that Chinese parenting resembles authoritarian child-rearing. Similar to authoritarian parents, Chinese parents demonstrate a high level of demandingness (i.e., coercive and psychological control) but a low level of responsiveness (i.e., support and warmth). Nevertheless, the accuracy of this notion is challenged and remains the center of debate.

To better study Chinese parenting within its context, it is essential to closely examine Chinese indigenous ideology and socialization goals regarding how they permeate throughout parenting practices and beliefs and influence the quality of parent-child relationship.

Chinese Cultural Contexts and Value Transmission

Confucian Traditional Ideology and its Relation to Parenting Approaches

Confucian traditional ideology has been the predominant influence on social-cultural contexts in Asia, such as Mainland China, Hong Kong, Taiwan, Vietnam, Singapore, and Korea (Niu, 2012). It defines humanity in terms of a person's functional role within a social construct, such as father, mother, husband, wife, son, and daughter, etc. These roles contain their unique social expectations and obligations, forming a systematic hierarchical network. Taking one family as an example, senior members (e.g., father and mother) are obligated to protect, discipline, and nurture the subordinate members in the family (e.g., son and daughter). They are expected to unconditionally sacrifice and devote their time and finances to drive their children's ultimate success in the future (Ho, 1986). On the other hand, sons and daughters are expected to fulfill their responsibility of filial piety by being completely obedient and respectful toward the senior members of the family while also striving for success in their later life. According to Confucian ideology, the ideal parent-child relationship is reciprocal in nature. Both parents and children willingly fulfill their roles and obligation with gratitude toward each other for their support and training (from parents) and their trust and submission (from children; Ho, 1986).

One may wonder whether such a hierarchical family structure naturally protects parents' authority role within the family since children are expected to fulfill their role as submissive and respectful followers of authority figures, regardless of the level of parental responsiveness. Indeed, it has been found that Chinese adolescents from both rural and urban

areas exhibit a strong endorsement of parental authority (Zhang et al., 2006). Interestingly, this strong endorsement is more likely to be valued by Chinese children raised by authoritative parents than authoritarian ones (Bi et al., 2018), providing support for the existence of reciprocal relationship in Chinese contexts.

When parents transmit Confucian values to children, they adopt an "authoritarian moralism" standard to demand children's filial piety (Ho, 1994). Authoritarian moralism refers to Chinese parents' absolute emphasis on children's moral conduct. Specifically, parental power assertiveness is not determinant by parents' own likes and dislikes but is set based on social moral criteria to ensure the continuity of children's morally good actions (Ho, 1994). Compared with European American and Turkish mothers, Chinese immigrant mothers place significantly higher emphasis on children's moral development (Cho et al., 2021). Chinese parents demand children's moral character and behaviors from an early age to help them incorporate Confucian values and "prepare children to meet the strong demand of external society control" (Liu et al., 2015, p9). Consequently, Chinese children's feelings, emotions, needs or reasoning behind their moral wrongdoings are often neglected by their parents (Ho, 1994), as they do not hold as much significant social meaning as behaving morally in Chinese society.

Although Chinese parents express less affection toward their children than Western parents, it does not necessarily mean that Chinese children experience less warmth from their parents than their Western peers. After quantitatively analyzing five decades of Google digitized books, Wu and colleagues (2019) concluded that both verbal (e.g. "love/like you") and non-verbal (i.e., kiss and hug) affectionate terms are less likely to be adopted in Chinese books than in American books. This indicates that Chinese parents' low affection expression does not equate to a low level of parental responsiveness but rather reflects a general cultural

practice. Moreover, some have argued that, just like parenting, affection communication is a culturally bound behavior as well (Wu et al., 2019). The implication of traditional Confucian ideology on emotion restriction and hieratical-authority role has left Chinese parents with little room to display their warmth and love to children explicitly. As a result, Chinese parents may express their love implicitly while fulfilling their culture obligation. For example, Chinese fathers have revealed that they are more comfortable expressing affection in nonverbal ways, such as displaying physical intimacy and providing instrumental support (Li, 2021). In addition, other studies show that Chinese parents tend to express their love for children through support for their academic success. Examples include assisting children with homework (Ng & Wei, 2020); making time to accommodate their children's studying (Cheah et al., 2015); recruiting one-on-one tutors (Zhou & Lee, 2017); striving for family resources, and shielding them from worries (Leung et al., 2016). A robust finding highlights that almost 40% of Chinese families invested one-fifth of annual income for their children's education in 2019 (51JOB, 2019, cited in Deng & Tong, 2020).

Collectivistic Socialization Goal and its Relation to Parenting Approaches

The fundamental purpose of Chinese collectivism is to solidify group harmony and interdependence (Chao & Tseng, 2002). Successful socialization within this context motivates children to maintain harmonious relationships with community members by inhibiting impulsive or aggressive behaviors and managing negative emotions that could disrupt group harmony (Chen, 2000a; Oyserman et al., 2002). It also involves perceiving themselves as integral parts of the collective whole, blending their own life satisfaction and self-worth with the fulfillment of social expectations (Markus & Kitayama, 1991). These socialization tasks shape parents' child-rearing beliefs and practices in culturally specific ways.

To elaborate, as an extension of group harmony, collectivism in China embraces obedience and cooperation as important virtues (Chao & Tseng, 2002). Parents are expected to teach their children to subordinate their personal interests for the collective benefit from an early age (Chao & Tseng, 2002). Unlike individualism, where autonomy and independence are prioritized above all, Chinese society perceives autonomy and independence as relative concepts. In simpler terms, Chinese people are free to express themselves and pursue autonomy, but only if such personal pursuit do not contradict social goals and group harmony (Triandis et al., 1998). For example, it has been observed that Chinese parents intensify their controlling attempts or harsh parenting when their children exhibit early signs of anger/frustration (Lee et al., 2013), conduct problems (Guo et al., 2021), and externalizing problems (Xing, et al., 2011; Wang & Liu, 2018). In addition, compared with European American parents, Chinese parents spend a significant amount of time criticizing children's past wrongdoings and establishing behavioral expectations. Meanwhile, they tend to only briefly address or acknowledge children's feelings during parent-child conversations (Wang, 2001; Wang & Fivush, 2005).

As a result, compared to American and European peers, Chinese individuals are more accustomed to suppressing and concealing their negative emotions (Chen 1995), engaging in self-disclosure in a nonverbal or contextual manner (Argyle et al., 1986), and placing a higher value on emotional moderation (Mauss et al, 2010; Soto et al., 2005). These findings suggest that Chinese parents' relatively lower level of emotional affection is partially due to its culturally normative emphasis on obedience and cooperation, rather than being a hostile-intended action directed at children per se.

Additionally, in order to promote the sense of interdependence, children are encouraged to internalize their self-identity through their membership with others (Chen,

2000a; Oyserman et al., 2002). To achieve this socialization task, shaming (i.e., a form of psychological control) is extensively practiced within the Chinese population by parents, teachers, and others (Helwig et al., 2014). According to Fung (1999), knowing shame is an important socialization process in China. Senior members are permitted to use shaming techniques to regulate children's misconduct while facilitating prosocial behaviors by combining children's senses of self-worth and self-esteem with the gaze, judgement, and approval of people around them (Fung, 1999). During the shaming process, children are expected to develop the ability for self-reflection and self-criticism (Fung, 1999), which ultimately leads to a greater commitment to collectivistic welfare (Markus & Kitayama, 1991). It has been found that Chinese parents use shaming as a learning opportunity to teach children what kinds of behaviors are considered desirable. Parents tend to introduce the concept of shame at an early age and use it as a means to prevent children from experiencing harsher criticism and shaming from external family members later (Fung, 1999). As a result, unlike American mothers, whose use of shaming/love withdrawal is negatively associated with their reported maternal warmth and positively associated with their verbal hostility, Chinese mothers' use of shaming or love withdrawal was not found to be related to these parenting conduct; but instead, positively related to their reasoning (Wu et al., 2002). Therefore, Chinese parents' use of psychological control may contain a functional significance in Chinese society, rather than an expression of parental hostility or indifference.

With respect to the unique Confucian ideology roots and collectivistic socialization goals in Chinese societies, it is probably safe to deduce that Baumrind's parenting framework cannot fully capture the true nature of Chinese parenting. This statement can be supported by an increasing amount of research that attempts to explore the relationship between Baumrind's parenting styles and child development outcomes in Chinese contexts.

Cultural Meanings of Parenting Styles

Debate about Baumrind's Parenting Styles under Chinese Context

When testing the relevance of the Western-derived Baumrind's parenting typology in Chinese society, equivocal results on the relationship between parenting styles and children's academic, social-emotional, and behavioral development were found. Some provide additional support for the universality of parenting framework. Specifically, it has been found that parental authoritativeness is optimal for the development of children; on the contrary, parental authoritarianism hinders such development. For example, in Chinese studies, authoritative parenting was positively associated with children's academic performance (Chen et al., 1997, 2000b; Hu & Feng, 2022; Kim et al., 2013; Liu & Guo, 2010; Yang & Zhao, 2020); socially adaptive behaviors (Chen et al., 1997; Liu & Guo, 2010; Xia, 2020); and emotion regulation (Shen, et al., 2018); but negatively associated with externalizing and/or internalizing behaviors (Chan, 2010; Chang et al., 2022; Guo et al., 2021; Muhtadie et al., 2013; Zhou et al., 2004, 2008). In contrast, authoritarian parenting was negatively associated with children's school and social adjustment (Chen et al., 1997; Xia, 2020); while positively associated with internalizing and/or externalizing behaviors (Chang et al., 2022; Lee et al., 2014; Muhtadie et al., 2013; Zhou et al, 2008).

It is worth noting that most of the scholars did not neglect the culturally specific features of parenting under Chinese contexts, that is, they all discussed cross-culture similarity and differences in their articles. For example, Liu and Guo (2010) found that both Chinese and Canadian parents obtained higher scores on authoritative over the authoritarian parenting style; yet a mutual increase in high power assertiveness was only found in Chinese parent-child interaction. This study illuminates that Chinese culture might buffer against the negative effect of high-power control. Children in this context could establish a higher level of

resilience toward high-power parenting practice, then engage in corresponding strategies to enhance their sense of control during interactions (Liu & Guo, 2010).

Conversely, some results are inconsistent with Western findings. Specifically, compared with children from individualistic countries, the impact of authoritarian parenting on Chinese children's development does not seem as maladaptive. Some empirical results concluded that authoritarian parenting could be beneficial, rather than destructive, to child outcomes in China. It was found that authoritarian parenting is associated with academic success (Chao, 2001; Fang et al., 2003; Yang & Zhao, 2020), higher school-related motivation (Camras et al., 2017); and lower internalizing behaviors in children (e.g., depression; Li et al., 2010). Additionally, Rothenberg et al. (2020) found that greater parental behavioral control has no significant association with the growth of Chinese adolescents' internalizing and externalizing problem. As for authoritative parenting, there is no current study indicating that authoritative parenting is negatively associated with child outcomes in China. However, in 1998, the time when Westernized values on autonomy and individualism has not yet been well spread in China, McBride-Chang and Chang found that Hong Kong adolescents who have authoritative parents reported lower sense of autonomy than those with authoritarian parents.

These controversial findings on Chinese parenting intrigue multiple scholars to dedicate themselves to looking beyond Baumrind's parenting styles and conceptualizing Chinese indigenous parenting (e.g., Chao, 1994, 1995; Fung, 1999; Ho, 1986; Kim & Fong, 2013; Lieber et al., 2006).

Looking Beyond Baumrind's Parenting Styles

Chao (1994) asserted that although Chinese parents appear to be more authoritarian than European American peers, their parenting is qualitatively different from Baumrind's notion of authoritarian parenting. In her key argument, Chinese parenting is guided through

chiao shun (or training) while parental care and love are likely to reveal through *guan* (or to govern). Both *chiao shun* and *guan* stem from Chinese traditional Confucian ideology. Specifically, *chiao shun* refers to Chinese parents' role as teachers or trainers for their children. They are obligated to actively socialize children to follow the cultural norms, maintain group harmony, respect the elderly, and engage in prosocial behaviors (Chao, 1994). Again, it establishes a parent-dominant tone in Chinese parenting, suggesting that parent-centered parenting and maintaining parental authority in this context are likely to be considered norms of standard conduct. As for the concept of *guan*, despite its literal translation as "to govern", *guan* contains parents' involvement, care, and concerns for their children in the Chinese population (Chao, 1994, p.1112), which, to an extent, resembles parental warmth (i.e., parental responsiveness). In other words, many Chinese parents' controlling behaviors are motivated out of love and care, rather than an attempt to dominate and antagonize children as implied by the Western parenting framework. Consequently, it was found that *guan* is positively associated with parental warmth, which in turn, is coherently associated with Hong Kong and Mainland Chinese adolescents' various positive outcomes, including higher perceived health, life satisfaction, and self-esteem (Stewart et al., 1998, 2002) and school adjustment (Lan et al., 2019).

Of particular note, Chao (1994) questions the validity of Baumrind's framework, which views parental responsiveness and demandingness as two exclusive components. Chao (1994) proposes that these two components are likely to be intertwined in the Chinese context. Accordingly, the importance of *Yanci* (i.e., strict and affection) on child-rearing has been repeatedly emphasized by Chinese immigrant mothers in Chao's cross-cultural qualitative study (1995). The finding indicates that Chinese maternal parenting is both authoritative (i.e., high affection) and authoritarian (i.e., high strictness) toward their children (Chao, 1995). This

finding is consistent with empirical results that address the contextually appropriate care in China, such as close monitoring (Lieber et al., 2006), high academic involvement (Kim & Fong, 2013), directiveness, and protection (Wu et al., 2002), which seems to be too subtle to be captured by Baumrind's typology.

Consequently, when mapping the profile of Chinese parenting in contemporary contexts, most Chinese parents rely on authoritative parenting, followed by Chinese indigenous parenting (i.e., strict-affectionate *(yan-ci)*, shaming or training) or authoritarian parenting. In addition, children with authoritative or indigenous child-rearing parents tend to have better developmental outcomes than children with authoritarian parents; thus, providing preliminary success in sorting out the association patterns between parenting styles and various child outcomes in the Chinese context (Chan et al., 2009; Chang et al., 2011; Kim et al., 2013; Lieber et al., 2006; Lu & Chang, 2013; Xie & Li, 2019; Zhang et al., 2017).

Instead of relying on parental report and behaviors, some researchers seek to understand the story of parenting from children's points of view by asking children how they internalize these transmitted values and experience from their parents (Camas et al., 2017; Cheah et al., 2019; Chen, 2014; Lan, 2022; Liu & Wang, 2018; Yang & Zhao, 2020). According to Bandura's (2008) model of learning and development, children are cognitively independent beings. They constantly process and interpret information from their family and society, then use the internalized values and beliefs to guide their interactions with others (Bandura, 2008). Therefore, no matter what values and child-rearing practices parents deliver to children, "[i]t is the children's cognitive appraisal of parenting, rather than the parenting per se, that influences their own development outcome" (Chen, 2014, p 308). Therefore, when examining parenting practices and their impact, it's crucial to consider how children perceive and interpret them. For example, in the context of Chinese culture, filial piety, or the concept

of children's respect and devotion to their parents and family, plays a significant role. It was found that Chinese adolescents typically have two perceptions of filial piety: *reciprocal* and *authoritarian* (Chen, 2014). *Reciprocal* filial piety refers to children actively embracing their filial role obligation, while *authoritarian* filial piety occurs when children consider filial piety as their unshakable family obligation that must be fulfilled. It was found that adolescents perceived authoritative parenting was positively correlated with both subtypes of filial piety, but only *reciprocal* filial piety was positively associated with their life satisfaction (Chen, 2014). This suggests that when children hold a reciprocal attitude toward filial piety, they are more likely to feel motivated to repay their parents' sacrifice and dedication with gratitude and be happy with their lives. However, when children consider filial piety in an authoritarian manner, having more authoritative parents would not increase their happiness. Further, when Chinese children perceive parental coercive control in a positive manner, they have been found to engage in fewer antisocial behaviors, but display greater school motivation (Camras et al., 2017).

These findings are interesting, as they make one rethink the underlying mechanism from parenting practices to childhood outcomes during children's socialization process. When Chinese parents demonstrate authoritarian-resembled attitudes and behaviors, why some of them are capable of communicating their benevolent intention behind harsh parenting and facilitating beneficial development in children while the other parents cannot? Is there something fundamentally different between these two groups of authoritarian parents?

In summary, Chinese parenting may seem controlling and even be perceived as harsh; however, the underlying intention for those behaviors can be positive. The level of parental care and concerns may be masked by parental lack of explicit affection expression and cultural emphasis on parental authority. Accordingly, when solely relying on Baumrind's parenting

framework, it could be difficult to distinguish whether Chinese parents' authoritarian-like behaviors (e.g. shaming and high-controlling behaviors) are motivated by following cultural norms or based on their children's specific needs. These inconsistent findings suggest that there may be a moderator missing from the big picture. The concept of mind-mindedness, which stems from parental sensitivity toward children's mental states (Meins, 1997), might provide a potential resolution.

Mind-Mindedness

Historical Foundation and Conceptualization

Mind-mindedness refers to a parental tendency to treat their children as individual beings with their own thoughts, feelings, and emotions (Meins, 1997). This concept is operationally defined by assessing the frequency and nature of parents' mind-related comments toward their children through videotaped parent-child interactions or parental verbal descriptions of their children during interviews (Meins & Fernyhough, 2006).

Before Elizabeth Meins coined this term, the parent-child relationship was explored through Attachment Theory, which yielded remarkable success in understanding children's social, cognitive, and emotional development (Thompson, 2008). Specifically, John Bowlby's (1969) Attachment Theory sought to explain the mutual attraction between parents and children from an ethological perspective. A mother's consistent sequence of caring behaviors (e.g., feeding, physical proximity) in response to her child's attachment-seeking signals (e.g., crying, smiling) was ascribed to instinct (Bowlby, 1969). This innate drive has an adaptation value in strengthening the emotional bond between children and caregivers and increasing children's chance of survival. Building on Bowlby's (1969) theoretical framework, Ainsworth et al. (1971, 1974) focused on the mechanisms of attachment through the characteristics of mothers. According to their observations, maternal sensitivity consists of (1) caregivers'

cognitive capability to see things from children's points of view, then (2) behavioral ability to properly respond to children's needs. These two components are essential for establishing a secure attachment relationship (Ainsworth et al., 1971, 1974). However, meta-analyses have shown that many attachment studies focus solely on parental behavioral responses, neglecting the cognitive perspective of parental sensitivity (De Wolff & van Ijzendoor, 1997). As a result, parental sensitivity was found to be a relatively weak predictor of secure attachment, accounting for less than 25% of the variance (De Wolff & van Ijzendoor, 1997; Raval et al., 2011; Van IJzendoorn, 1995). Therefore, mind-mindedness was introduced to reinterpret parental sensitivity by focusing on parents' ability to perceive children's mind, and then identify and infer meaning behind their children's behavioral cues (Meins et al., 2001). Research supports that mind-mindedness is related to, yet independent from, maternal sensitivity (Laranjo et al., 2008; Meins et al., 2002). It acts as a sufficient predictor for both infantile attachment security (Laranjo et al. 2008; Lundy 2003; McMahon et al., 2016; Miller et al., 2019; Planalp et al., 2019) and parental sensitivity (Ereky-Stevens, 2008; Meins et al., 2001; Planalp et al., 2019).

Vygotsky's theory of Zone of Proximal Development has provided additional theoretical underpinnings for mind-mindedness (Meins, 1997). In Lev Vygotsky's (1978) theory, parents have an active role in supporting preschoolers' early learning processes. Children can expand their potential cognitive function with the scaffolding of adults (e.g., caregivers). Accordingly, mind-mindedness can not only promote parents to set up age-appropriate rules and goals to support their children's better cognitive development but also stimulate children to understand the minds of others (i.e., theory of mind) through countless parent-child interactions (Meins, 1997). Therefore, with caution, mind-mindedness may bridge the cultural belief transmission between parents and children, as children exposed to more

mind-mindedness might better understand the purpose of their parents' parenting from their parents' points of view. To support this notion, a study attempted to test how mothers' level of mind-mindedness influenced the beneficial outcomes they can bring out from a parent-child interaction therapy (Meynen et al., 2022). The researchers found that mothers with medium to high levels of mind-mindedness were more likely to experience significant improvements in their parenting skills and reductions in their child's conduct problems after the therapy intervention, compared to mothers with low levels of mind-mindedness (Meynen et al., 2022). It suggests that mothers with high advocacy of mind-mindedness are capable of detecting their children's needs. With proper training, they can quickly pick up a better parenting style and apply it to manage their children's behavior problems accordingly. As for mothers who have a low level of mind-mindedness, they may still have a hard time utilizing the newly learned parenting technique to interact with their children, as they might not be mindful enough to detect their children's nuanced behavioral cues. On the other hand, it is possible that children of these highly mind-minded parents may better appreciate their parents' good intentions and be more willing to follow their parents' discipline.

Mind-Mindedness and Child Development in Cultural Contexts

The positive effect of mind-mindedness on children's development has been well supported by research findings in Euro-American population (see McMahon & Bernier, 2017 for review). For the interest of the current study, the beneficial effects of mind-mindedness will be discussed in the following three child developmental domains, that is, (1) theory of mind, (2) externalizing behavior problems and (3) internalizing behavior problems.

First, parents who make appropriate comments on their children's mental states uniquely predict children's early development of Theory of Mind, including their ability to distinguish discrepant desires at age two (Laranjo et al., 2010), perspective-taking abilities at

26 months (Laranjo et al., 2014), and comprehension of complex social-cognitive situations such as contrary emotion, white lies, and sarcasm at age 5 to 6 (Kirk et al., 2015). Moreover, mind-mindedness is associated with children's externalizing behavior problems. Children whose parents use less mind-mindedness demonstrate more difficulty in inhibiting their impulsivity and experiencing negative emotion outbursts (Bernier et al., 2017; Gagné et al., 2018). They also experience more behavior difficulties, such as conduct problems, peer relation issues, and disruptive behaviors (Colonesi et al., 2019; Hobby et al., 2022; Meins et al., 2013; Meynen et al., 2022). Mind-mindedness can also play a mediating role in supporting at-risk children in the management of their externalizing behavior problems. Hughes et al. (2017) indicated that mothers' appropriate use of mind-mindedness has reduced the disruptive behaviors of children with conduct problems. As for the relationship between mind-mindedness and internalizing behavior problems, the research findings are less conclusive. Some studies failed to find a significant association (Colonesi et al., 2019; Meins et al., 2013). On the other hand, some found a negative correlation between maternal appropriate mental attribution and children's internalizing emotional problems (Camisasca et al., 2018; Hobby et al., 2022).

To date, mind-mindedness has been rarely explored in the Chinese population (Kan et al., 2018; Wang et al., 2017), as well as in cross-cultural comparisons (Hughes et al., 2018; Dai et al., 2020). Most of the studies focus on examining the relationship between mind-mindedness, attachment, or theory of mind. For example, a cross-cultural study found that although mother-child dyads in Hong Kong report fewer instances of mind-mindedness and lower false-belief understanding of other people's reality than dyads from United Kingdom, both countries demonstrated a significant positive association between maternal mind-mindedness and children's theory of mind (Hughes et al., 2018). Moreover, consistent with

Western literature, it has been found that Chinese mothers' high mind-mindedness capability enhance infant's cognition development through the mediation of secure attachment (Kan et al., 2018). Unfortunately, the relationship between mind-mindedness and children's externalizing and internalizing problems remains unexplored in China. Regardless, it seems like mind-mindedness is a valid measure to understand the cognitive precondition of parental sensitivity, which promotes positive child development. Therefore, it is likely that mind-mindedness could play a moderating role in clarifying the complex relationship between parenting styles and children's behavior problems in China and, possibly, in other cultural contexts.

The Present Study

The purpose of the present study was threefold. First, the study aimed at engaging in cross-cultural and within-cultural comparisons of Canadian and Chinese mothers' parenting styles, mind-mindedness, and their children's externalizing and internalizing behaviors. The second purpose of this study was to investigate the relationship between maternal parenting styles, maternal mind-mindedness, and preschoolers' behavior problems in Canadian and Chinese samples. Finally, maternal levels of mind-mindedness were examined as a moderator between maternal parenting styles and preschoolers' behavior problems.

Cross- and Within-Cultural Comparison

Maternal parenting styles were accessed through both self-report and observation. With the ongoing process of Westernization and social changes (i.e., one-child policy) in Chinese society (Chuang et al., 2018), Chinese parents may have gradually incorporated more Western values, such as an encouragement of autonomy and independence, into their parenting practices. Indeed, compared with previous research which found Chinese parents reported more authoritarian parenting (e.g., Chiu, 1987; Dornbusch et al., 1987), contemporary

studies tend to show that Chinese parents in urban areas, such as Shanghai and Shenzhen, are predominantly authoritative (e.g., Chang et al., 2011; Lu & Chang, 2013). Although parental self-report of parenting style is a commonly used psychometric measurement in family studies, it would be too simplistic to expect a direct one-to-one reflection of parental parenting beliefs in their actual parenting behaviors (Kochanska et al., 1989). The social desirability issues that emerge from self-report measurements may bias parents to report a more socially accepted authoritative parenting style while downplaying socially-discouraged authoritarian practices (Morsbach & Prinz, 2006). Moreover, Confucian ideology and collectivistic values continue to be deeply ingrained in Chinese core culture (Ho, 1996). As a result, it is possible that Chinese parents' inclination toward authoritative parenting primarily manifests at the level of belief, which may not readily translate into their day-to-day parenting practices, due to the influence or persistence of traditional parenting behavior norms. Therefore, it was expected that, from a within-cultural perspective, both Chinese and Canadian mothers would report a higher emphasis on authoritative parenting than authoritarian parenting. However, from a cross-cultural perspective, Chinese parents would still demonstrate more authoritarian parenting behaviors than their Canadian counterparts when interacting with children.

Maternal mind-mindedness was examined through observation. A relatively low emphasis on children's internal states has been revealed among the Asian population. For instance, Chinese mothers use fewer mental attributed comments than mothers from the United Kingdom during interviews (Hughes et al., 2017) and produce fewer spontaneous utterances regarding their children's feelings and thoughts than Australian mothers during free-play sessions (Dai et al., 2020). Similarly, Japanese and Indian mothers are also found to make fewer comments about their children's mental states when compared with Western counterparties (Bozicevic et al., 2023; Fujita & Hughes, 2021). Although there are only a few

studies, the consistent cross-cultural differences in mind-mindedness between Asian and Western mothers could reflect their distinct cultural emphasis in the socialization process. Specifically, in autonomy-promoting Western contexts, mothers may encourage their children to express their opinions and perspectives by interpreting and inferencing their ongoing mental states. On the other hand, given the emphasis on interdependence and group harmony in the Asian context, mothers may pay more attention to children's behavior than internal states. Therefore, consistent with these past studies, it was hypothesized that Canadian mothers could make more mind-minded comments than Chinese mothers.

Preschoolers' internalizing and externalizing behaviors were investigated through maternal self-report. In terms of internalizing behaviors, due to the great cultural emphasis on emotional moderation driven by social harmony, children's development of emotional knowledge tends to be neglected by Chinese parents (Doan & Wang, 2018). This neglect might lead to various internalizing behaviors since children may suppress their feelings instead of learning to regulate or resolve them properly. Previous studies have indicated that Chinese children report a higher level of internalizing behaviors than the overall sample mean of 11 other cultures (Rothenberg et al., 2020). This finding may be particularly relevant in contemporary China. Doan and Wang (2018) noted that Chinese immigrant children, exposed to emotional knowledge, tend to report more internalizing behaviors than European American children, possibly due to conflicts between personal characteristics and Chinese cultural norms. With modernization in today's Chinese society, this phenomenon may also be observed in mainland China. Subsequently, it was hypothesized that Chinese children would score higher on internalizing behaviors than Canadian children.

On the other hand, when it comes to externalizing behavior, it is considered one of the most critical indices of social adjustment (Blair et al., 2015). In line with Chinese collectivistic

socialization goals, behaviors that disrupt group cohesion are strictly prohibited (Chen, 2000a; Ho, 1996; Triandis et al., 1998). It was found that Chinese preschool children who engaged in aggressive behaviors were more likely to be viewed negatively in school settings, experiencing higher levels of teacher-child conflict (Han et al., 2016) and peer difficulty (Chen et al., 2005a). Thus, to prevent children from facing criticism and experiencing maladjustment beyond the family, Chinese parents start teaching the importance of group harmony and fostering control over impulsivity, aggression, and anger as early as 3 years old (Cheah & Rubin, 2004; Chen & Luster, 2002; Ho, 2008; Ho & Kang, 1984). Various parenting techniques are employed to promote emotional restraint and impulse control, ranging from inductive reasoning (Shuster & Shi, 2012) to harsh discipline (Wang & Liu, 2018). Accordingly, Rothenberg and colleagues (2020) found that Chinese children self-reported fewer externalizing problems than children from other ten cultures, including subcultures within the United States. Therefore, given the cultural expectations placed on children, it was predicted that Chinese mothers would report a lower level of externalizing behaviors compared to Canadian mothers.

Parenting Styles and Behavior Problems

As shown in previous literature, there were consistent association patterns between Baumrind's parenting style and child development outcomes in Western populations. Authoritative parenting is associated with fewer externalizing and internalizing behaviors (e.g., Rose et al., 2018; Olivari et al., 2018). Meanwhile, authoritarian parenting is correlated with more externalizing and internalizing behaviors (e.g., Baumrind et al., 2010; Camras et al, 2017). Therefore, a similar relationship pattern was expected in Canadian mother-child dyads. Specifically, when Canadian mothers advocate a higher level of authoritativeness, they should report fewer concerns about their children's behavior problems. In contrast, when Canadian

mothers score higher on authoritarian parenting, they would be more likely to report profound problematic behaviors in their children.

As for the Chinese mother-child dyads, due to their unique cultural emphasis on Confucian ideology and collectivisms, scholars have obtained mixed results when applying Baumrind's parenting framework to child behavior problems, especially concerning the authoritarian parenting style (Lee et al., 2014; Li et al., 2010; Muhtadie et al., 2013). Arguably, Chinese parental authoritarianism may not align with Baumrind's model, which suggests a hostile intention toward their children. Instead, it can be seen as a child-centered parenting approach that aims to support their children's socialization in implicit but culturally acceptable ways (Chao, 1994). As a result, Chinese children tend to interpret their parents' coercive and psychological control more benignly than children from individualist cultures (Camras et al., 2017). Such interpretation is even stronger when children believe that these controls stem from parental concerns and love (i.e., guan; Cheah et al., 2019), which mitigates the negative influence of authoritarian parenting on their adjustment. For example, it has been found that parents' high level of psychological control, such as love withdrawal, guilt induction, and shaming, increase children's depressive symptoms. However, this connection is at its weakest when children highly approve of these practices (Cheah et al., 2019). Additionally, it was found that Chinese children's positive perception of coercive control mitigates the positive relationship between this parenting practice and antisocial behavior (Camras et al., 2017). Taken together, it was hypothesized that Chinese maternal authoritativeness, characterized by a high level of parental warmth would be negatively associated with children's internalizing and externalizing behavior problems, just like their Canadian counterparts. However, there might be either a slight positive association or no

association between maternal authoritarian parenting and preschoolers' behavior problems in the Chinese group.

Mind-Mindedness and Parenting Styles

Current literature lacks empirical evidence regarding the connection between mind-mindedness and parenting styles. However, from a theoretical standpoint, mind-mindedness is derived from maternal sensitivity, which is an essential precursor for parents to respond to children's needs and emotions appropriately (Meins, 1997). Current literature has consistently shown that parental mind-mindedness is associated with better child development outcomes, such as higher theory of mind (e.g., Kirk et al., 2015) and fewer behavior problems (e.g., Hobby et al., 2022). It is reasonable to assume that the child-centered authoritative parents, who aim to strengthen children's autonomy and adhere to social norm, would rely on children's mental states (i.e., mind) to tailor an appropriate level of parental responsiveness and demandingness. Therefore, it was hypothesized that mothers' authoritative orientation would be correlated with maternal higher maternal use of mind-mindedness, regardless of their cultural background.

When examining the relationship between authoritarian parenting and mind-mindedness, it is important to consider cultural factors. Due to the significant cultural emphasis on autonomy in Western societies, parent-centered authoritarian parenting does not align with this emphasis, as these parents place high levels of parental demandingness on children but rarely encourage the development of children's sense of self through high parental responsiveness. However, in Chinese society, high parental authority (i.e., parent-centered) and low expression of affection are considered normative. In addition, a high level of shaming and psychological control, which are prevalent manifestations of parental demandingness in Chinese society, may not necessarily contain a hostile and non-nurturing intention. According

to Chao (1994), the concepts of parental care and control often intertwine, forming a unique way of implicit affection expression (i.e., *guan, yanci*) in China. Chinese parents' authoritarianism may not imply a lack of concern for their children's mental states (i.e., mind). Therefore, it was hypothesized that Canadian mothers' use of authoritarian practices would be negatively associated with their use of mind-mindedness comments. As for Chinese authoritarian mothers, it was predicted that no significant association would be found.

Mind-Mindedness and Behavior Problems

In line with previous literature (e.g., Hobby et al., 2022; Gagné et al., 2018), it was hypothesized that Canadian mothers' high frequency of mind-mindedness comments would be associated with fewer externalizing and internalizing behaviors in children. The relationship between mind-mindedness and behavior problems has yet to be explored in the Chinese population. However, cross-culturally consistent findings between mind-mindedness and other child developmental outcomes have come to light in both China and Western societies, such as secure attachment (Kan et al., 2018) and theory of mind (Hughes et al., 2018). Therefore, a similar prediction was made for the Chinese sample, that is, maternal higher mind-mindedness use would be negatively connected with externalizing and internalizing behaviors.

The Moderating Effect of Mind-Mindedness

The Confucian ideology and collectivistic socialization goal within the Chinese context require parents to uphold their authority within the family unit. This allows parents to adopt practices that may resemble authoritarianism and to refrain from explicitly expressing their concerns and care (Chao, 1994). While some Chinese children may perceive these parenting practices positively by understanding the cultural significance behind their parents' authoritarian-like behaviors (Chen, 2014; Camras et al., 2017), the underlying mechanism facilitating effective cultural transmission between parents and these children remains

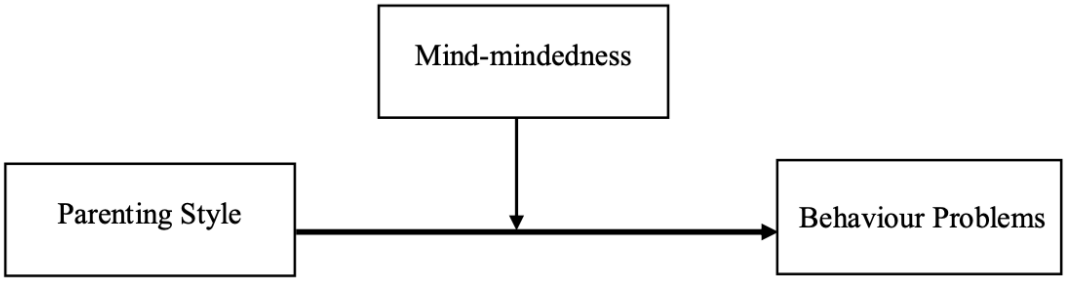
inconclusive. It is possible that mind-mindedness acts as a culturally sensitive component of parental warmth to help these children differentiate authoritarian-like indigenous Chinese parenting (i.e., strict-and-affectional or training parenting) from “truly” authoritarian parenting.

According to the theoretical construct of mind-mindedness (Meins, 1997), highly mind-minded parents would incorporate their children’s needs and perspectives to navigate and adjust their child-rearing conduct. Indeed, previous studies have found that maternal mind-mindedness mitigates negative child development, such as externalizing and internalizing behaviors (Camisasca et al., 2018; Hobby et al., 2022; Hughes et al., 2017), suggesting mothers with high mind-minded capability are prone to detect and defuse their children’s internal conflict and behavioral difficulty. In addition, mothers with a high level of mind-mindedness tend to benefit more from parent-child interaction-based interventions as they are more likely to adopt newly learned parenting techniques and address their children’s undesirable behaviors more quickly than those with a low level of mind-mindedness (Meynen et al., 2022). Although these findings are mainly derived from European American sample, the child-centered nature of mind-mindedness seems to facilitate appropriate parenting behaviors in any given cultural context. In addition, maternal mind-mindedness is positively associated with children’s theory of mind in both the Western (Meins, 1997; Laranjo et al., 2010, 2014) and Chinese contexts (Hughes et al., 2018). Perhaps mothers’ frequent use of mental-related comments would promote children’s perspective-taking. Under such circumstances, Chinese children whose parents have a high level of mind-mindedness may develop enhanced cognitive abilities to discern the underlying motivations behind their parents’ high-controlling parenting and respond accordingly.

Therefore, it was hypothesized that mind-mindedness would moderate the relationship between parenting styles and child internalizing and externalizing behaviors in China (Figure 2).

Figure 2

The Moderation Model of Mind-Mindedness on the Association Between Maternal Parenting Style and Preschoolers' Behavior Problems



When authoritarian Chinese mothers have a high frequency of mind-mindedness use during parent-child interactions, their children should demonstrate fewer internalizing and externalizing behaviors. Conversely, when authoritarian Chinese mothers produce a low level of mind-mindedness comments, their children's scores on internalizing and externalizing behaviors would remain high. On the other hand, given the cultural prevalence of autonomy and emotional expression in Western contexts, Canadian mothers' mind-mindedness would not moderate the relationship between their parenting styles and children's behavior problems.

Summary

Taken together, the present study aimed to investigate (1) variations in parenting styles, maternal mind-mindedness, and children's behavior problems, both across and within Canadian and Chinese cultural contexts, (2) the relationships among these three variables in Canadian and Chinese mother-child dyads, and (3) the moderating role of maternal mind-

mindedness in the links between authoritarian parenting and behavior problems within each cultural context. The corresponding hypotheses are listed below.

For cross-cultural and within-cultural comparisons:

- Chinese mothers were expected to exhibit a higher level of authoritarian parenting and a lower level of authoritative parenting than Canadian mothers [*cross-cultural comparison*]. However, both groups of mothers were predicted to prefer more authoritativeness than authoritarianism [*within-cultural comparison*].
- It was predicted that Chinese mothers would use fewer mind-mindedness utterances than Canadian mothers [*cross-cultural comparison*].
- Chinese children were anticipated to display fewer externalizing behaviors but significantly more internalizing behavior than Canadian children [*cross-cultural comparison*].

For the relationship between mothers' parenting styles, mind-mindedness, and children's behavior problems:

- Mothers' higher endorsement of authoritative parenting was expected to be related with children's fewer behavior problems in both cultural groups. However, only Canadian mothers' authoritarian parenting was anticipated to be significantly and positively related to children's behavior problems, whereas Chinese mothers' authoritarian parenting was expected to have a weaker or even nonsignificant relationship with their children's behavior problems.
- Similarly, mothers' authoritative parenting was expected to be positively correlated with their use of mind-mindedness, regardless of their cultural backgrounds. However, the

negative connection between authoritarian parenting and mind-mindedness was anticipated to be evident only in the Canadian sample.

- Mind-mindedness was expected to act as a culturally sensitive component of parenting, linked to fewer behavior problems in both countries.

For the moderating role of mind-mindedness:

- It was predicted that there would be a moderating effect of mind-mindedness in the relationship between authoritarian parenting styles and behavior problems in the Chinese context, but not in the Canadian context. Specifically, Chinese mothers with a high level of mind-mindedness were expected to establish a communication channel to convey their positive parenting intentions to their children, thereby buffering the adverse effects of authoritarian parenting on children's internalizing and externalizing problems. On the other hand, when Chinese mothers had a low level of mind-mindedness, their authoritarian parenting may be positively associated with children's internalizing and externalizing problems.

Methods

Participants

The data in the present study was originally collected for a cross-cultural project between 2006 and 2007. The participants were mother-child dyads from China and Canada, including 83 Canadian pairs with 44 boys and 39 girls, as well as 136 Chinese pairs (67 boys, 69 girls).

Both samples were recruited from middle-class families that shared similar socioeconomic status. In the Canadian sample, the average age of mothers was 35.9 (*SD* = 4.3), ranging from 26 to 45 years old. Family annual income ranged from $11,000 to $160,000

(*M* = $76,500, *SD* = $32,253.79). Many Canadian mothers held either a college degree (34.94%), a Bachelor's degree (20.48%), or an Honours degree (27.71%). The majority of Canadian child participants had at least one sibling (90.36%), and they were either the first child (34.21%) or the second child (39.47%) in their family.

In the Chinese sample, the mothers' ages ranged from 28 to 39 (*M* = 33.2, *SD* = 2.70) with an average family annual income of 40,439.47 RMB (*Min* = 1,800 RMB; *Max* = 80,000 RMB, *SD* = 20,101.07 RMB). The largest group of mothers held a Bachelor's degree (31.62%), followed by those with an Honours degree (14.71%), a High school degree (13.97), or those who graduated from a Vocational or correspondence school (11.76%). Most Chinese children were the only child in their family (82.40%) due to the implementation of the one-child policy. Previous research suggested that the number of children in the household partially contributes to Chinese mothers' level of authoritative parenting (Lu & Chang, 2013). However, given the disproportionate number between families with one child and families with more than one child in the present Chinese sample, which accurately reflects the demographic reality in China, it would be difficult to determine whether the detected significant parenting differences, or any other significant results, are due to the difference in the number of siblings or to false positive errors. At the same time, the present study did not find significant association between the number of siblings and the variables of interest in the Canadian sample. Thus, the number of siblings was not further analyzed as one of the potential covariates.

Procedure

The Chinese participants were recruited through Northeast Normal University in Changchun, Jilin, China. Mothers and their preschoolers were contacted through local birth registration offices. Meanwhile, the Canadian participants were recruited through Trent

University in Peterborough, Ontario, Canada, using birth announcements in local newspapers in the Peterborough region. Both groups of participants were initially contacted by phone to briefly communicate the nature and procedure of the study. Those who were willing to participate received letter of information, consent form, and questionnaires for demographic information, child-rearing attitudes (i.e., reported parenting practices) and Child Behavior Checklist (i.e., externalizing and internalizing behavior problems) by mail. These questionnaires were originally written in English, then translated into Mandarin and back-translated into English to ensure the cultural validity.

Mother-child dyads were invited to participate in university laboratories. Each mother-child dyad engaged in an hour-long interaction with each other in the observation room. Their behavioral and vocal interactions were observed and recorded on cameras. When they first arrived, children were asked to engage in a 15-minute free-play session with toys while their mothers were not given any instructions. Then, the mother-child dyad was asked to complete three 10-mintue tasks together sequentially. The tasks consisted of castle building, math, and reading. Finally, children were asked to play with toys for another 15 minutes with no instructions given to their mothers.

To observe mother-child interaction patterns that were as spontaneous as possible, only the first 15-minute free-play segment was included in the current study. Maternal frequency of verbal mind-mindedness comments and the level of power assertiveness (i.e., observed parenting style) were coded and analyzed based on this segment.

Measures

Reported Parenting Practices

Mothers reported their own parenting styles through the Child-Rearing Practices Report (CRPR) questionnaires. The initial version of CRPR consists of 91 Q items regarding

parental socialization goals, child-rearing attitudes and values (Block, 1981), which has high reliability in assessing parental authoritative parenting and authoritarian parenting (Chen et al., 1997; 2000). For the purpose of the present study, two subscales were created to categorize mothers' parenting styles: (1) *authoritative parenting* (10 items that include descriptions of high warmth, high confrontative control, or high encouragement of autonomy; e.g. "I express affection by hugging, kissing, and holding my child", "I talk it over and reason with my child when s/he misbehave" or "I let my child make many decisions for him/herself."); and (2) *authoritarian parenting* (10 items of description including low warmth, high coercive control, or low encouragement of autonomy; e.g. "I often feel angry with my child", "I believe physical punishment to be the best way of discipling" or "I believe children should not have secrets from their parents"). Each statement is answered on a 5-point scale from 1 ("strongly disagree") to 5 ("strongly agree"). A higher average score represents higher approval of a parenting style. The internal consistency of the measure (Cronbach's alpha) was 0.66 for authoritative parenting style and 0.64 for authoritarian parenting style in the Canadian sample. For Chinese sample, internal consistency was 0.63 and 0.67 for authoritative and authoritarian parenting styles, respectively.

Observed Parenting Strategies

Mothers' behaviors were coded using the mother-child free play interaction coding scheme (Liu, 2006). The coding scheme was originally used to organize parents' behaviors into three categories based on the level of power assertiveness demonstrated during parent-child interactions. (1) *High-power strategies.* Parental behaviors that consist of direct commands with force (coercively changing children's behaviors), intrusiveness (taking over children's ongoing activities), criticism (responding negatively to children's behaviors), and prohibition (forbidding children from an activity). (2) *Low-power strategies*. Parental

behaviors intended to interact with children through polite requests (providing suggestions and being open to children's rejection of these suggestions), positive reinforcement (responding positively to children's behaviors), and explanation (providing interpretations). (3) *Neutral-power strategies.* This category includes direct commands or requests made without the use of force (issuing instructions with a neutral emotion or without asserting power). A higher score on high-power strategies indicates that the mothers displayed more authoritarian practices; while a higher score on low-power strategies indicates that the mothers displayed more authoritative practices. Given the various cultural meaning of maternal directiveness, no specific parenting styles was assigned for maternal neutral-power strategies. Twenty percent of the sample were randomly checked in both groups using Cohen's Kappa. The inter-rater reliability for the observed maternal parenting practices was 0.91 in the Canadian sample and 0.92 in the Chinese sample.

The present study did not further categorize mothers' mind-mindedness into *appropriate* and *non-attuned* mind-mindedness. Despite previous research attempts to explore mind-mindedness use among Australian and Chinese mothers, which found significant cross-cultural differences (Dai et al., 2020), their results should be interpreted with caution. It was found that Chinese parents were more likely to actively redirect their children's attention when the children showed interest in another toy (Dai et al., 2020) or commend their children's mental states in a directive manner (e.g., "think!"). Although these types of mind-mindedness may appear to fall under the non-attuned category, considering the Chinese cultural emphasis on parental involvement and guidance, these mind-mindedness utterances may not necessarily imply that Chinese parents lack concern for their children's minds. Therefore, determining whether a mother's mental state utterances about their children's mental states are appropriate

within different cultural contexts requires furthermore in-depth exploration and is beyond the scope of the present study.

Maternal Mind-Mindedness Coding System

The coding system for mind-mindedness was revised based on Fishburn and Meins's (2017) Interactional Mind-Mindedness for Mothers and Preschoolers. Mothers' vocal initiations and responses were transcribed and coded to access mothers' level of mind-mindedness. Mothers' comments were divided into two categories.

First, the overall numbers of *mental talks,* which encompassed utterances regarding one's mental state, desire, emotion, thoughts, and the clear use of metacognitive terms such as "like", "want", and "know" (*Cognitive*, e.g., "What do *you want* to do?" and *emotional*, e.g. "Are *you happy*?"). In addition, mental-state comments were further divided into two types based on whose mental states a mother referred to: *child* or *mother*. The overall score of *child-related mental talks* consisted of emotional and cognitive mental state talk that pertained to children's mind (cognitive, e.g., "Do *you know* it?" and emotion, "Are *you tired*?"). On the other hand, the overall score of *mother-related mental talks* consisted of emotional and cognitive mental state talk that pertained to a mother's own mind (cognitive, e.g., "*I remember* this movie," and emotion, "*I* am *happy*"). A higher score indicated a greater focus on one's mental states.

Second, the overall numbers of *non-mental talks*, which included utterances that were not related to mental activity or lacked metacognitive terms. These non-mental talks include description (e.g., "There are a lot of toys here"), feedback on children's behaviors during the free-play session (e.g., "Well done!"), and reflections on children's daily life or past experiences (e.g., "You had a doll just like this one when you were young").

Many previous studies have measured the percentage of mind-mindedness to control for verbosity. Other studies have shown that the patterns of results with frequency scores are identical to proportional scores (Meins et al., 2001; Gagné et al., 2018), as observed in the present study. Two graduate students and an undergraduate were responsible for video coding. The Kappa value was 0.95 and 0.93 for Canadian and Chinese mothers' mind-mindedness.

Internalizing and Externalizing Behaviors

Children's internalizing and externalizing behavior problems were assessed using the Child Behavior Checklist (CBCL; Achenbach, 1991). The original scale consists of 113 questions. Mothers were asked to score their children's behavior on a three-point Likert scale to indicate how often their children display certain behavior problems (0 = absent, 1 = occurs sometimes, 2 = occurs often). Items related to anxious/depressed behaviors (e.g., "too fearful or anxious"), withdrawn-depressed behaviors (e.g., "shy or timid") were summed together to create the *internalizing behavior subscale*. Items addressing rule breaking behaviors (e.g., "steals outside of home") and aggressive behaviors (e.g., "gets in many fights") were summed to form the *externalizing behavior subscale*. Higher scores indicate more severe problems.

Data Analytical Strategy

Statistical analyses were conducted through IBM SPSS version 26. Missing data were deleted listwise throughout the analyses. Boxplots were used to graphically identify outliers in both Canadian and Chinese sample. Each case of outliers was then traced back to its physical file (i.e., parental reported questionnaire or researcher-recorded observation profile) to check for potential inaccurate data inputs. Once data entry errors were corrected, histograms and descriptive statistics were generated to examine the distribution, kurtosis, and skewness patterns of each target variable. Outliers from ratio variables (i.e., observed parenting strategies, maternal mind-mindedness, internalizing and externalizing behaviors) were

winsorized to maintain a sufficient sample size. Due to the nature of 5-point Likert-scale variable, no data falls within the accessible range (1 to 5) were identified as an outlier for reported parenting styles.

In addition, to ensure the internal validity of this study, demographic variables, such as, child's age, mother's education level, socioeconomic status, and age, that are found to be significantly correlated with target variables were controlled for in the later moderation analysis.

A two-way multivariate analysis of covariance (MANCOVA) was performed to investigate cross-culture and cross-gender differences in maternal parenting styles (authoritative vs authoritarian), mind-mindedness talk (overall mind-mindedness), and preschoolers' behavior problems (externalizing vs internalizing), after accounting for the variance of mother's education level, annual family income, maternal age, and child's age. When significant main effects on country and gender were detected, a series of follow-up 2 (country) x 2 (gender) analysis of covariance (ANCOVAs) were performed to probe the main effects of country, child's gender, and their interaction on (1) maternal overall mind-mindedness, (2) preschoolers' externalizing behaviors, and (3) internalizing behaviors. When a target variable failed to meet the requirement of Levene's test of equality of error variances, the Mann-Whitney U test was adopted to generate robust findings.

Regarding within-cultural variation, paired t-test was employed to examine the mean differences between (1) authoritative parenting style and authoritarian parenting style and (2) child-related mind-mindedness talk and mother-related mind-mindedness talk in Chinese and Canadian sample separately. When assumptions of normality were violated, the Wilcoxon signed-rank tests were performed instead. In addition, Pearson's bivariate correlations were used to assess the associations between parenting style, mind-mindedness, behavior problems,

and the four confounding variables. If the assumption of homogeneity and normality were violated, Spearman's correlation was used as alternative.

Multiple regression analyses were conducted to examine the main effects and interactions of maternal parenting style and mind-mindedness on preschoolers' internalizing and externalizing behaviors in both samples. Meanwhile, all significant confounding variables detected in MANCOVA and correlation analyses were controlled during moderation analysis to ensure statistical accuracy. When a significant interaction effect was detected, Hayes's PRPCESS macro model 1 was adopted to investigate the moderating effect on mind-mindedness on the connection between parenting styles and children's behavior problem. Johnson-Neyman Technique was utilized to visualize these significant interactions through the platform of RStudio version 4.1.2 with the *haven* package.

Results

Preliminary Analyses

To conduct a cross-cultural comparison, a two-way MANCOVA was utilized to investigate country and gender differences in maternal parenting styles, mind-mindedness, and preschoolers' behavior problems, while taking into account the mother's education level, annual family income, age and child's age. A significant multivariate main effect was found for country, *Pillai* = 0.62, $F(10, 135) = 22.36$, $p < .001$, whereas no significant gender effect was found, *Pillai* = 0.49, $F(10, 135) = .70$, $p = .73$. Therefore, no separate data were reported regarding children's gender differences.

In addition, variables that violated the homogeneity of variance (Levene's Test) were further analyzed using the Manning Mann-Whitney U test. These variables were parental authoritarianism, $F(3, 148) = 2.68$, $p = .05$; neutral power strategy, $F(3, 148) = 10.04$, $p < .001$; high power strategy, $F(3, 148) = 7.22$, $p < .001$; and mother-related mind-mindedness,

$F(3, 148) = 4.42$, $p = .005$. All studied variables and their corresponding descriptive data are displayed in Table 1. Within-cultural differences in maternal parenting behaviors were examined using Wilcoxon signed-rank tests.

Cross- and Within-Cultural Comparison of Maternal Parenting Styles

According to maternal self-report, there was a significant tendency for Chinese mothers to score lower on authoritativeness, $F(1, 144) = 33.05$, $p < .001$, $d = 0.94$, but higher on authoritarianism, U ($n_{China} = 112$, $n_{Canada} = 81$) = 3675.50, $z = -2.25$, $p = .02$, $d = 0.33$, than Canadian mothers. Similar cross-cultural patterns were observed for mothers' power assertiveness; compared with Canadian mothers, Chinese mothers displayed significantly fewer low-power strategies, $F(1, 144) = 4.19$, $p = .04$, $d = 0.30$ and significantly more neutral and high-power strategies when interacting with their children, $U_{neutral}$ ($n_{China} = 123$, $n_{Canada} = 75$) = 1082.0, $z = -9.04$, $p < .001$, $d = 1.67$ and U_{high} ($n_{China} = 123$, $n_{Canada} = 75$) = 3691.50, $z = -2.44$, $p = .015$, $d = 0.34$.

From a within-cultural perspective, Wilcoxon Signed Ranks Tests revealed that both groups of mothers had a significantly lower ranks on authoritarian parenting style (Canada: $Mdn = 2.1$, $n = 80$; China: $Mdn = 2.3$, $n = 110$) than authoritative parenting style (Canada: $Mdn = 4.4$, $n = 80$; China: $Mdn = 4.0$, $n = 110$), $z_{Canada} = -7.77$, $p < .001$, $d = -0.61$; $z_{China} = -8.80$, $p < .001$, $d = -0.52$. In line with maternal report, it was observed that high-power strategies (Canada: $Mdn = 1.0$, $n = 75$; China: $Mdn = 1.0$, $n = 123$) were the least frequently used parenting practices in both groups, which were ranked significantly lower than both neutral-power strategies (Canada: $Mdn = 5.00$, n = 75; China: $Mdn = 18.0$, $n = 123$), $z_{Canada} = -6.83$, $p < .001$, $d = -0.56$; $z_{China} =$, $p < .001$, $d = -0.56$; $z_{China} = -9.57$, $p < .001$, $d = -0.61$, and low-power strategies (Canada: $Mdn = 19.0$, $n = 75$; China: $Mdn = 17.0$, $n = 123$), $z_{Canada} = -7.53$, $p < .001$, $d = -0.61$; $z_{China} = -9.55$, $p < .001$, $d = - 0.61$. However, unlike Canadian

Table 1

Descriptive Data for Reported and Observed Parenting Styles, Mind Mindedness, and Behavior Problems in Canada and China

	Canada					China					*F*	*U(z)*
Variable	*M*	*SD*	*Mdn*	*Min*	*Max*	*M*	*SD*	*Mdn*	*Min*	Max		
Reported parenting styles												
Authoritative	4.35	0.35	4.40	3.10	5.00	3.98	0.42	4.00	1.90	5.00	33.05***	
Authoritarian	2.08	0.35	2.10	1.40	3.30	2.29	0.48	2.30	1.20	3.70		-2.25*
Observed parenting styles												
HPS	1.33	1.83	1.00	0.00	8.00	2.53	3.15	1.00	0.00	12.00		-2.44**
NPS	6.55	5.28	5.00	0.00	25.00	18.91	9.50	17.00	2.00	41.00		-9.04***
LPS	21.82	11.07	19.00	3.00	54.00	18.77	10.66	18.00	0.00	57.00	4.19*	
Mind-Mindedness												
Child-related	13.93	7.14	13.00	2.00	38.00	7.41	6.14	6.00	0.00	29.00	28.79***	
Mother-related	7.95	4.39	7.00	0.00	22.00	2.86	2.90	2.00	0.00	14.00		-8.06***
Behavior Problems												
Internalizing	4.73	4.03	4.00	0.00	19.00	8.46	4.80	8.00	0.00	25.00	25.92***	
Externalizing	7.33	6.19	5.00	0.00	28.00	7.23	4.58	7.00	0.00	20.00	0.04	

Note. LPS = low-power strategies; NPS = neutral-power strategies; HPS = high-power strategies.

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

mothers who applied significantly more low-power strategies than neutral-power strategies, z =-7.18, $p < .001$, d = -0.59, Chinese mothers adopted an equivalent amount of low and neutral-power strategies to direct their children's behaviors during the free-play session, z = -1.17, p = .24.

Cross- and Within-Cultural Comparison on Maternal Mind-Mindedness

Compared with Canadian mothers, Chinese mothers had lower instances of mind-mindedness talk toward their children, $F(1, 144) = 28.79$, $p < .001$, $d = 0.87$, and toward themselves, U ($n_{China} = 120$, $n_{Canada} = 73$) = 1362.00, z = -8.06, $p < .001$, d = 1.41. Despite this difference, mothers from both countries verbally commented on their children's mental states (i.e., mind-mindedness; $Mdn_{Canada} = 13.0$, $n_{Canada} = 73$; $Mdn_{China} = 6.5$, $n_{China} = 120$), more than on their own ($Mdn_{Canada} = 7.0$, $n_{Canada} = 73$; $Mdn_{China} = 2.0$, $n_{China} = 120$), z_{Canada} = -6.05, $p < .001$, d = -0.50; z_{China} = -7.59, $p < .001$, d = -0.49.

Cross-Cultural Comparison on Children's Behavior Problems

Maternal reports indicated that Chinese preschoolers experienced a higher level of internalizing behavior problems than Canadian children, $F(1, 144) = 25.92$, $p < .001$, d = 0.83. However, mothers from both countries reported a similar level of children's externalizing behaviors, $F(1, 144) = 0.04$, $p = .84$.

Maternal Parenting Styles, Mind-Mindedness and Children's Behavior Problems

The connections between maternal variables, child behavior problems and confounding variables were assessed using Spearman's correlations in the Canadian (see Table 2) and the Chinese sample (see Table 3) separately. With respect to the relationship between reported and observed parenting practices, Canadian mothers' self-reported authoritativeness was negatively associated with the number of observed neutral-power strategies used, r_s = -.18, p = .04; while their self-reported authoritarianism was positively associated with their use of

Table 2

Correlations Among Parenting Styles, Behavior Problems, Mind-mindedness, and Confounding Variables in the Canadian Sample

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Child age	-											
2. Mother age	.15	-										
3. Family income	-.26**	-.21**	-									
4. Maternal education	.04	.11	.04	-								
5. Authoritative	-.09	-.17*	.09	.21*	-							
6. Authoritarian	.11	.11	-.03	-.07	-.45**	-						
7. LPS	-.07	.03	.13	-.01	.02	0.08	-					
8. NPS	-.02	.02	-.02	-.13	-.18*	.22**	.05	-				
9. HPS	-.10	-.06	.02	-.12	-.12	.20*	.09	.20*	-			
10. CMM	-.01	-.06	-.04	.08	.19*	.03	.05	.07	-.08	-		
11. MMM	.02	-.02	-.02	.07	.08	.03	.07	-.11	-.01	.25**	-	
12. IB	.13	-.11	.15	.06	-.04	.17*	-.11	-.05	.04	-.08	.07	-
13. EB	-.03	.06	.07	-.04	-.15	.24**	-.12	-.05	.05	.02	.05	.27**

Note. LPS = low-power strategies; NPS = neutral-power strategies; HPS = high-power strategies; CMM = child-related mind-mindedness; MMM = mother-related mind-mindedness; IB = internalizing behaviors; EB = externalizing behaviors

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

Table 3

Correlations Among Parenting Styles, Behavior Problems, Mind-mindedness, and Confounding Variables in the Chinese Sample

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Child age	-											
2. Mother age	.09	-										
3. Family income	-.10	-.04	-									
4. Maternal education	-.32***	-.01	.36***	-								
5. Authoritative	.05	0.1	.08	.01	-							
6. Authoritarian	-.01	-.01	-.21**	-.12	-.47***	-						
7. LPS	-.12	-.01	-.03	.11	.04	.03	-					
8. NPS	-.04	-.07	-.14*	-.03	.05	-.03	.17*	-				
9. HPS	-.01	-.01	-.12	-.26***	-.13	.13	.13	.07	-			
10. CMM	-.08	-.16*	.06	.08	.02	.01	.22***	.16*	.00	-		
11. MMM	-.17*	-.07	.11	.20**	.08	-.17*	.12	.01	-.08	.14*	-	
12. IB	-.10	-.01	-.09	.07	-.16*	.18**	.10	.06	.03	.02	.13	-
13. EB	-.10	.05	-.09	.03	-.22**	.27***	.06	.05	.06	.02	.09	.54**

Note. LPS = low-power strategies; NPS = neutral-power strategies; HPS = high-power strategies; CMM = child-related mind-mindedness; MMM = mother-related mind-mindedness; IB = internalizing behaviors; EB = externalizing behaviors

* p < .05., ** p < .01; *** *p* < .00.1

neutral-power strategies, r_s = .22, p = .009, and high-power strategies use, r_s = .20, p = .04. On the other hand, no significant connections were found between reported parenting styles and observed parenting behaviors among Chinese participants, suggesting that Chinese mothers' self-reported parenting styles may not be well reflected in their actual parenting behaviors. It is also worth noting that maternal neutral-power strategies were positively associated with Canadian mothers' high-power strategies, r_s = .20, p = .03, but positively associated with Chinese mothers' low-power strategies, r_s = .17, p = .01.

The relationships between parenting styles (reported and observed) and maternal mind-mindedness (child- and mother-related) are displayed in Tables 2 and 3. In the Canadian sample, mothers with a higher level of authoritative parenting beliefs generated a higher number of comments about their children's emotions and cognitions (i.e., child-related mind-mindedness), r_s = .19, p = .03. For Chinese mothers, self-reported authoritarianism was negatively associated with their self-oriented mind-mindedness talks, r_s = -.17, p = .03. In the meantime, the number of Chinese mothers' mind-mindedness utterances about their children's mental state (i.e., child- related mind-mindedness) was positively correlated with their use of both low-power strategies, r_s =.22, p < .001, and neutral-power strategies, r_s =.16, p = .01. No other significant relationships were found between parenting styles and mind-mindedness.

In exploring the connections between behavior problems and all studied maternal variables, it was found that preschoolers' behavior problems were significantly correlated with maternal reported parenting practices, but not observed parenting practices nor maternal mind-mindedness. Chinese children who had an authoritative mother were reported to demonstrate fewer internalizing, r_s = -.16, p = .02, and externalizing behaviors, r_s = -.22, p = .001. On the other hand, both Canadian and Chinese children exhibited more internalizing (Canada: r_s = .17, p = .04; China: r_s = .17, p = .01) as well as externalizing behaviors (Canada: r_s = .24, p

= .003; China: r_s = .27, p < .001) when their mothers had higher authoritarian parenting tendencies.

After careful consideration, it was determined that only mothers' high-power strategies (from observed parenting behaviors) would be used as a source of mothers' authoritarianism in the moderation analysis. The reasons are as follows (a detailed explanation was provided in the discussion):

(1) The consistency between mothers' self-reported and observed parenting practices was observed in the Canadian sample, but not in the Chinese sample, echoing that Chinese mothers' parenting attitudes and beliefs do not reflect their spontaneous child-rearing behaviors in a semi-natural setting. Therefore, at least in the present study, observed parenting behaviors may be the more culturally sensitive indicator of a mother's daily parenting practices.

(2) Data on both reported parenting styles and children's behavior problems were collected from the same source of information (i.e., the mothers). Therefore, with the use of observed parenting practices, the potential inflation of participant bias could be reduced.

Confounding variables that were significantly associated with maternal high-power strategies, child-related mind-mindedness, and children's internalizing and externalizing problems were identified and controlled for later analyses. No confounding variables were identified in the Canadian sample. As for the Chinese sample, mothers' age was found to be negatively associated with child-related mind-mindedness, r_s = -.16, p = .02, and mothers' educational level was negatively associated with their use of high-power strategies, r_s = -.26, p < .001.

The Moderating Effect of Maternal Mind-Mindedness

Hierarchical linear regression was conducted to investigate the moderating role of mind-mindedness in the relationships between authoritarian parenting and behavior problems in Canada (see Table 4) and China (see Table 5). Maternal age and education level were controlled for in the Chinese sample. All continuous variables were standardized. The results indicated that neither high-power strategies nor mind-mindedness were significant predictors of children's behavior problems in either country group. However, significant interactions between child- related mind-mindedness and high-power strategies were detected in the Chinese sample, influencing both children's internalizing behaviors, β = -0.27, t = -2.58, p = .01, ΔR^2 = .063, and externalizing behaviors, β = -0.22, t = -2.09, p = .04, ΔR^2 = .042. The significant interaction term explained an additional 6.33% and 4.23% variance in children's internalizing and externalizing behaviors, respectively. As for the Canadian sample, no significant interaction was found.

To visualize the relationship between maternal high-power strategies and child behavior problems in the Chinese sample, the Johnson-Neyman technique was employed to estimate the cut-off values for the moderator (i.e., mind-mindedness) at which the slope of maternal high-power strategies on children's behavior problems shifted from nonsignificant to significant.

For the prediction of internalizing behaviors, it was found that when Chinese mothers' level of mind-mindedness use toward children was lower than -0.94 SDs from the means, maternal high-power strategies were positively associated with children's internalizing problems. However, when the level of mind-mindedness use was higher than 1.40 SDs from the mean, Chinese mothers' high-power strategies were significantly and negatively associated with children's internalizing behaviors (see Figure 3).

Table 4

Effects of Maternal High-Power Strategies and Mind-Mindedness in Relation to Indices of Children's Behavior Problems in the Canadian Sample

Behavior Problems	Predictors	β	*SE*	*t*-Value	95% CI	R^2	ΔR^2	ΔF
Internalizing								
	Constant	-0.47	0.10	-4.75***	[-0.67, -0.27]			
Step 1	HPS	-0.12	0.10	1.19	[-0.08, 0.33]			
	CMM	-0.09	0.10	-0.94	[-0.29, 0.11]	0.02		
Step 2	HPS × CMM	-0.08	0.09	-0.89	[-0.26, 0.10]	0.04	0.01	0.78
Externalizing								
	Constant	-0.08	0.14	-0.57	[-0.35, 0.19]			
Step 1	HPS	-0.02	0.14	-0.14	[-0.30, 0.26]			
	CMM	-0.02	0.14	-0.14	[-0.29, 0.26]	0.00		
Step 2	HPS × CMM	-0.08	0.13	-0.61	[-0.32, 0.17]	0.01	0.01	0.37

Note. HPS = high-power strategies; CMM = child-related mind-mindedness
CI, confidence interval.

Table 5

Effects of Maternal High-Power Strategies and Mind-Mindedness (Controlling for Maternal Age and Education level) in Relation to Indices of Children's Behavior Problems in the Chinese Sample

Behavior Problems	Predictors	β	*SE*	*t*-Value	95% CI	R^2	ΔR^2	ΔF
Internalizing								
	Constant	0.04	0.10	0.42	[-0.15, 0.24]			
Step 1	Maternal Age	0.22	0.10	0.23	[-0.17, 0.22]			
	Maternal education	0.04	0.10	0.40	[-0.16, 0.25]	0.003		
Step 2	HPS	0.05	0.10	0.51	[-0.15, 0.25]			
	CMM	-0.03	0.10	-0.28	[-0.23, 0.17]	0.004	0.01	
Step 3	HPS × CMM	-0.27	0.10	-2.58*	[-0.47, -0.06]	0.067	0.063*	6.66*
Externalizing								
	Constant	-0.04	0.10	-0.36	[-0.24, 0.16]			
Step 1	Maternal Age	0.03	0.10	0.33	[-0.17, 0.23]			
	Maternal education	0.05	0.11	0.51	[-0.16, 0.26]	0.003		
Step 2	HPS	0.08	0.10	0.77	[-0.13, 0.29]			
	CMM	-0.003	0.10	-0.03	[-0.21, 0.20]	0.005	0.002	
Step 3	HPS × CMM	-0.22	0.11	-2.09*	[-0.43, -0.01]	0.047	0.042*	4.35*

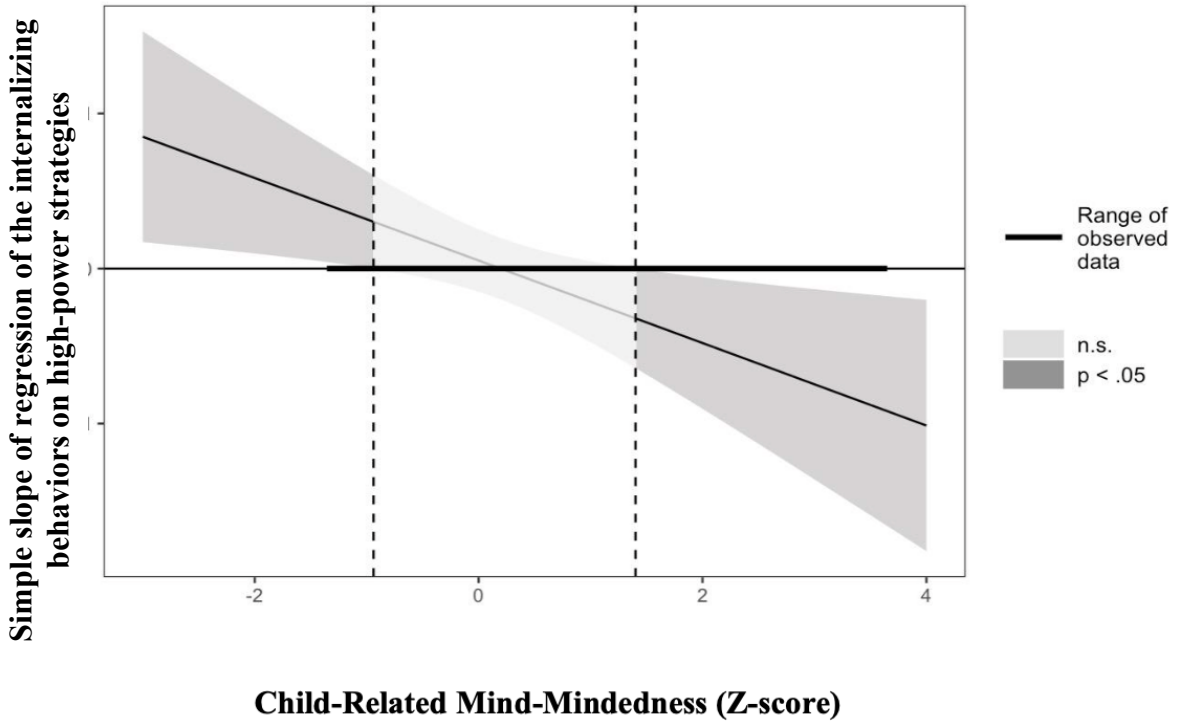
Note. HPS = high-power strategies; CMM = child-related mind-mindedness

*CI, confidence interval. *p < 0.05*

For the prediction of externalizing behaviors, a similar pattern was revealed between mind-mindedness and the slope of high-power strategies. Specifically, when Chinese mothers' level of child-related mental-states comments was lower than -1.37 *SDs* from the mean, their higher power assertiveness was related to a significantly increase in their children's externalizing behaviors. However, this significant association disappeared when Chinese mothers demonstrated higher levels of mind-mindedness talks (from -1.37 to 5.91 *SDs* from the mean). Then, the connection between high-power strategies and externalizing behaviors become significant and negative when the level of the standardized score of mind-mindedness went beyond 5.91 (see Figure 4).

Figure 3

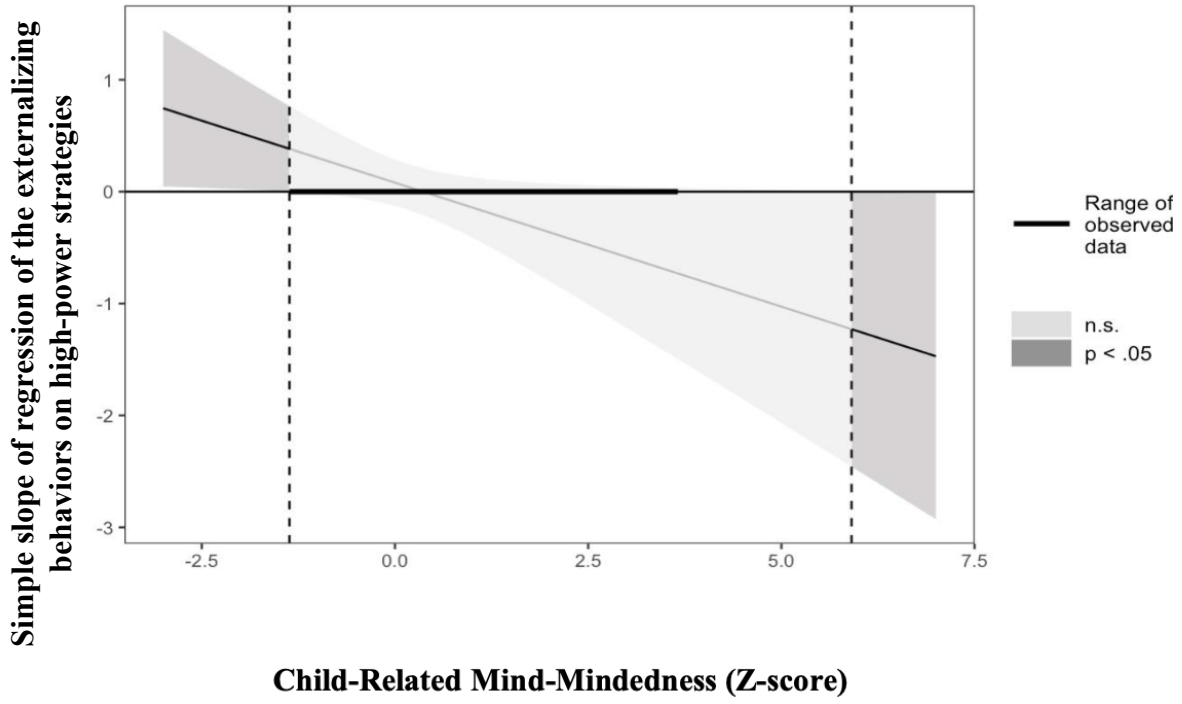
The Predicting Effect of High-Power Strategies on Internalizing Behaviors with the Change of Child-Related Mind-Mindedness



Note. Johnson-Neyman region of significance for high-power strategies along child-related mind-mindedness in relation to internalizing behaviors after controlling for maternal age and education level in the Chinese sample. The regression coefficient for the slope of high-power strategies on internalizing behaviors is demonstrated as the solid diagonal line. The colored area around the diagonal line is the upper and lower bounds of the 95% confidence interval for internalizing problem behavior along high-power strategies. The dashed vertical line indicates the value at which the slope of high-power strategies goes from significant (dark color region) to insignificant (light color region), which are -0.94 and 1.40 SDs from the mean. The range of observed values (bolded horizontal line) of child-related mind-mindedness is [-1.33, 3.62].

Figure 4

The Predicting Effect of High-Power Strategies on Externalizing Behaviors with the Change of Child-Related Mind-Mindedness



Note. Johnson-Neyman region of significance for high-power strategies along child-related mind-mindedness in relation to externalizing behaviors after controlling for maternal age and education level in the Chinese sample. The regression coefficient for the slope of high-power strategies on externalizing behaviors is demonstrated as the solid diagonal line. The colored area around the diagonal line is the upper and lower bounds of the 95% confidence interval for externalizing problem behavior along high-power strategies. The dashed vertical line indicates the value at which the slope of high-power strategies goes from significant (dark color region) to insignificant (light color region), which are -1.37 and 5.91. The range of observed value (bolded horizontal line) of child-related mind-mindedness is [-1.33, 3.62].

Discussion

Baumrind's typology of parenting styles, a framework depicting distinct approaches to child-rearing, has contributed tremendously to parenting and child development research. Despite its worldwide application, questions regarding its practical applicability have generated significant debate within Chinese societies. Chinese parenting is often portrayed as harsh and controlling (Chiu, 1987; Dornbush et al., 1987), yet its connection with child development remains inconclusive (Chao, 1994; Yang & Zhao, 2020). Previous researchers have argued that, unlike Western societies, the connotations of love and care are often intertwined with parents' controlling behaviors in China (Chao, 1994). This argument challenges researchers to understand Chinese "indigenous" parental warmth and determine the motivation behind Chinese parents' controlling conducts. When Chinese parents engage in controlling behavior, is it motivated by concerns for their children or purely by their needs to maintain parental authority?

In any case, children raised within Chinese cultural contexts seem capable of perceiving their parents' controlling behavior positively (Camras et al., 2017; Cheah et al., 2019; Chen, 2014; Chen-Bouck & Patterson, 2017). This raises the question of why some Chinese children are able to appreciate the good nature of their parents' high controlling behavior. More specifically, what characteristics do Chinese parents need to possess in order to promote their children's perception of benevolent parental intentions, which in turn, leads to better developmental outcomes? Mind-mindedness, the parental tendency to treat children as individuals with their own minds, thoughts, and emotions (Meins, 1997), might serve as a manifestation of culturally appropriate parental warmth, which could discern the good intentions behind Chinese parents' authoritarian-like parenting styles.

The overarching goal of the current research was to provide insight into the cross-cultural variations in the relationship between parenting styles and child behavior problems by adopting parental mind-mindedness as a moderator. To achieve this goal, it is important to first examine the cross-cultural and within-cultural differences in parenting styles, mind-mindedness, and child behavior problems, as well as the connections among these three variables.

Heterogeneous Parenting Emphasis, Universal Parenting Preferences

Comparing Parenting Across Cultures

Findings from both self-report and observed parenting styles suggest that Chinese parenting tends to align more closely with the characteristics of authoritarian parenting. Compared with Canadian mothers, Chinese mothers not only endorsed more authoritarian parenting values but also adopted higher levels of high-power (e.g., issuing direct commands with force and intrusiveness) and neutral-power strategies (e.g. issuing direct commands without force) when seeking children's collaboration during free-play sessions. Although the results are consistent with previous literature (Camras et al., 2017; Chiu, 1987; Dornbusch et al., 1987; Leung et al., 2013; Ng et al., 2014), it's important to note that these findings should not be misconstrued as additional evidence supporting the notion that Chinese parents are more apathetic or hostile than Western parents.

Regardless of previous researchers' perspectives on Chinese parenting, it's widely acknowledged that a parenting style can carry different meanings and functions across various cultural groups (Wu et al., 2002). Each cultural group has its own specific norms and goals when it comes to socializing children. In contrast to Western societies that prioritize child autonomy, Chinese culture places greater importance on parental authority and emotional restraint, rooted in traditional Confucian ideology and collectivistic values (Chao & Tseng,

2002; Ho, 1986). These cultural norms grant Chinese parents the prerogative to employ high levels of control in child-rearing. In addition, these norms may restrict them from openly expressing their care for children as explicitly as Western parents tend to do (Chao, 1994). Therefore, while Chinese mothers may display more authoritarian attitudes and practices compared to Canadian mothers, their higher utilization of controlling behaviors may serve as more than mere manipulation. However, it can be considered as a culturally appropriate means of expressing their concerns, care, and involvement in their children's upbringing.

As indicated earlier, the co-existence of control and care in China has posed challenges for Baumrind's parenting measure in capturing the distinctive warmth associated with Chinese parenting (Chao, 1994). The findings lend support to this notion. It was found that Canadian mothers' self-reported parenting styles were somewhat consistent with observed parenting practices. However, there was no correlation found between the reported and observed parenting styles of Chinese mothers. More specifically, it was only among Canadian mothers who perceived themselves as authoritarian parents that a tendency toward using neutral- and high-power strategies in interactions with their children was noted. Meanwhile, Canadian mothers who identified as authoritative tended to use fewer neutral-power strategies. In contrast, the present study failed to find any consistency between the reported parenting beliefs of Chinese mothers and their actual child-rearing practices. It suggests that Baumrind's parenting measure may better reflect parenting attitudes and practices within its original cultural context, but not in the Chinese context.

As indicated by past studies, the conceptual alignment between reported and observed parenting is a critical indicator of whether a significant association can be found between reported and observed data (Goodnow, 1988). Taking the alignment between reports and observed parenting in the Canadian sample as a reference point, it is reasonable to conclude

that the observed incongruence in the Chinese sample stems from the differing concepts of Baumrind's parenting attitudes (i.e., self-report) and the daily child-rearing practices of Chinese mothers (i.e., observed parenting). Indeed, it has been found that directiveness (a form of neutral-power strategy) and shaming/love withdrawal (a form of high-power strategy) — concepts that are commonly linked to Baumrind's authoritarianism style — are considered common child-rearing practices used to foster desirable behaviors in children (Wu et al., 2002) and cultivate their sensitivity to interpersonal opinions and judgements (Fung, 2013) within the Chinese context. It is possible that Chinese parents who practice high- or neutral-power strategies perceive themselves as warm and caring, leading them to self-report as having high authoritativeness. This phenomenon may help explain the disparity between reported and observed parenting styles in the Chinese sample.

Parenting Within Each Culture

The current study also investigated the within-cultural differences in parenting. The hypothesis was supported by both maternal self-report and laboratory observation. As expected, there appeared to be a shared emphasis on child-centered parenting between Canadian and Chinese mothers. Regardless of their cultural backgrounds, mothers scored higher on authoritativeness than authoritarianism, and they relied more on low-power than high-power strategies to discipline their children. This result is congruent with previous findings, which suggested that contemporary Chinese parents tend to favor authoritative parenting over authoritarian approaches (Chang et al., 2011; Chen et al., 2005b; Chen & Luster, 2022; Liu & Guo, 2010; Lu & Chang, 2013; Qiu & Shum, 2022; Xia, 2020). A shift in parental child-rearing attitude has been identified in Shanghai, one of the most modernized cities in China. Over time, Shanghai parents have increasingly emphasized parental warmth and the fostering of autonomy growth while reducing the use of parental control from 1998 to

2002 (Chen & Chen, 2010; cited from Chuang et al., 2018). Nowadays, parents in Shanghai continue to actively integrate both Western-based (child-directed) and traditional (parent-directed) approaches to children's play-based learning (Lin et al., 2019).

One explanation for this phenomenon is the rapid social, economic, and cultural transformation occurring within Chinese societies. Culture is not static; It evolves with rapid economic and political changes, which promote ongoing adjustments in parents' socialization goals and child-rearing practices at a macro level (i.e., social-cultural change) to facilitate their children's adaptation and value transmission in the current society (Lim & Lim, 2004; Quass & Zhao, 1995). In 1979, the one-child policy was introduced in China to conserve resources for economic growth (Zhu, 2003). This policy not only challenged traditional Chinese family structures, but also affected daily parent-child interactions (Chen & Goldsmith, 1991). Compared to Chinese parents who raise multiple children at home, parents with only one child tend to use more authoritative parenting and child-centered attitudes, as they can allocate more attention and resources to the success of their single child (Chen et al., 2000c; Chow et al., 1996; Lin et al., 2021; Lu & Chang, 2013; Min et al., 2017).

Concurrently, researchers have highlighted the impact of Chinese economic reform on parents' traditional socialization goals (Chuang et al., 2018). After 1978, the Chinese government shifted from a centrally planned, state-owned urban economy to promoting the growth of private sectors (Dickson, 2007), which stimulated the market vitality by motivating individuals to compete for their own interests and goods. Moreover, the Chinese government recently unveiled a 31-point action plan outlining its strategy to support and guide the recovery of the post-pandemic private sector ("[Opinions of the Central Committee]", July 14, 2023). Although there is no empirical evidence estimating the influence of economic reform on Chinese parenting, Chuang and colleagues (2018) speculate that such economic

transformation has led to a higher parental appreciation for a child's initiative, innovation, and independence, in preparation for standing out in a competition future market.

As supplementary support for the aforementioned statements, the present study revealed that older Chinese mothers expressed less recognition of their children's likely mental experiences (i.e., child-related mind-mindedness) compared to younger mothers. This finding contradicts Western research, as higher appropriate mind-mindedness is typically connected with older maternal age due to increased psychological maturity, internal locus of control (Camberis et al., 2015), and sensitivity (Demers et al., 2010). The negative correlation between maternal age and mind-mindedness in the present Chinese sample may reflect a cohort effect, which sheds light on the shift in mothers' parenting attitudes and practices due to their personal life experiences amid ongoing social transformation. In other words, with the implementation and reinforcement of the one-child policy and economic reform, Chinese mothers at younger ages might embrace more autonomous ideology and express children's mental states more openly. In contrast, mothers at older ages, raised in more traditional social contexts, may remain relatively steadfast in their faith in traditional parenting styles.

In sum, the present study acknowledges the complex effects of social transformation on Chinese parents' parenting styles as it challenges Chinese parents to achieve a balance between their traditional and contemporary parenting obligations (i.e., autonomy vs filial piety). However, it should be noted that the present research did not manipulate the impact of social transformation on Chinese parenting. Thus, the above argument regarding the connection between maternal age and mind-mindedness should be interpreted with caution and requires further investigation.

Another interesting finding was observed when examining parents' preferences for power strategies. In the Canadian sample, the highest incidence of maternal power

assertiveness was observed for low-power strategies, and it was significantly higher than the usage of both neutral- and high-power strategies. Whereas in the Chinese sample, mothers employed the fewest high-power strategies to regulate their children's behaviors. However, no significant preference was found between Chinese mothers' use of low- and neutral-power strategies, suggesting intrinsic consistency between these two types of maternal assertiveness in Chinese contexts. To comprehend the rationale behind these differences, it is essential to consider this finding in conjunction with the association among high-, low-, and neutral-power strategies in Canada and China. Specifically, maternal use of neutral-power strategies was positively connected with high-power strategies use in Canada but positively associated with mothers' low-power strategies in China.

These findings suggest that Canadian and Chinese cultures may ascribe different socialization meanings to the use of maternal neutral power. Consistent with previous studies, which highlight the priority of parental authority, Chinese mothers are prone to use directive assistance, such as commands, physical help, and progress control, to scaffold their preschoolers' puzzle and mathematics tasks (Sun & Tang, 2019). Wu and colleagues (2002) also found that Chinese parents' directiveness was positively associated with their emphasis on parental warmth and reasoning. On the other hand, in North American contexts, parents' directiveness was negatively associated with their parental warmth and democratic practices (Wu et al., 2002), but positively associated with negative emotion and cognition towards their children (Rudy & Grusec, 2006). The present findings further highlight the need to unpack the nature of parenting practices within their specific cultural contexts. For example, autonomy-emphasized Western societies tend to view neutral power assertiveness (e.g., direct command without force) negatively as it may compromise children's development of initiation and self-regulation (Baumrind, 1971). In such cultural contexts, parents are expected to rely on child-

centered parenting approaches, such as polite requests, verbal reinforcement, and explanations (i.e., low-power strategies), to socialize their children. Conversely, modern Chinese child-rearing emphasizes both parental involvement and autonomy support simultaneously (Liu et al., 2013; Zong et al., 2017).

These findings suggest that, although contemporary Chinese parents place more emphasis on autonomy support, Confucian ideology remains a predominant influence on their daily parenting conduct. In other words, when Chinese parents endorse more authoritative parenting beliefs, it does not necessarily mean that they just abandon their traditional Chinese parenting norms, and then fully embrace the Western ideology for their daily parenting practices. As a matter of fact, Chinese mothers still feel obligated to protect, direct, and didacticize their children as part of the requirement to foster children's filial piety. They may perceive neutral-power strategies as practical means to express their care toward children without compromising their authority in a family unit. As a result, they rely on both neutral and low controlling behaviors to interact with their children.

Maternal Mind-Mindedness in Canada and China

Child-Related Mind-Mindedness

Maternal mind-mindedness refers to the maternal predisposition to treat their children as individuals with their own thoughts, emotions, and feelings (Meins, 1997). It was observed that Chinese mothers used fewer child-related mind-mindedness comments during interactions than Canadian mothers, which is consistent with our predictions and previous cross-cultural research on mind-mindedness (Dai et al., 2020; Hughes et al., 2018). This finding is also aligned with past studies that attempted to investigate maternal use of mental state language cross-culturally. For example, compared with European American mothers, immigrant Chinese mothers engaged in significantly fewer verbal descriptions of story characters'

cognition and emotional states when asked to tell a story based on a wordless picture book (Doan & Wang, 2010). Chinese mothers also demonstrated less language use than European American mothers to refer to their 3-year-old children's internal state when mother-child dyads were asked to reminisce about past emotionally salient events (Wang et al., 2010).

From a broad social-cultural perspective, the cross-cultural difference in maternal mind-mindedness comments seems to underline the preference for self-expression under Canadian and Chinese cultural norms. Parents' communication with their children embodies rich cultural messages that reflect their emphasis on children's distinct developmental outcomes (Dai et al., 2010). In an individualistic context, Canadian mothers are expected to promote children's autonomy and self-expression by referencing children's ongoing feelings and thoughts during parent-child interactions (i.e., a high level of mind-mindedness). On the contrary, Confucian ideology in Chinese society prioritizes children's absolute moral conduct (i.e., authoritarian moralism) and group harmony (Ho, 1994). The ideology requires Chinese mothers to allocate more attention to regulating their children's behavioral conduct, rather than children's mental states. This supposition has been supported by previous research. Mothers from cultures that prioritize interdependence focus on criticizing their children's emotions by facilitating appropriate moral behaviors, rather than explaining the cause and consequence of emotions (Wang, 2001). As a result, Chinese children demonstrate early signs of emotional moderation as they downplay the intensity of emotional situations more than American children, especially for negative emotions (Wang, 2003). Overall, these results provide additional empirical support that, similar to parenting styles, a mother's willingness to explicitly pinpoint children's likely undergone mental states is also largely shaped by their associated cultural values.

Nevertheless, it would be overly simplistic to conclude that maternal mind-mindedness lacks significance in collectivistic social contexts. Despite a reluctance to explicitly comment on children's mental states, these states remain important within the Chinese context. Specifically, when children's thoughts and feelings are not in line with social expectations, parents are expected to regulate these thoughts and feelings to be socially adequate. For instance, during the coding of mind-mindedness, Chinese and Canadian mothers show distinct approaches to understand their children's desire. Many Chinese mothers tend to continuously check their children's ongoing experience during the free-play session by asking questions like "are you having *fun*?" or "isn't this *fun*?". In contrast, Canadian mothers provide more precise comments about their children's desire. For example, when a child shows interest in baby dolls and says, "babies", his mom might ask, "Do you want to play with the babies?". It appears that mothers' use of mind-mindedness varies across different cultural contexts. Although Chinese mothers may not be as detail-oriented as Canadian counterparts when describing their children's internal states, their constant checking of their children's experience suggests that they believe children could have independent feelings or desires, and they are ready to get involved promptly when needed.

Mother-Related Mind-Mindedness

The present study also collected data on mothers' self-disclosure of mental states (i.e., mother-related mind-mindedness utterances) and analyzed it in comparison with child-related mind-mindedness utterances. Interestingly, it was found that when compared to Canadian mothers, Chinese mothers scored lower on mother-related mind-mindedness. The present findings are in line with this from a doctoral dissertation that found Singaporean mothers were less likely to disclose their own mental states than Canadian mothers while interacting with children in free-play sessions (Quan, 2020). Thus, given that Asian mothers seem to disregard

their own internal states in their conversation, their lower mind-mindedness use toward children is not likely a result of their hostility and indifference toward children. Instead, it is likely a manifestation of parents' cultural practices, such as emotional moderation (Mauss et al., 2010; Soto et al., 2005) and group harmony (Ho, 1994), which impede their general openness to discuss an individual's mental states. Impressively, it was found that Chinese mothers discussed much more about their children's mental states than their own. The same within-cultural comparison was also observed in the Canadian sample. This pattern of findings indicates that Chinese and Canadian parents seem to adhere to their child-centered parenting nature by focusing more on their children's mentality, despite having different cultural priorities.

Children's Behavior Problems in Canada and China

Internalizing Behaviors

Significant cross-cultural differences were revealed between Canadian and Chinese preschoolers' internalizing behaviors. Chinese children experienced more internalizing problems than Canadian children, which is consistent with our expectation and previous research (Kong et al., 2022; Rothenberg et al., 2020; Savina et al., 2011; Yu et al., 2015). For instance, compared with adolescents and youth from other countries, Chinese children showed significantly higher manifestations of internalizing symptoms, such as shyness (Kong et al., 2023) and anxiety (Savina et al., 2011). Arguably, compared with the more self-emphasized Canadian society, less demand is placed on Chinese parents to regulate children's emotion as it does not carry as much socialization value in Chinese cultures (Wang, 2003). Emotion expression is often neglected or only receives a small amount of attention, except for the emotions that disrupts social harmony, which require parents' immediate correction or suppression (Dong & Wang, 2018). Such neglect has been shown to impede children's ability

to regulate psychological arousal (Eisenberg et al., 1996; Yang & Wang, 2016). Yang and Wang (2016) found that immigrant Chinese children tended to adopt fewer coping strategies than their European-American peers when facing negative emotional situations and were also in favor of using passive coping strategies (e.g., self-distraction) rather than active ones (e.g., active coping and support seeking). These findings suggested that Chinese children have learned to suppress their emotions but lack sufficient knowledge to regulate intensive emotions accordingly. Under these unique cultural circumstances, the chronic emotional dysregulation may lead to more internalizing behaviors in the Chinese population (Dong & Wang, 2018; Yu et al., 2015).

Chinese mothers' higher usage of psychological control may also relate to their children's higher internalizing problems. Psychological control has a functional significance in China, which aims to promote Chinese children's understanding of interdependence (Fung,1999). Despite past research often concluding that Chinese parents' psychological use does not carry a psychological cost to children's adjustment (Chao & Aque, 2009; Fung,1999; Ho, 1996), the rising emphasis on autonomy has challenged the adaptive value of psychological control in contemporary Chinese society (Chuang et al., 2018; Lu & Chang, 2013). Chinese children nowadays tend to appraise psychological control negatively (Zhu et al., 2023). Similar to Western findings, a Chinese mother's higher use of psychological control was associated with poorer mother-child relationship quality (Xu et al., 2020), leading to children's feelings of low self-worth (Helwig et al., 2014), loneliness and depression (Bullock et al., 2018). In addition, Chen et al. (2016) highlight that although Chinese children still hold a higher acceptant attitude toward psychological control than Belgian peers, children from both countries suffer from an equivalent level of autonomy frustration when they perceive parental psychological control. This result indicates that contemporary Chinese children

generally do not benefit from psychological control, even though collectivistic culture retains an essential role in shaping children's appraisal of such parenting practices.

Nevertheless, it is important to clarify that psychological control takes a variety of forms, including shaming, love withdrawal, and relation induction. Some forms still maintain its significant cultural meaning in Chinese society. For example, relation induction is a form of psychological control that refers to parents' reasoning for emphasizing the importance of taking others' perspectives. Compared with shaming and love withdrawals, Chinese children provide positive justification for parents' use of relation induction as it reflects parental love and concern (Fung, 2013; Smetana et al., 2021). Relation induction has also been found to positively connect to Chinese children's internalized moral orientation (Helwig et al., 2014), committed compliance (Chen et al., 2003), and well-being (Zhu et al., 2023). Taken together, Chinese children's higher internalizing behaviors in the present study may be partially attributed to their maladaptive use of emotional regulation and the parental use of hostile psychological control, such as love withdrawal and shaming.

Externalizing Behaviors

No cross-cultural difference was detected between Canadian and Chinese children's externalizing behaviors, which does not support the present hypothesis. This finding was inconsistent with previous findings as Chinese children have significantly lower amounts of externalizing behaviors than Western peers across the trajectories from 8 to 14 years old (Rothenberg et al., 2020). This inconsistency could be attributed to the varying stages of self-regulation ability observed in preschoolers versus early adolescents. It has been noted that children's self-regulation evolves along with their growing cognitive capabilities (Raffaelli et al., 2005), which assists in effective attention and behavioral regulation from childhood to early adolescence. Although children tend to have substantial level of effortful control during

the first four years of their lives (Kochanska et al., 2001), their self-regulation (including but not limit to inhibitory control) continues to demonstrate an age-related increase from 4 to 12 years old (Murphy et al., 1999; Raffaelli et al., 2005). Therefore, it is possible that children in this study may not have sufficient self-regulation ability to inhibit their impulsive and aggressive behaviors in both samples, potentially obscuring significant cross-cultural effect.

The Relations Between Parenting Styles, Mind-Mindedness and Behavior Problems

Reported and Observed Parenting Styles and Behavior Problems

Two cross-cultural hypotheses were provided based on previous studies on the application of authoritative and authoritarian parenting and their connections with children's behavioral outcomes (Chang et al., 2022; Li et al., 2010; Guo et al., 2021; Muhtadie et al., 2013; Pinquart & Kauser, 2018; Rothenberg et al., 2020). Neither of these hypotheses were well supported in the present investigation.

Authoritative Parenting and Behavior Problems. Both Canadian and Chinese mothers' high authoritativeness was expected to link to fewer behavior problems in children. However, this negative connection was only found among Chinese mother-child dyads, but not in their Canadian counterparts. The present finding is partially contradictory to the finding from a recent meta-analysis that combined the statistical results from 428 studies of the relationship between Baumrind's parenting styles and children's behavioral outcomes across two decades. The meta-analysis revealed that authoritative parenting was associated with fewer externalizing and internalizing problems in young children and adolescents across most regions, including North America and East Asia (Pinquart & Kauser, 2018). Furthermore, Baumrind's parenting styles often yield consistent connections with children's behavioral outcomes in Western societies (Baumrind et al., 2010; Gimenez-Serrano et al., 2021; Trinkner et al., 2012).

One possible explanation is that there are potential ceiling effects within Canadian mothers' authoritative parenting. A ceiling effect refers to a substantial portion of data clustering near a maximum score (Uttl, 2005). It compromises researchers' ability to determine true measurement values, which leads to biased parameter estimation and misleading interpretations (Wang & Zhang, 2009). Indeed, in the present study, Canadian mothers' self-reported authoritativeness scores ranged on the upper end of the measure (from 3.10 – 5.00), and about 30% of Canadian mothers scored higher than 4.5, indicating a high likelihood for the occurrence of a ceiling effect. Since individualistic societies place a higher emphasis on parents' parental warmth and confrontive control (i.e., high authoritative parenting practices), Canadian mothers may face higher pressure to paint themselves and their child-rearing in a socially desirable light in self-report measures. As a result, this social desirability bias might overshadow the significant connection between Canadian mothers' actual application to authoritative parenting and their children's behavior problems through a ceiling effect.

On the other hand, Chinese mothers' authoritative parenting scores had a relatively higher variability (range from 1.9 to 5), and only 6.2% of mothers fell near the maximum score (higher than 4.5), suggesting a lower probability of a ceiling effect. Chinese collectivistic values permit parents to use low parental warmth and high coercive control (i.e., low authoritative parenting practices) if needed (Chao, 2000a). Therefore, the potential attenuation in variance estimates due to a ceiling effect may not underestimate a significant correlation between authoritative parenting and behavior problems in the present Chinese sample.

Authoritarian Parenting and Behavior Problems. It was initially predicted that there would be a positive connection between maternal authoritarianism and child behavior

problems in the Canadian group, but this connection would be less pronounced or absence in the Chinese group. However, the result of the study indicated that, in both groups, mothers' higher authoritarianism was linked to more behavior problems. A meta-analysis concluded similar patterns of such associations in individualistic and collectivistic countries (Pinquart & Kauser, 2018). In addition, past research has consistently shown a vicious cycle between harsh parenting and children's behavior problems over children's early development from 3 to 10 years old (Guo et al., 2021; Lee et al., 2013; Wang & Liu, 2018; Xing, et al., 2011). However, this finding violates the assumption that children's appraisals of parental behaviors could moderate the effect of parenting on children's developmental outcomes (Camras et al., 2017; Cheah et al., 2019). Soenens and Vansteenkiste (2020) argued that culture is one of the salient antecedents of children's appraisals. The collectivistic cultural climate in China may provide more justification for parents' controlling behavior and gradually influence children's views of such conduct, which eventually adjusts children's emotional and behavioral responses. In line with this notion, previous studies found that Chinese children's positive view of authoritarian parenting plays a moderating role in mitigating the adverse effect of harsh parenting on some developmental outcomes (Camras et al., 2017; Cheah et al., 2019), suggesting that authoritarian parenting should be less detrimental to Chinese children's development.

A possible attribution to the contradictory results between previous studies (i.e., Camras et al., 2017; Cheah et al., 2019) and the present study is the participants' age difference. The present study targeted preschoolers aged between 4 to 6, while previous studies were conducted among 10- to 14-year-old adolescents. Other than culture, age is another antecedent that can influence children's appraisals of parenting (Soenens & Vansteenkiste, 2020). Adolescents play a leading role in the value transmission process and are in a more advanced stage of cognitive development than preschoolers (Soenens et al.,

2015). Adolescents have gradually grasped the importance of cultural values by actively reflecting on parents' behaviors and requests, and have identified the consequences of (non)compliance to parents' rules both within and outside of a family. These accumulated experiences can better prepare adolescents to determine whether their parents' authoritarian parenting behaviors are concerned about their welfare, and then adjust their behaviors accordingly. In comparison, preschoolers are in a critical stage for understanding family rules and social norms (Schmidt et al., 2016) and learning self-regulation (Savina, 2013). Therefore, Chinese children may lack sufficient knowledge to recognize the benevolent intentions behind harsh parenting, which places them in a vulnerable position to confront the punitive manifestation of authoritarian parenting and engage in more internalizing and externalizing problems. Indeed, it was found that the moderating effect of positive appraisals in the relationship between harsh parenting and behavior problems was stronger for adolescents than young children (Cheah et al., 2019), indicating the cognitive and behavioral differences between the developmental stages.

Surprisingly, significant relationships between parenting styles and behavior problems were only caught when using maternal reports. Parenting data collected through observation was not related to children's behavior problems in either sample. This finding is different from past research findings as strong associations between observed parenting styles and children's emotional and behavioral development were revealed (Baumrind et al., 2010; Griffith et al., 2019; Jennings, 2008; Schwartz et al., 2012). Although each data collection has advantages and limitations, some previous research found that, compared with self-report, observed parenting provides stronger predictions of children's social-emotional and behavioral development (McLeod et al., 2007; Zaslow et al., 2006).

Several perspectives should be considered to assist the understanding of the disparity in associations between reported and observed parenting. First, it is essential to understand that different methods can access different information. The self-reported approach enables information regarding parents' perception of their child-rearing attitudes, beliefs, and practices (Darling & Steinberg, 1993; Gardner, 2000). Whereas the observation approach mainly collects information on spontaneous parenting behaviors (Gardner, 2000). It is plausible that self-reported parenting could detect nuanced parenting climate that is too subtle to identify through observed parenting, such as impatience and frustration.

On the other hand, given that mothers are also the respondents who complete the report of children's behavior problems, the present study would face a higher risk of response bias if we solely relied on the results from maternal-reported parenting. McLeod and colleagues (2007) pointed out that, when all associated questionnaires are conducted by the same source (i.e., parent), the validity and generalizability of the findings are questionable. Parents who report a higher endorsement of authoritarianism may have the desire to describe their children as challenging to deal with to justify the adopted parenting style (i.e., the issue of shared method variance, McLeod et al., 2007). As a result, correlation inflation resulting from shared method variance may have dedicated to the significant finding between maternal-reported parenting (i.e., maternal-reported parenting styles) and behavior problems (i.e., maternal-reported child behavior problems) in the present study.

The present data do not have sufficient information to confirm which of the above explanations is legitimate. However, considering that the data on observed parenting behaviors (1) are closer to capturing the day-to-day interactions between Chinese and Canadian mothers and their children (as discussed in the section of Parenting Within Each Culture) and (2) can

reduce potential overlapping variability due to the single-source bias, a final decision was made to use observed high-power strategies in the moderation analysis.

Reported and Observed Parenting Styles and Maternal Mind-Mindedness

Authoritative Parenting and Mind-Mindedness. Significant correlations were found between authoritative parenting styles and child-related mind-mindedness. In the Canadian group, mothers with a more favorable attitude toward authoritativeness tended to comment more on their children's mental states. In the Chinese group, mothers' higher use of low- and neutral-power strategies was associated with higher concurrent child-related mind-minded talks. These results were consistent with our expectations, indicating that authoritative parenting styles and maternal mind-mindedness are closely linked through their child-focused nature.

Although no study has directly examined the relationship between mind-mindedness and Baumrind's parenting styles, past research on mind-mindedness found empirical support that aligns with the theoretical underpinning of authoritative parenting. First, authoritative parenting aims to support children's sense of self and autonomy growth (Baumrind, 1989, 2013). Mind-mindedness emphasizes parents' cognitive effort to see things from a child's points of view (Meins, 1997) and was significantly linked with parental autonomy support (Bernier et al., 2010; Bordeleau et al., 2012; Colonnesi et al., 2017; Lundy & Fyfe, 2015). For example, in a cross-sectional study, Lundy and Fyfe (2015) explored the underlying mechanism between maternal mind-mindedness and children's theory of mind through the serial mediation path of maternal autonomy promotion and children's mind-related comments. Their mediation model was well-supported, indicating that mothers with a high level of mind-mindedness would better scaffold their children's theory of mind by encouraging independent thinking while closely monitoring children's ongoing mental cues (Lundy & Fyfe, 2015). The

findings suggest that mind-mindedness might serve as a cognitive guide for authoritative parents to better promote autonomy-encouraging parenting behaviors.

Second, authoritative parenting emphasizes parental sensitivity through high parental responsiveness to children's physical and emotional needs (Baumrind, 1983, 2013). Maternal mind-mindedness was found to have small to moderate positive correlations with various forms of maternal sensitivity (Bernier et al., 2010; Bigelow et al., 2015; Licata et al., 2013; Meins et al., 2001; Planalp et al., 2019). Mothers with high mind-mindedness had a higher tendency to respond to their children's behavioral signals in a warmth manner, including mirroring children's behaviors (Bigelow et al., 2015), providing more emotional availability (Licata et al., 2013), and modifying their own behavior in accordance with children's ongoing mental states (Planalp et al., 2019). Therefore, mind-mindedness seems to reflect the cognitive foundation of high parental responsiveness during the authoritative child-rearing process. Although our results could not establish causality, we can conclude that, regardless of cultural background, mothers with a level of high authoritative parenting were more likely to attempt to connect with children mentally by actively commenting on their emotions and cognitions, which may establish an equal communication channel for mother-child dyads.

Authoritarian Parenting and Mind-Mindedness. No significant associations were observed between authoritarian parenting and child-related mind-mindedness in both cultural groups. These results were somewhat unexpected since they are inconsistent with previous research. In particular, MacMahon and Meins (2012) found that Australian mothers who are inclined to view their preschoolers as psychological agents display less parental hostility during free play, such as threats, criticism, and impatience. In addition, Hughes and colleagues (2017) speculated that there would be a negative connection between authoritarian parenting

and mind-mindedness since authoritarian parenting violates the socialization goal of autonomy growth in Western contexts.

It may be the case that Canadian mothers' scores on authoritarian parenting attitudes and practices were generally low in the current study. Perhaps the low variations in authoritarian parenting might have underestimated the statistical power to detect its relation to maternal mind-mindedness use. Additionally, since the present study focuses solely on the frequency of maternal mind-mindedness used, some crucial criteria might have been overlooked. To illustrate, observed mind-mindedness has two orthogonal dimensions: *appropriate* vs. non-*attuned* (Meins et al., 2012). *Appropriate* mind-mindedness indexes parents' sensitive attentiveness to children's points of view by accurately commenting on children's mental states, while *non-attuned* mind-mindedness refers to parents' lack of attunement to children's ongoing experiences and behaviors by misinterpreting children's internal states (Meins et al., 2012). These two types of mind-mindedness may be linked to different parenting styles. For example, mothers who have more *appropriate* mind-mindedness tend to have a high level of maternal sensitivity (Colonnesi et al., 2017; Planalp et al., 2019; Lundy, 2013), which reflects child-centered parenting approach. On the other hand, mothers' frequent use of *non-attuned* mind-minded talks was associated with their lower emotional availability and more behavioral intrusiveness (McMahon & Newey, 2018), which are more in line with the description of parent-centered parenting approaches. Accordingly, the potential presence of these two subtypes within observed mind-mindedness utterances might have complicated the association between authoritarian parenting and mind-mindedness. Since this study is the first to examine the relationship between authoritarian parenting and mind-mindedness, further investigation is needed to test the above proposition.

In contrast, the lack of relationship between Chinese mothers' authoritarian parenting and child-related mind-mindedness was consistent with our expectation. In a collectivistic Chinese society, the emphasis is placed on group harmony and emotional restriction (Ho, 1986; Triandis et al., 1998) rather than autonomy growth. Thus, Chinese mothers' authoritarian parenting attitudes and practices may not mean they do not care for and are hostile against their children. The present result indicates that, regardless of whether mothers adopt authoritarian parenting beliefs, mothers' propensity to comment on child-related mental states remain unaffected in the Chinese context.

The present study also explored the connection between authoritarian parenting and mother-related mind-mindedness. According to Baumrind (1971), authoritarian parents are in favor of using coercive and psychological control to maintain their authority in a family unit. Such parent-centered child-rearing approaches would likely revolve around parents' feelings and thoughts (i.e., mother-related mind-mindedness). However, an opposite finding was observed in the Chinese sample. In the present study, Chinese mothers with more authoritarian attitudes expressed fewer comments regarding their internal states during mother-child interactions. Such a culturally unique negative association may further advocate the idea that Chinese mothers' authoritarian attitudes are not derived from the hostility against their children but are attached to the value of filial piety (Chao, 1994). Although these parents view their relationship with their children as unequal in nature, they believe they are obligated to protect, care for, and nurture their children (Ho, 1996). Authoritarian mothers' lower disclosure of their mental state may point toward one of the culturally appropriate paths Chinese mothers take to maintain their dominant position. After all, expressing feelings and thoughts could be considered a sign of vulnerability, which could challenge authoritarian mothers' position of authority. As a result, Chinese parents with authoritarian parenting style

may not think it is necessary for their children to know what they are feeling or thinking, which unintentionally creates an emotional distance from their children.

Maternal Mind-Mindedness and Behavior Problems

Contrary to the hypothesis, the present study failed to find any connection between maternal mind-mindedness and children's behavior problems in the Canadian and Chinese groups. The lack of substantial association is surprising given previous research indicating that a high level of observed parental mind-mindedness facilitates preschoolers' inhibitory control (Gagné et al., 2018), mitigates behavioral difficulty (Colonesi et al., 2019; Hobby et al., 2022; Meynen et al., 2022), and reduces emotional problems (Hobby et al., 2022).

Again, the present study might not have replicated these significant correlations because of the method used to assess maternal mind-mindedness. Current research has shown that *appropriate* and *non-attuned* mind-mindedness contribute to children's behavioral development in opposite directions. The negative relationships between mind-mindedness and preschoolers' behavior problems found in previous studies were mostly drawn from the *appropriate* dimension of mind-mindedness. On the other hand, although only a few studies have investigated *non-attuned* mind-mindedness (McMahon & Bernier, 2017), it was generally found to be linked with adverse child outcomes, such as externalizing problems (Colonesi et al., 2019) and insecure attachment (Meins et al., 2012). Regarding the present study, the measure of maternal mind-mindedness focused on the overall number of mind-related comments. *Appropriate* and *non-attuned* mind-mindedness in relation to children's behavior problems were not analyzed separately, which could have counteracted their significant effects on each other, leading to an insignificant correlation between mind-mindedness and behavior problems. Accordingly, the nonsignificant findings may suggest that the quantity of Canadian and Chinese mothers' mind-related comments is insufficient to

facilitate their children's better behavioral development; the appropriateness of such comments is also important.

The Moderating Role of Maternal Mind-Mindedness

As hypothesized, maternal mind-mindedness played a moderating role in the Chinese sample but not in the Canadian sample. The impact of maternal high-power strategies on children's problem behaviors differed depending on maternal mind-mindedness. Specifically, compared with Chinese children whose mothers adopted fewer mind-related talks, children raised by mothers who used a high level of mind-mindedness no longer displayed profound internalizing and externalizing behaviors when facing mothers' increasing use of controlling behaviors. It is worth noting that the present results also indicated that when mothers' mind-mindedness comments reached adequate numbers (1.40 and 5.91 *SDs* above the mean in the analysis of internalizing and externalizing behaviors, respectively), mothers' controlling behaviors started to significantly and negatively related with children's problem behaviors. However, these extremely high cut-off points indicated that only a small portion of Chinese mother-child dyads could meet such criteria. This raises questions about the meaningfulness of these upper-end cut-off points. Therefore, it would be more idealistic to conclude that mothers' open communication toward children's internal states (i.e., maternal mind-mindedness) is a resilience factor that buffers the negative association between maternal high-power strategies and children's problem behaviors in China.

Maternal mind-mindedness, especially appropriate utterances, is consistently found to be associated with maternal sensitivity and secure parent-child relationships (Bigelow et al., 2015; Colonnesi et al., 2017; Laranjo et al., 2008; Licata et al., 2013; McMahon & Bernier, 2016; Planalp et al., 2019), suggesting that the construct of mind-mindedness is closely related to parental warmth and care. Furthermore, high mind-mindedness capability helps mothers

detect and promptly respond to their children's behavioral difficulties. In line with this notion, parents' appropriate mind-mindedness comments during early infancy were found to reduce children's externalizing (Colonesi et al., 2019) and internalizing behaviors (Meins et al., 2013). Similarly, it has been found that maternal mind-mindedness contributes to preschoolers' ability to inhibit control (Cheng et al., 2018; Gagné et al., 2018) and self-regulation (Nikolić et al., 2022). Taken together, it is possible that, in the context of an affection-restrained Chinese society (Doan & Wang, 2018; Wu et al., 2019), mothers' verbal expression about children's internal states may serve as an implicit index of parental warmth. When mothers go beyond merely fulfilling children's physical and financial needs and strive to connect with their children on a mental level, it better prepares the children to handle stressful situations, such as parent-child interactions involving high levels of parental coercive control.

Chinese mothers' mind-mindedness may help children understand the good intentions behind mothers' authoritarian-like behaviors by facilitating children's theory of mind. Previous studies have shown that maternal mind-mindedness during infancy scaffolds children's theory of mind at preschool age (Kirk et al., 2015; Laranjo et al., 2010, 2014; Lundy, 2013). For example, children whose mothers frequently use appropriate mind-related comments tend to have an advanced understanding of mental manipulation in tasks like strange stories that include lies, persuasion, and misunderstanding (Kirk et al., 2015). Therefore, it is possible that, compared with children whose parents display a high level of mind-mindedness, children with parents who rarely discuss thoughts and feelings may lack the communication channel needed to effectively understand their parents' perspectives and motivations, resulting in more maladaptive behaviors triggered by high-power strategies.

It is speculated that maternal mind-mindedness can reduce children's behavioral difficulties by fostering a sense of initiative in them. According to the Self-Determination Theory (Deci & Ryan, 2000), humans have three universal psychological needs: autonomy, relatedness, and competence, all of which are important for an individual's internalization and integration of values. Specifically, for children's successful integration process, they must be given the opportunity to endorse or modify transmitted values as they see fit (Deci & Ryan, 2000). This places parents' support of autonomy in an indispensable position in children's optimal development. As discussed earlier, maternal mind-mindedness has been linked to mothers' autonomy granting (Bernier et al., 2010; Bordeleau et al., 2012; Colonnesi et al., 2017; Lundy & Fyfe, 2015), reflecting mothers' efforts to respect their children as psychological agents. As a result, when parents actively acknowledge their children's perspectives, interests, feelings, and thoughts, children might adopt a more volitional mindset in understanding their parents' behaviors and values.

Moreover, maternal mind-mindedness may encourage children to assert their initiatives adaptively. Although culture and personality could modify children's appraisal of controlling behaviors to a certain degree, parental coerciveness is still negatively associated with children's problem behaviors across cultures (Soenens & Vansteenkiste, 2015). According to Sinner and Edge (2003), there are two categories of responses children are likely to demonstrate when their need for autonomy is suppressed: *compulsive compliance* (i.e., concession) or *oppositional defiance* (i.e., defense; see Soenens and Vansteenkiste for well-established taxonomy figure). Both responses are maladaptive and dysfunctional. *Compulsive compliance* refers to children's passive obedience to parental authority, often accompanied by anxiety and frustration. *Oppositional defiance* refers to children's indiscriminate rejection of parental authority (Soenens et al., 2015), which could generalize to children's aggressive

behaviors (Van Petegem et al., 2015). Studies have shown that high-controlling parenting practices are linked to children's internalizing and externalizing problems through children's compulsive compliance and oppositional defiance, respectively (Brenning et al., 2019; Flamant et al., 2020). Interestingly, compared with Belgian children, Chinese children raised in a more controlling society were more likely to concede to or fight against their parents' requests (Chen et al., 2006). As a logical extension, it is possible that when facing mothers' controlling behaviors (e.g., high-power strategies), Chinese children's problem behaviors can be viewed as a manifestation of prolonged maladaptive coping behaviors. Therefore, Chinese mothers' use of mind-mindedness utterances may grant children a greater sense of autonomy and reduce the inclination to employ maladaptive coping behaviors when facing maternal high-power strategies. Children may feel entitled to engage in negotiation (an adaptive form of coping response) when mothers' controlling behavior is perceived as unreasonable. However, to date, there is no empirical support for the direct connection between mind-mindedness and child compliance.

Conclusion, Limitations and Future Directions

In sum, the results indicated that, despite Chinese mothers exhibiting more controlling behaviors and fewer mind-mindedness utterances compared to Canadian mothers, the higher appreciation of authoritative, rather than authoritarian, parenting style is universal among both groups of mothers. Moreover, mothers from both China and Canada who endorse authoritative parenting are more likely to display a high level of mind-mindedness when interacting with their children, suggesting that mind-mindedness could be an indicator of mothers' positive parenting attempts. However, only Chinese mothers' frequent use of mind-mindedness comments buffers against their preschoolers' internalizing and externalizing behaviors when facing mothers' harsh-controlling behaviors. This research provides additional support for the

effectiveness of mind-mindedness in facilitating children's social adaptation in the Chinese context.

Several limitations should be addressed in the present study. To begin, the present study recruited participants from community samples. Mothers in the study generally scored low on authoritarian parenting beliefs and practices, which raises questions about the generalizability of the findings of the present study to other populations. For instance, Walker et al. (2012) found that mothers in a clinical sample made fewer instances of appropriate mind-minded talks compared to those recruited from a community sample. However, other research has concluded that mothers' level of appropriate mind-mindedness can be improved through intervention (Larkin et al., 2019), which might enable the possibility to facilitate "true" authoritarian mothers' proper child-rearing conduct and, subsequently, improving child development. Future research should expand the participant sample to include parents from clinical populations and/or those in need of parenting support. This will enable an examination of the effectiveness of mind-mindedness in the context of clinical interventions.

In addition, the present study employed a cross-sectional design, which limits the ability to establish causality in the relationship between parenting, mind-mindedness, and problem behaviors. Although the present study has a theoretical foundation supporting the potential causal connections (Meins, 1997), a considerable body of research has found solid evidence that children's behavioral difficulties could reduce mothers' appropriate mind-mindedness through the mediation role of high parenting stress (McMahan & Bernier, 2017). Therefore, a longitudinal design is warranted in future research to examine the causal connections among the variables.

Moreover, the present study only examined mind-mindedness based on the quantity of mental-state talks a mother engaged in, which could contribute to the insignificant finding of

the moderating effect of mind-mindedness in the Canadian sample. It is possible that in the child-centered Canadian society (Ho, 1986), the quantity of mind-mindedness used is not adequate to explain the reduction of children's problem behaviors. Instead, the form of mind-mindedness delivery may be more significant in individualistic contexts (e.g., Canada) compared to collectivist contexts (e.g., China). Future research should examine the moderating role of appropriate mind-mindedness in the relationship between authoritarian parenting and behavior problems in Canadian mother-child dyads. In addition, aside from *appropriate* and *non-attuned* mind-mindedness, other measurement approaches should be considered for cross-cultural investigation. For instance, based on different child-rearing emphases on child autonomy and parental authority, mind-mindedness can be further divided into child-centered and parent-centered forms (modified based on Fonshburn & Meins, 2017). Canadian mothers' use of child-centered mind-mindedness comments such as suggestions and questions to communicate (e.g., "what do *you* think if we try this..." "are *you* having fun?") may promote children's autonomy growth and better associate with children's positive behavior outcomes. In comparison, when Canadian mothers' mind-mindedness is demonstrated in a more didactic and direct manner (e.g. "*think* about it," "go, have *fun*"), representing parent-centered mind-mindedness, their children may not benefit from it. Therefore, it would be valuable to further investigate the link between the various forms of mind-mindedness and child development. This investigation could include both domestic Chinese and Canadian populations, as well as the immigrant population, to gain a comprehensive understanding of how parents' preferences for these forms of mind-mindedness influence individual development. This would also shed light on the impact of varying cultural emphases and degrees of acculturation within the immigrant population.

Finally, the present study examined the effectiveness of mind-mindedness in preschool- aged participants. Adolescence is an important developmental stage marked by a desire for autonomy. During this stage, adolescents are likely to negotiate for greater power within the family in order to shift the parent-dominant relationship towards a more egalitarian one (Soenens & Vansteenkiste, 2020). In line with this notion, it has been found that, compared with young children, Chinese adolescents are more likely to challenge their mothers' authoritarian parenting (Cheah et al., 2019). Although Chinese adolescents' positive view of authoritarian parenting can profoundly mitigate the negative effects of authoritarian parenting, those who do not hold such a view seem to suffer more than young children (Cheah et al., 2019). This changing power dynamic between parents and children raises questions about the role that mind-mindedness might play in this process. Future studies should corroborate the moderating effect of mind-mindedness in the relationship between authoritarian parenting style and children's compliance in the adolescent population.

Despite its limitations, the present study contributes to the current literature by providing a new perspective on understanding Chinese parenting. Specifically, the significant moderating role of mind-mindedness in the Chinese sample provides some clarifications of the complex relationship between Chinese authoritarian parenting and children's problem behaviors. Thereby, maternal mind-mindedness may have practical implications for early parent-child interaction-based intervention, since it serves as a more culturally appropriate tool for enhancing children's cultural awareness by creating an effective communication channel between mothers and their preschoolers.

References

Achenbach, T. M., & Edelbrock, C. (1991). Child behavior checklist. *Burlington (Vt)*, 7, 371-392.

Ainsworth M., Bell S., Stayton D. (1971). Individual differences in Strange Situation behaviour of one-year-olds. In Schaffer H. R. (Ed.), *The origins of human social relations.* New York: Academic Press.

Ainsworth M., Bell S., Stayton D. (1974). Infant-mother attachment and social development: Socialisation as a product of reciprocal responsiveness to signals. In Richards M. P. (Ed.), *The introduction of the child into a social world.* London: Cambridge University Press.

Areepattamannil, S. (2010). Parenting Practices, Parenting Style, and Children's School Achievement. *Psychological Studies, 55*, 283–289. https://doi.org/10.1007/s12646-010-0043-0

Argyle, M., Henderson, M., Bond, M., Iizuka, Y., & Contarello, A. (1986). Cross-cultural variation in relationship rules. *International Journal of Psychology, 21*, 287–315. https://doi.org/10.1080/00207598608247591

Barber, B. K. (2002). *Intrusive parenting: How psychological control affects children and adolescents*. American Psychological Association.

Barber, B. K., Olsen, J. E., & Shagle, S. C. (1994). Associations between parental psychological and behavioral control and youth internalized and externalized behaviors. *Child Development, 65*(4), 1120–1136. https://doi.org/10.1111/j.1467-8624.1994.tb00807.x

Barreto, A. L., Fearon, R. M. P., Osório, A., Meins, E., & Martins, C. (2016). Are adult mentalizing abilities associated with mind-mindedness? *International Journal of Behavioral Development, 40*(4), 296–301. https://doi.org/10.1177/0165025415616200

Baumrind, D. (1966). Effects of authoritative parental control on child behavior. *Child Development, 37*, 887–907. https://doi.org/10.2307/1126611

Baumrind, D. (1968). Authoritarian v. authoritative parental control. Adolescence, 3, 255-272.

Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology, 4*(1, Pt.2), 1–103. https://doi.org/10.1037/h0030372

Baumrind, D. (1989). Rearing competent children. In W. Damon (Ed.), *Child development today and tomorrow* (pp. 349–378). San Francisco: Jossey-Bass.

Baumrind, D. (2012). Differentiating between Confrontive and Coercive Kinds of Parental Power-Assertive Disciplinary Practices. *Human Development, 55*(2), 35-51. https://doi.org/10.1159/000337962

Baumrind, D. (2013). Authoritative parenting revised: History and current status. In Larzelere, R. E., Morris, A. S., & Harrist, A. W. (Eds.), *Authoritative parenting* (pp. 11-34). Washington, D.C.: American Psychological Association.

Baumrind, D., Larzelere, R. E., & Owens, E. B. (2010). Effects of preschool parents' power assertive patterns and practices on adolescent development. *Parenting: Science and Practice, 10*(3), 157-201. http://dx.doi.org.proxy1.lib.trentu.ca/10.1080/15295190903290790

Bernier, A., Carlson, S. M., & Whipple, N. (2010). From External Regulation to Self-Regulation: Early Parenting Precursors of Young Childrens Executive Functioning. *Child Development, 81*(1), 326–339. https://doi.org/10.1111/j.1467-8624.2009.01397.x

Bernier, A., McMahon, C. A. & Perrier, R. (2017). Maternal mind-mindedness and children's school readiness: A longitudinal study of developmental processes. *Developmental Psychology, 53*(2), 210-221. https://doi.org/10.1037/dev0000225

Berry, J. W. (1989). Imposed etics-emics-derived etics: The operationalization of a compelling idea. International Journal of Psychology, 24, 721–735. https://doi.org/10.1080/00207598908247841

Bi, X., Yang, Y., Li, H., Wang, M., Zhang, W., & Deater-Deckard, K. (2018). Parenting styles and parent–adolescent relationships: The mediating roles of behavioral autonomy and parental authority. *Frontiers in Psychology,* 9, 13. https://doi.org/10.3389/fpsyg.2018.02187

Bigelow, A. E., Power, M., Bulmer, M., & Gerrior, K. (2015). The Relation between Mothers' Mirroring of Infants' Behavior and Maternal Mind-Mindedness. *Infancy, 20*(3), 263–282. https://doi.org/10.1111/infa.12079

Blair, B. L., Perry, N. B., O'Brien, M., Calkins, S. D., Keane, S. P., & Shanahan, L. (2015). Identifying developmental cascades among differentiated dimensions of social competence and emotion regulation. *Developmental Psychology, 51*(8), 1062–1073. https://doi.org/10.1037/a0039472

Bordeleau, S., Bernier, A., & Carrier, J. (2012). Longitudinal associations between the quality of parent−child interactions and children's sleep at preschool age. *Journal of Family Psychology, 26*(2), 254–262. https://doi.org/10.1037/a0027366

Bornstein, M.H. (2002). Handbook of Parenting: Biology and ecology of parenting. *Hillsdale, NJ: Lawrence Erlbaum*.

Bowlby, J. (1969). *Attachment and loss: Attachment*; *Volume 1 Attachment*. Basic Books.

Bozicevic, L., Hill, J., Chandra, P. S., Omirou, A., Holla, C., Wright, N., & Sharp, H. (2023). Cross-cultural differences in early caregiving: levels of mind-mindedness and instruction in UK and India. *Frontiers in Child and Adolescent Psychiatry, 2*. https://doi.org/10.3389/frcha.2023.1124883

Brenning, K. M., Antrop, I., Petegem, S., Soenens, B., Meulenaere, J., Rodríguez-Meirinhos, A., & Vansteenkiste, M. (2019). I won't obey!: Psychologically Controlling Parenting and

(Non)-Clinical Adolescents' Responses to Rule-setting. *Journal of Clinical Psychology, 75*(6), 1034–1046. https://doi.org/10.1002/jclp.22750

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist,* 32, 513–531. https://doi.org/10.1037/0003-066X.32.7.513

Bullock, A., Liu, J., Cheah, C. S. L., Coplan, R. J., Chen, X., & Li, D. (2018). The role of adolescents' perceived parental psychological control in the links between shyness and socio-emotional adjustment among youth. *Journal of Adolescence, 68*, 117-126. https://doi.org/10.1016/j.adolescence.2018.07.007

Camberis, A.-L., McMahon, C. A., Gibson, F. L., & Boivin, J. (2016). Maternal Age, Psychological Maturity, Parenting Cognitions, and Mother-Infant Interaction. *Infancy, 21*(4), 396–422. https://doi.org/10.1111/infa.12116

Camisasca, E., Miragoli, S., Ionio, C., Milani, L., & Di Blasio, P. (2018). Post-partum depressive symptoms and child behavior: The mediational role of maternal mind-mindedness. *Children's Health Care, 47*(2), 165-183. https://doi.org/10.1080/02739615.2017.1318389

Camras, L. A., Sun, K., Fraumeni, B. R., & Li, Y. (2017). Interpretations of parenting by mainland Chinese and U.S. American children. *Parenting: Science and Practice, 17*(4), 262-280. https://doi.org/10.1080/15295192.2017.1369330

Chan, S. M. (2010). Aggressive behaviour in early elementary school children: relations to authoritarian parenting, children's negative emotionality and coping strategies. *Early Child Development and Care, 180*(9), 1253–1269. https://doi.org/10.1080/03004430902981447

Chan, S. M., Bowes, J., & Wyver, S. (2009). Chinese parenting in Hong Kong: links among goals, beliefs and styles. *Early Child Development and Care, 179*(7), 849–862. https://doi.org/10.1080/03004430701536525

Chao, R. K. (1994). Beyond parental control and authoritarian parenting style: Understanding Chinese parenting through the cultural notion of training. *Child Development, 65*(4), 1111-1119. https://doi.org/10.2307/1131308

Chao, R. K. (1995). Chinese and European American cultural models of the self reflected in mothers' childrearing beliefs. *Ethos*, 23(3), 328-354. https://doi.org/10.1525/eth.1995.23.3.02a00030

Chao, R. K. (2001). Extending Research on the Consequences of Parenting Style for Chinese Americans and European Americans. *Child Development., 72*(6), 1832–1843. https://doi.org/10.1111/1467-8624.00381

Chao, R. K., & Aque, C. (2009). Interpretations of Parental Control by Asian Immigrant and European American Youth. *Journal of Family Psychology, 23*(3), 342–354. https://doi.org/10.1037/a0015828

Chao, R., & Tseng, V. (2002). Parenting of Asians. In M. H. Bornstein (Ed.), 2nd ed.; handbook of parenting: Social conditions and applied parenting (vol. 4, 2nd ed.) (2nd ed. ed., pp.59-93, Chapter xxx, 410 Pages) *Lawrence Erlbaum Associates Publishers,* Mahwah, NJ.

Chang, L., Chen, B.-B., & Ji, L. Q. (2011). Attributions and Attitudes of Mothers and Fathers in China. *Parenting, Science and Practice, 11*(2-3), 102–115. https://doi.org/10.1080/15295192.2011.585553

Chang, F., Wu, H. X., Ching, B. H., Li, X., & Chen, T. T. (2022). Behavior problems in deaf/hard-of-hearing children: Contributions of parental stress and parenting styles. *Journal of Developmental and Physical Disabilities, 35*(4), 607-630. https://doi.org/10.1007/s10882-022-09869-2

Cheah, C. S. L., Li, J., Zhou, N., Yamamoto, Y., & Leung, C. Y. Y. (2015). Understanding Chinese immigrant and European American mothers' expressions of warmth. *Developmental Psychology, 51*(12), 1802-1811. https://doi.org/10.1037/a0039855

Cheah, C. S. L., & Rubin, K. H. (2004). European American and Mainland Chinese mothers' responses to aggression and social withdrawal in preschoolers. *International Journal of Behavioral Development, 28*(1), 83–94. https://doi.org/10.1080/01650250344000299

Cheah, C. S. L., Yu, J., Liu, J., & Coplan, R. J. (2019). Children's cognitive appraisal moderates associations between psychologically controlling parenting and children's depressive symptoms. *Journal of Adolescence, 76*, 109. https://doi.org/10.1016/j.adolescence.2019.08.005

Chen, G.-M. (1995). Differences in Self-Disclosure Patterns among Americans Versus Chinese: A Comparative Study. *Journal of Cross-Cultural Psychology, 26*(1), 84–91. https://doi.org/10.1177/0022022195261006

Chen, W.-W. (2014). The Relationship Between Perceived Parenting Style, Filial Piety, and Life Satisfaction in Hong Kong. *Journal of Family Psychology, 28*(3), 308–314. https://doi.org/10.1037/a0036819

Chen, X. (2000a). Growing up in a collectivist culture: Socialization and socioemotional development in chinese children. In A. L. Comunian, & U. P. Gielen (Eds.), *International perspectives on human development; international perspectives on human development* (pp. 331-353, Chapter xxi, 666 Pages). Lengerich: Pabst Science Publishers.

Chen, S. X., Cheung, F. M., Bond, M. H., & Leung, J.-P. (2005). Decomposing the construct of ambivalence over emotional expression in a Chinese cultural context. *European Journal of Personality, 19*(3), 185–204. https://doi.org/10.1002/per.538

Chen, X., Dong, Q., & Zhou, H. (1997). Authoritative and authoritarian parenting practices and social and school performance in Chinese children. *International Journal of Behavioral Development, 21*(4), 855-873. https://doi.org/10.1080/016502597384703

Chen, J., & Goldsmith, L. T. (1991). Social and behavioral characteristics of Chinese only children: A review of research and its research concern. *Journal of Research in Childhood Education, 5*(2), 127-39. https://eric.ed.gov/?id=ED338427

Chen, X., Liu, M., & Li, D. (2000b). Parental warmth, control, and indulgence and their relations to adjustment in Chinese children: A longitudinal study. *Journal of Family Psychology, 14,* 401–419. https://doi.org/10.1037/0893-3200.14.3.401

Chen, X., Liu, M., Li, B., Cen, G., Chen, H., & Wang, L. (2000c). Maternal authoritative and authoritarian attitudes and mother–child interactions and relationships in urban China. *International Journal of Behavioral Development, 24*(1), 119-126. http://dx.doi.org.proxy1.lib.trentu.ca/10.1080/016502500383557

Chen, F., & Luster, T. (2002). Factors related to parenting practices in Taiwan. *Early Child Development and Care, 172*(5), 413-430. https://doi.org/10.1080/03004430214549

Chen, X., Rubin, K. H., Liu, M., Chen, H., Wang, L., Li, D., … Li, B. (2003). Compliance in Chinese and Canadian toddlers: A cross-cultural study. *International Journal of Behavioral Development, 27*(5), 428–436. https://doi.org/10.1080/01650250344000046

Chen, B., Soenens, B., Vansteenkiste, M., Van Petegem, S., & Beyers, W. (2016). Where Do the Cultural Differences in Dynamics of Controlling Parenting Lie? Adolescents as Active Agents in the Perception of and Coping with Parental Behavior. *Psychologica Belgica, 56*(3), 169–192. https://doi.org/10.5334/pb.306

Chen, S. H., Zhou, Q., Main, A., & Lee, E. H. (2015). Chinese American Immigrant Parents' Emotional Expression in the Family: Relations With Parents' Cultural Orientations and

Children's Emotion-Related Regulation. *Cultural Diversity & Ethnic Minority Psychology, 21*(4), 619–629. https://doi.org/10.1037/cdp0000013

Chen-Bouck, L., & Patterson, M. M. (2017). Perceptions of parental control in China: Effects of cultural values, cultural normativeness, and perceived parental acceptance. *Journal of Family Issues, 38*(9), 1288-1312. https://doi.org/10.1177/0192513X15590687

Cheng, N., Lu, S., Archer, M., & Wang, Z. (2018). Quality of maternal parenting of 9-month-old infants predicts executive function performance at 2 and 3 years of age. *Frontiers in Psychology, 8*, 2293. https://doi.org/10.3389/fpsyg.2017.02293

Chiu, L. (1987). Child-rearing attitudes of Chinese, Chinese-American, and Anglo-American mothers. *International Journal of Psychology, 22*(4), 409-419. https://doi.org/10.1080/00207598708246782

Cho, H. S., Cheah, C. S. L., Vu, K. T. T., Selçuk, B., Yavuz, H. M., Şen, H. H., & Park, S. (2021). Culturally shared and unique meanings and expressions of maternal control across four cultures. *Developmental Psychology, 57*(2), 284-301. https://doi.org/10.1037/dev0001136

Chow, N. L., & Zhao, S. M. (1996). The one-child policy and parent-child relationships: A comparison of one-child with multiple-child families in China. *The International Journal of Sociology and Social Policy, 16*(12), 35-62. https://doi.org/10.1108/eb013285

Chuang, S. S., Glozman, J., Green, D. S., & Rasmi, S. (2018). Parenting and family relationships in Chinese families: A critical ecological approach. *Journal of Family Theory & Review, 10*(2), 367-383. https://doi.org/10.1111/jftr.12257

Colonnesi, C., van Polanen, M., Tavecchio, L. W. C., & Fukkink, R. G. (2017). Mind-mindedness of male and female caregivers in childcare and the relation to sensitivity and attachment:

An exploratory study. *Infant Behavior & Development, 48*, 134-146. https://doi.org/10.1016/j.infbeh.2017.04.006

Colonesi, C., Zeegers, A. J., Majdandžić, M., van Steensel, F. J. A. & Bögels, S. M. (2019). Fathers' and mothers' early mind-mindedness predicts social competence and behavior problems in childhood. *Journal of Abnormal Child Psychology, 47*, 1421-1435. https://doi.org/10.1007/s10802-019-00537-2

Costigan, C., & Su, T. F. (2008). Cultural predictors of the parenting cognitions of immigrant Chinese mothers and fathers in Canada. *International Journal of Behavioral Development,* 32, 432–442. https://doi.org/10.1177/0165025408093662

Dai, Q., McMahon, C., & Lim, A. K. (2020). Cross-cultural comparison of maternal mind-mindedness among Australian and Chinese mothers. *International Journal of Behavioral Development, 44*(4), 365-370. https://doi.org/10.1177/0165025419874133

Deater-Deckard, K., Lansford, J. E., Malone, P. S., Alampay, L. P., Sorbring, E., Bacchini, D., et al. (2011). The association between parental warmth and control in thirteen cultural groups. *Journal of Family Psychology,* 25, 790–794. https://doi.org/10.1037/a0025120

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01

Demers, I., Bernier, A., Tarabulsy, G. M., & Provost, M. A. (2010a). Maternal and child characteristics as antecedents of maternal mind-mindedness. *Infant Mental Health Journal, 31*(1), 94–112. https://doi.org/10.1002/imhj.20244

Demers, I., Bernier, A., Tarabulsy, G. M., & Provost, M. A. (2010b). Mind-mindedness in adult and adolescent mothers: Relations to maternal sensitivity and infant attachment.

International *Journal of Behavioral Development, 34*(6), 529–537. https://doi.org/10.1177/0165025410365802

Deng, L. & Tong, T. (2020). Parenting style and the development of noncognitive ability in children. China Economic Review, 62. https://doi.org/10.1016/j.chieco.2020.101477

De Wolff M., van Ijzendoorn M. (1997). Sensitivity and attachment: A meta-analysis on parental antecedents of infant attachment. *Child Development, 68*, 571–591. https://doi.org/10.1111/j.1467-8624.1997.tb04218.x

Dickson, B. J. (2007). Integrating wealth and power in China: The communist party's embrace of the private sector. *The China Quarterly (London), 192*(192), 827–854. https://doi.org/10.1017/S0305741007002056

Doan, S. N., & Wang, Q. (2010). Maternal discussions of mental states and behaviors: Relations to emotion situation knowledge in European American and immigrant Chinese children. *Child Development, 81*(5), 1490–1503. https://doi.org/10.1111/j.1467-8624.2010.01487.x

Doan, S. N., & Wang, Q. (2018). Children's emotion knowledge and internalizing problems: The moderating role of culture. *Transcultural Psychiatry, 55*(5), 689-709. https://doi.org/10.1177/1363461518792731

Dornbusch, S. M., Ritter, P. L., Leiderman, P. H., Roberts, D. F., & Fraleigh, M. J. (1987). The relation of parenting style to adolescent school performance. *Child Development, 58*(5), 1244-1257. http://dx.doi.org.proxy1.lib.trentu.ca/10.2307/1130618

Eisenberg, N., Fabes, R. A., & Murphy, B. C. (1996). Parents' reactions to children's negative emotions: Relations to children's social competence and comforting behavior. *Child Development, 67*(5), 2227-2247. https://doi.org/10.2307/1131620

Ekblad, S. (1988). Influence of child-rearing on aggressive behavior in a transcultural perspective. *Acta Psychiatrica Scandinavica,* 78(344), 133-139. http://dx.doi.org.proxy1.lib.trentu.ca/10.1111/j.1600-0447.1988.tb09012.x

Ereky-Stevens, K. (2008). Associations between mothers' sensitivity to their infants' internal states and children's later understanding of mind and emotion. *Infant and Child Development.*, *17*(5), 527–543. https://doi.org/10.1002/icd.572

Fang, P., Xiong, D., & Guo, C. (2003). The effect of parenting styles on children's academic achievement. *Psychological Science (China), 26*(1), 78-81.

Flamant, N., Haerens, L., Mabbe, E., Vansteenkiste, M., & Soenens, B. (2020). How do adolescents deal with intrusive parenting? the role of coping with psychologically controlling parenting in internalizing and externalizing problems. *Journal of Adolescence, 84*, 200-212. https://doi.org/10.1016/j.adolescence.2020.09.003

Fox, R. A., Platz, D. L., & Bentley, K. S. (1995). Maternal factors related to parenting practices, developmental expectations, and perceptions of child behavior problems. *The Journal of Genetic Psychology, 156*(4), 431. https://doi.org/10.1080/00221325.1995.9914835

Fujita, N., & Hughes, C. (2021). Mind-mindedness and self–other distinction: Contrasts between Japanese and British mothers' speech samples. *Social Development (Oxford, England), 30*(1), 57–72. https://doi.org/10.1111/sode.12454

Fung, H. (1999). Becoming a moral child: The socialization of shame among young Chinese children. *Ethos*., 27(2), 180–209. https://doi.org/10.1525/eth.1999.27.2.180

Fung, J. Y. J. (2013). The meaning and correlates of psychological control in Chinese and American families (Order No. AAI3518133). http://proxy.lib.trentu.ca/login?url=https://www.proquest.com/dissertations-theses/meaning-correlates-psychological-control-chinese/docview/1426228642/se-2

Gagné, C., Bernier, A. & McMahon, C. A. (2018). The role of paternal mind-mindedness in preschoolers' self-regulated conduct. *Infant and Child Development, 27*, e2081. https://doi.org/10.1002/icd.2081

Gardner, F. (2000). Methodological issues in the direct observation of parent-child interaction: do observational findings reflect the natural behavior of participants? *Clinical Child and Family Psychology Review, 3*(3), 185–198. https://doi.org/10.1023/A:1009503409699

Gimenez-Serrano, S., Garcia, F., & Garcia, O. F. (2021). Parenting styles and its relations with personal and social adjustment beyond adolescence: Is the current evidence enough? *European Journal of Developmental Psychology,* https://doi.org/10.1080/17405629.2021.1952863

Goodnow, J. J. (1988). Parents' ideas, actions, and feelings: Models and methods from developmental and social psychology. *Child Development, 59,* 286-320. https://doi.org/10.2307/1130312

Goodwin, R., & Lee, I. (1994). Taboo topics among Chinese and English friends: A cross-cultural comparison. *Journal of Cross-Cultural Psychology, 25*, 325–328. https://doi.org/10.1177/0022022194253002

Greenlee, J. L., Piro-Gambetti, B., Putney, J., Papp, L. M., & Hartley, S. L. (2021). Marital satisfaction, parenting styles, and child outcomes in families of autistic children. *Family Process,* https://doi.org/10.1111/famp.12708

Griffith, J. M., Crawford, C. M., Oppenheimer, C. W., Young, J. F., & Hankin, B. L. (2019). Parenting and youth onset of depression across three years: Examining the influence of observed parenting on child and adolescent depressive outcomes. *Journal of Abnormal Child Psychology, 47*(12), 1969–1980. https://doi.org/10.1007/s10802-019-00564-z

Guo, Y., Zhang, Y., Wu, C., Yin, X., Zhang, J., Wu, J., Jing, J., Jin, U., Lin, L. & Chen, W. (2021). Bidirectional associations between parenting styles and conduct problems in Chinese preschool children: the Shenzhen Longhua child cohort study. *Psychology, Health & Medicine, 27*(9), 2007-2020. https://doi.org/10.1080/13548506.2021.1999994

Han, P. G., Wu, Y. P., Tian, Y., Xu, M. X., & Gao, F. G. (2016). The Relationship between Shyness and Externalizing problem in Chinese Preschoolers: The Moderating Effect of Teacher-child Relationship. *Journal of Education and Training Studies, 4*(3), 167–. https://doi.org/10.11114/jets.v4i3.1295

Harkness, S., & Super, C. M. (1995). Culture and parenting. In M. H. Bornstein (Ed.), Handbook off parenting: Vol. 2. *Biology and ecology off parenting* (pp. 211 – 234). Mahwah, NJ: Lawrence Erlbaum Associates Inc.

Harlow, H. F., & Harlow, M. K. (1965). The Affectional Systems. In A. Schrir, H. F. Harlow, & F. Stollniz (Eds.), *Behaviour of Nonhuman Primates: Modern Research Trends*. New York: Academic Press.

Heaven, P. C. L., & Ciarrochi, J. (2008). Parental styles, conscientiousness, and academic performance in high school: A three-wave longitudinal study. *Personality and Social Psychology Bulletin, 34*(4), 451-461. http://dx.doi.org.proxy1.lib.trentu.ca/10.1177/0146167207311909

Helwig, C. C., To, S., Wang, Q., Liu, C., & Yang, S. (2014). Judgments and reasoning about parental discipline involving induction and psychological control in China and Canada. *Child Development, 85*(3), 1150-1167. https://doi.org/10.1111/cdev.12183

Ho, D. Y., & Kang, T. K. (1984). Intergenerational comparisons of child-rearing attitudes and practices in Hong Kong. *Developmental Psychology, 20*(6), 1004-1016. https://doi-org.proxy1.lib.trentu.ca/10.1037/0012-1649.20.6.1004

Ho, D. Y. F. (1986). Chinese patterns of socialization: A critical review. In M. H. Bond (Ed.), The psychology of the Chinese people; *the psychology of the Chinese people* (pp. 1-37, Chapter xii, 354 Pages). New York, NY: Oxford University Press.

Ho, D. Y. F. (1994). Cognitive socialization in Confucian heritage cultures. In P. M. Greenfield, & R. R. Cocking (Eds.), Cross-cultural roots of minority child development; *cross-cultural roots of minority child development* (pp. 285-313, Chapter xix, 431 Pages) Lawrence Erlbaum Associates, Inc, Hillsdale, NJ.

Ho, D. Y. F. (2008). Chinese patterns of socialization: A critical review. In M.H.Bond(Ed.), The psychology of the Chinese people (p. 1037). *Hong Kong: Oxford University Press.*

Hobby, L., Bird, A. L., Townsend, M. L., & Barnes, J. (2022). Mind-mindedness and preschool children's behavioral difficulties: The moderating role of maternal parenting distress. *Development and Psychopathology*, https://doi.org/10.1017/S0954579422000311

Hong, G. K. & Hong, L. K. (1991). Comparative perspectives on child abuse and neglect: Chinese versus Hispanics and Whites. *Child Welfare.*, 70(4), 463 - 475.

Hosokawa, R., & Katsura, T. (2019). Role of Parenting Style in Children's Behavioral Problems through the Transition from Preschool to Elementary School According to Gender in Japan. *International Journal of Environmental Research and Public Health, 16*(1) https://doi.org/10.3390/ijerph16010021

Hu, Q., & Feng, Q. (2022). Parenting style and prosocial behavior among Chinese preschool children: A moderation model. *Early Child Development and Care: ECDC, 192*(9), 1444-1461. https://doi.org/10.1080/03004430.2021.1888942

Hughes, C., Aldercotte, A., & Foley, S. (2017). Maternal mind-mindedness provides a buffer for pre-adolescents at risk for disruptive behavior. *Journal of Abnormal Child Psychology, 45*(2), 225-235. https://doi.org/10.1007/s10802-016-0165-5

Hughes, C., Devine, R. T. & Wang, Z. (2018). Does parental mind-mindedness account for cross-cultural differences in preschoolers' theory of mind? *Child Development, 89*(4), 1296-1310. https://doi.org/10.1111/cdev.12746

Jennings, K. D., Sandberg, I., Kelley, S. A., Valdes, L., Yaggi, K., Abrew, A., & Macey-Kalcevic, M. (2008). Understanding of self and maternal warmth predict later self-regulation in toddlers. *International Journal of Behavioral Development, 32*(2), 108–118. https://doi.org/10.1177/0165025407087209

Jia, S., Wang, L., & Shi, Y. (2014). Relationship between parenting and proactive versus reactive aggression among Chinese preschool children. *Archives of Psychiatric Nursing, 28*(2), 152-157. https://doi.org/10.1016/j.apnu.2013.12.001

Kan, J. Q., Liu, S. M., Shi, J. H., Yan, Q., Guo, J. B., & Wang., Z. Y. (2018). 祖辈共同看护背景下母亲和祖辈将心比心、母子依恋与 婴幼儿认知的关系: 一个有调节的中介模型. [The relationship between mother and grandparents' heart-to-heart comparison, mother-child attachment and infant cognition under the background of grandparents' joint care: A moderated mediation model]. *Psychological Development and Education. 34* (4), 8. DOI:10.16187/j.cnki.issn1001-4918.2018.04.02.

Kang, S., Shaver, P. R., Sue, S., Min, K., & Jing, H. (2003). Culture-specific patterns in the prediction of life satisfaction: Roles of emotion, relationship quality, and self-esteem. *Personality and Social Psychology Bulletin, 29*(12), 1596-1608. https://doi.org/10.1177/0146167203255986

Kapetanovic, S., Rothenberg, W. A., Lansford, J. E., Bornstein, M. H., Chang, L., Deater-Deckard, K., . . . Bacchini, D. (2020). Cross-cultural examination of links between parent–adolescent communication and adolescent psychological problems in 12 cultural groups.

Journal of Youth and Adolescence, 49(6), 1225-1244. https://doi.org/10.1007/s10964-020-01212-2

Kim, S., & Fong, V. L. (2013). How parents help children with homework in China: Narratives across the life span. *Asia Pacific Education Review, 14*(4), 581-592. http://dx.doi.org.proxy1.lib.trentu.ca/10.1007/s12564-013-9284-7

Kim, S. Y., Wang, Y., Orozco-Lapray, D., Shen, Y., & Murtuza, M. (2013). Does "tiger parenting" exist? Parenting profiles of Chinese Americans and adolescent developmental outcomes. *Asian American Journal of Psychology, 4*(1), 7–18. https://doi.org/10.1037/a0030612

Kirk, E., Pine, K., Wheatley, L., Howlett, N., Schulz, J., & Fletcher, B. (2015). A longitudinal investigation of the relationship between maternal mind-mindedness and theory of mind. *British Journal of Developmental Psychology, 33*(4), 434-445. https://doi.org/10.1111/bjdp.12104

Kochanska, G., Kuczynski, L., Radke-Yarrow, M., Kochanska, G., Kuczynski, L., & Radke-Yarrow, M. (1989). Correspondence between mothers' self-reported and observed child-rearing practices. *Child Development, 60*(1), 56–63. https://doi.org/10.2307/1131070

Kochanska, G., Coy, K. C., & Murray, K. T. (2001). The Development of Self-Regulation in the First Four Years of Life. *Child Development, 72*(4), 1091–1111. https://doi.org/10.1111/1467-8624.00336

Kong, X., Brook, C. A., Zhong, J., Liu, J., & Schmidt, L. A. (2022). Are cross-cultural shyness comparisons valid? testing invariance with multigroup CFA and the alignment method across eastern and western cultures. *Psychological Assessment, 34*(3), 271-280. https://doi.org/10.1037/pas0001086

Lan, X., Scrimin, S., & Moscardino, U. (2019). Perceived parental guan and school adjustment among Chinese early adolescents: The moderating role of interdependent self-construal. *Journal of Adolescence, 71,* 18-27. https://doi.org/10.1016/j.adolescence.2018.12.003

Laranjo, J., Bernier, A., & Meins, E. (2008). Associations between maternal mind-mindedness and infant attachment security: Investigating the mediating role of maternal sensitivity. *Infant Behavior & Development., 31*(4), 688–695. https://doi.org/10.1016/j.infbeh.2008.04.008

Laranjo, J., Bernier, A., Meins, E., & Carlson, S.M. (2010). Early manifestations of children's theory of mind: The roles of maternal mind-mindedness and infant security of attachment. *Infancy, 15*(3), 300-323. https://doi.org/10.1111/j.1532-7078.2009.00014.x

Laranjo, J., Bernier, A., Meins, E., & Carlson, S.M. (2014). The roles of mind-mindedness and infant security attachment in predicting preschoolers' understanding of visual perspective taking and false belief. *Journal of Experimental Child Psychology, 125,* 48-62. https://doi.org/10.1016/j.jecp.2014.02.005

Larkin, F., Oostenbroek, J., Lee, Y., Hayward, E., & Meins, E. (2019). Proof of concept of a smartphone app to support delivery of an intervention to facilitate mothers' mind-mindedness. *PloS One, 14*(8), e0220948–e0220948. https://doi.org/10.1371/journal.pone.0220948

Lee, E. H., Zhou, Q., Eisenberg, N., & Wang, Y. (2013). Bidirectional relations between temperament and parenting styles in Chinese children. *International Journal of Behavioral Development : IJBD, 37*(1), 57-67. https://doi.org/10.1177/0165025412460795

Lee, E. H., Zhou, Q., Ly, J., Main, A., Tao, A., & Chen, S. H. (2014). Neighborhood characteristics, parenting styles, and children's behavioral problems in Chinese American

immigrant families. *Cultural Diversity and Ethnic Minority Psychology, 20*(2), 202–212. https://doi.org/10.1037/a0034390

Leung, K., Lau, S., & Lam, W. (1998). Parenting styles and academic achievement: A cross-cultural study. *Merrill-Palmer Quarterly, 44*(2), 157-172.

Leung, J. T. Y., Shek, D. T. L., & Ma, C. M. S. (2016). Measuring Perceived Parental Sacrifice Among Adolescents in Hong Kong: Confirmatory Factor Analyses of the Chinese Parental Sacrifice Scale. *Child Indicators Research., 9*(1), 173–192. https://doi.org/10.1007/s12187-015-9313-7

Leung, C. Y. Y., Zhou, N., Cheah, C. S. L., & Leung, C. Y. Y. (2013). Understanding "tiger parenting" through the perceptions of Chinese immigrant mothers: Can Chinese and U.S. parenting coexist? Asian American Journal of Psychology., 4(1), 30–40. https://doi.org/10.1037/a0031217

Li, X. (2021). How do Chinese fathers express love? viewing paternal warmth through the eyes of Chinese fathers, mothers, and their children. *Psychology of Men & Masculinities, 22*(3), 500-511. https://doi.org/10.1037/men0000312

Li, Y., Costanzo, P. R., & Putallaz, M. (2010). Maternal socialization goals, parenting styles, and social-emotional adjustment among Chinese and European American young adults: Testing a mediation model. *The Journal of Genetic Psychology, 171*(4), 330–362. https://doi.org/10.1080/00221325.2010.505969

Licata, M., Paulus, M., Thoermer, C., Kristen, S., Woodward, A. L., & Sodian, B. (2014). Mother-infant interaction quality and infants' ability to encode actions as goal-directed. *Social Development (Oxford, England), 23*(2), 340–356. https://doi.org/10.1111/sode.12057

Lieber, E., Fung, H., & Leung, P. W. (2006). Chinese child-rearing beliefs: Key dimensions and contributions to the development of culture-appropriate assessment. *Asian Journal of Social Psychology,* 9(2), 140-147. https://doi.org/10.1111/j.1467-839X.2006.00191.x

Lim, S., & Lim, B. K. (2004). Parenting style and child outcomes in Chinese and immigrant Chinese families-current findings and cross-cultural considerations in conceptualization and research. *Marriage & Family Review*, 35(3-4), 21-43. https://doi.org/10.1300/J002v35n03_03

Lin, X., Li, H., & Yang, W. (2019). Bridging a cultural divide between play and learning: Parental ethnotheories of young children's play and their instantiation in contemporary China. *Early Education and Development, 30*(1), 82-97. https://doi.org/10.1080/10409289.2018.1514846

Lin, X., Liao, Y., & Li, H. (2021). Parenting styles and social competence in Chinese preschoolers: A moderated mediation model of singleton and self-regulation. *Early Education and Development*, https://doi.org/10.1080/10409289.2021.1940643

Liu, M., Chen, X., Rubin, K. H., Zheng, S., Cui, L., Li, D., . . . Wang, L. (2005). Autonomy- vs. connectedness-oriented parenting behaviors in Chinese and Canadian mothers. *International Journal of Behavioral Development,* 29(6), 489-495. https://doi.org/10.1080/01650250500147063

Liu, M., & Guo, F. (2010). Parenting practices and their relevance to child behaviors in Canada and China. *Scandinavian Journal of Psychology, 51*(2), 109-114. http://dx.doi.org.proxy1.lib.trentu.ca/10.1111/j.1467-9450.2009.00795.x

Liu, L., & Wang, M. (2018). Parental harsh discipline and adolescent problem behavior in China: Perceived normativeness as a moderator. *Child Abuse & Neglect, 86*, 1-9. https://doi.org/10.1016/j.chiabu.2018.09.009

Liu, G., Zhang, S., Zhang, J., Lee, C., Wang, Y., & Brownell, M. (2013). Autonomous Motivation and Chinese Adolescents' Creative Thinking: The Moderating Role of Parental Involvement. *Creativity Research Journal, 25*(4), 446–456. https://doi.org/10.1080/10400419.2013.843401

Lu, & Chang, L. (2013). Parenting and Socialization of Only Children in Urban China: An Example of Authoritative Parenting. *The Journal of Genetic Psychology, 174*(3), 335–343. https://doi.org/10.1080/00221325.2012.681325

Lundy, B. L. (2013). Paternal and maternal mind-mindedness and preschoolers' theory of mind: The mediating role of interactional attunement. *Social Development, 22*, 58-74. https://doi.org/10.1111/sode.12009

Lundy, B. L., & Fyfe, G. (2016). Preschoolers' Mind-related Comments During Collaborative Problem-solving: Parental Contributions and Developmental Outcomes: Preschoolers' Mind-related Comments During Collaborative Problem-solving. *Social Development (Oxford, England), 25*(4), 722–741. https://doi.org/10.1111/sode.12176

Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: Parent–child interaction. *Handbook of child psychology, 4.* New York: Wiley.

Marcone, R., Affuso, G., & Borrone, A. (2020). Parenting styles and children's internalizing-externalizing behavior: The mediating role of behavioral regulation. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues, 39*(1), 13-24. https://doi.org/10.1007/s12144-017-9757-7

Markus, H. R., & Kitayama, S. (1991). Culture and the Self: Implications for Cognition, Emotion, and Motivation. *Psychological Review, 98*(2), 224–253. https://doi.org/10.1037/0033-295X.98.2.224

Mauss I. B., Butler E. A., Roberts N. A., Chu A. (2010). Emotion control values and responding to an anger provocation in Asian-American and European-American individuals. *Cognition and Emotion 24*(6), 1026–1043. https://doi.org/10.1080/02699930903122273

McBride-Chang, C., & Chang, L. (1998). Adolescent–parent relations in Hong Kong: Parenting styles, emotional autonomy, and school achievement. *The Journal of Genetic Psychology: Research and Theory on Human Development, 159*(4), 421-436. http://dx.doi.org.proxy1.lib.trentu.ca/10.1080/00221329809596162

McMahon, C. A., & Bernier, A. (2017). Twenty years of research on parental mind-mindedness: Empirical findings, theoretical and methodological challenges, and new directions. *Developmental Review, 46*, 54–80. https://doi.org/10.1016/j.dr.2017.07.001

McMahon, C., Camberis, A. L., Berry, S. & Gibson, F. (2016). Maternal mind-mindedness: Relations with maternal-fetal attachment and stability in the first two years of life: Findings from an Australian prospective study. *Infant Mental Health Journal, 37*(1), 17-28. https://doi.org/10.1002/imhj.21548

McMahon, C. A., & Meins, E. (2012). Mind-mindedness, parenting stress, and emotional availability in mothers of preschoolers. *Early Childhood Research Quarterly, 27*(2), 245–252. https://doi.org/10.1016/j.ecresq.2011.08.002

McMahon, C., & Newey, B. (2018). Non-Attuned Mind-Mindedness, Infant Negative Affect, and Emotional Availability: Assessing Mind-Mindedness during the Still-Face Paradigm. *Infancy, 23*(6), 873–892. https://doi.org/10.1111/infa.12245

Meins, E. (1997). *Security of attachment and the social development of cognition.* Psychology Press/Erlbaum (UK) Taylor & Francis Group.

Meins, E., Centifanti, L. C. M., Fernyhough, C. & Fishburn, S. (2013). Maternal mind-mindedness and children's behavioral difficulties: Mitigating the impact of low

socioeconomic status. *Journal of Abnormal Child Psychology, 41*, 543-553. https://doi.org/10.1007/s10802-012-9699-3

Meins, E., & Fernyhough, C. (1999). Linguistic acquisitional style and mentalising development: The role of maternal mind-mindedness. *Cognitive Development*, *14*(3), 363–380. https://doi.org/10.1016/S0885-2014(99)00010-6

Meins E., Fernyhough C. (2006). *Mind-mindedness coding manual.* Unpublished manuscript. Durham University, Durham, UK.

Meins, E., Fernyhough, C., de Rosnay, M., Arnott, B., Leekam, S. R., & Turner, M. (2012). Mind-Mindedness as a Multidimensional Construct: Appropriate and Nonattuned Mind-Related Comments Independently Predict Infant-Mother Attachment in a Socially Diverse Sample. *Infancy, 17*(4), 393–415. https://doi.org/10.1111/j.1532-7078.2011.00087.x

Meins, E., & Fernyhough, C., Fradley, E., & Tuckey, M. (2001). Rethinking maternal sensitivity: Mothers' comments on infants' mental processes predict security attachment at 12 Months. *Journal of Child Psychology and Psychiatry and Allied Disciplines., 42*(5), 637–648. https://doi.org/10.1111/1469-7610.00759

Meins E., Fernyhough C., Wainwright R., Gupta M. D., Fradley E., Tuckey M. (2002). Maternal mind-mindedness and attachment security as predictors or theory of mind understanding. *Child Development, 73*, 1715–1726. https://doi.org/10.1111/1467-8624.00501

Meynen, M., Colonnesi, C., Abrahamse, M. E., Hein, I., Stams, G. J. M., & Ramón, J. L. L. L. (2022). A cohort study on the effect of parental mind-mindedness in Parent−Child interaction therapy. *International Journal of Environmental Research and Public Health, 19*(8), 4533. https://doi.org/10.3390/ijerph19084533

Miller, J. E., Kim, S., Bodlt, L. J., Goffin, K. C. & Kochanska, G. (2018). Long-term sequelae of mothers' and fathers' mind-mindedness in infancy: A developmental path to children's

attachment at age 10. *Developmental Psychology, 55*(4), 675-686. https://doi.org/10.1037/dev0000660

Min, J., Xue, H., Wang, V. H. C., Li, M., & Wang, Y. (2017). Are single children more likely to be overweight or obese than those with siblings? The influence of China's one-child policy on childhood obesity. *Preventive Medicine: An International Journal Devoted to Practice and Theory, 103*, 8-13. https://doi.org/10.1016/j.ypmed.2017.07.018

Morsbach, S. K., & Prinz, R. J. (2006). Understanding and improving the validity of self-report of parenting. *Clinical Child and Family Psychology Review, 9*(1), 1-21. https://doi.org/10.1007/s10567-006-0001-5

Muhtadie, L., Zhou, Q., Eisenberg, N., & Wang, Y. (2013). Predicting internalizing problems in Chinese children: The unique and interactive effects of parenting and child temperament. *Development and Psychopathology, 25*(3), 653-667. https://doi.org/10.1017/S0954579413000084

Murphy, B. C., Eisenberg, N., Fabes, R. A., Shepard, S., & Guthrie, I. K. (1999). Consistency and Change in Children's Emotionality and Regulation: A Longitudinal Study. *Merrill-Palmer Quarterly-Journal of Developmental Psychology, 45*(3), 413–444.

Nelson, D. A., Nelson, L. J., Hart, C. H., Yang, C., & Jin, S. (2006). Parenting and Peer-Group Behavior in Cultural Context. In X. Chen, D. C. French & B. H. Schneider (Eds.), *Peer relationships in cultural context* (pp. 213-246, Chapter xii, 520 Pages). Cambridge University Press. https://doi.org/10.1017/CBO9780511499739.010

Ng, F. F., Pomerantz, E. M., & Deng, C. (2014). Why are Chinese mothers more controlling than American mothers? "My child is my report card". Child Development, 85(1), 355-369. http://dx.doi.org.proxy1.lib.trentu.ca/10.1111/cdev.12102

Ng, F. F., & Wei, J. (2020). Delving into the minds of Chinese parents: What beliefs motivate their learning-related practices? *Child Development Perspectives, 14*(1), 61-67. http://dx.doi.org.proxy1.lib.trentu.ca/10.1111/cdep.12358

Nikolić, M., Zeegers, M., Colonnesi, C., Majdandžić, M., de Vente, W., & Bögels, S. . (2022). Mothers' and fathers' mind-mindedness in infancy and toddlerhood predict their children's self-regulation at preschool age. *Developmental Psychology, 58*(11), 2127–2139. https://doi.org/10.1037/dev0001428

Niu, W. (2012). Confucian ideology and creativity. *The Journal of Creative Behavior, 46*(4), 274-284. https://doi.org/10.1002/jocb.18

Olivari, M. G., Cuccì, G., Bonanomi, A., Tagliabue, S., & Confalonieri, E. (2018). Retrospective paternal and maternal parenting styles, regulatory self-efficacy and adolescent risk taking. *Marriage & Family Review*, 54(3), 282-295. https://doi.org/10.1080/01494929.2017.1403990

[Opinions of the Central Committee of the Communist Party of China and the State Council on Promoting the Development and Growth of the Private Economy] *中共中央 国务院关于促进民营经济发展壮大的意见*. (2023, July 14). Xinhua News Agency. https://www.gov.cn/zhengce/202307/content_6893055.htm

Orlansky, H. (1949). Infant care and personality. Psychological Bulletin, 46, 1-48. https://doi.org/10.1037/h0058106

Oyserman, D., Coon, H. M., & Kemmelmeier, M. (2002). Rethinking Individualism and Collectivism: Evaluation of Theoretical Assumptions and Meta-Analyses. *Psychological Bulletin, 128*(1), 3–72. https://doi.org/10.1037/0033-2909.128.1.3

Pinquart, M., & Kauser, R. (2018). Do the associations of parenting styles with behavior problems and academic achievement vary by culture? Results from a meta-analysis. *Cultural Diversity and Ethnic Minority Psychology, 24*(1), 75–100. https://doi.org/10.1037/cdp0000149

Planalp, E. M., O'Neill, M. & Braungart-Rieker, J. M. (2019). Parent mind-mindedness, sensitivity, and infant affect: Implications for attachment with mothers and fathers. *Infant Behavior and Development, 57*, 101330. https://doi.org/10.1016/j.infbeh.2019.101330

Qiu, C., & Shum, K. K. (2022). Relations between caregivers' emotion regulation strategies, parenting styles, and preschoolers' emotional competence in Chinese parenting and grandparenting. *Early Childhood Research Quarterly, 59*, 121-133. https://doi.org/10.1016/j.ecresq.2021.11.012

Quan, J. (2020). *Autonomy and Relatedness During the Preschool Period: An Examination of Parent-Child Interactions Within and Across Cultures* [Doctoral Dissertation, University of Ottwa]. https://ruor.uottawa.ca/handle/10393/40785

Quoss, B., & Zhao, W. (1995). Parenting Styles and Children's Satisfaction with Parenting in China and the United States. *Journal of Comparative Family Studies, 26*(2), 265-280.

Raffaelli, M., Crockett, L. J., & Shen, Y.-L. (2005). Developmental Stability and Change in Self-Regulation From Childhood to Adolescence. *The Journal of genetic psychology, 166*(1), 54–76. https://doi.org/10.3200/GNTP.166.1.54-76

Raval V., Goldberg S., Atkinson L., Benoit D., Myhal N., Poulton L., et al. (2001). Maternal attachment, maternal responsiveness and infant attachment. *Infant Behavior and Development, 24*(3), 281–304. https://doi.org/10.1016/S0163-6383(01)00082-0

Rose, J., Roman, N., Mwaba, K. & Ismail, K. (2018). The relationship between parenting and internalizing behaviours of children: a systematic review. *Early Child Development and Care*, 188(10), 1468-1486. https://doi.org/10.1080/03004430.2016.1269762

Rothenberg, W. A., Lansford, J. E., Bornstein, M. H., Chang, L., Deater-Deckard, K., Di Giunta, L., . . . Bacchini, D. (2020). Effects of parental warmth and behavioral control on adolescent externalizing and internalizing trajectories across cultures. *Journal of Research on Adolescence, 30*(4), 835-855. https://doi-org.proxy1.lib.trentu.ca/10.1111/jora.12566

Rudy, D., & Grusec, J. E. (2006). Authoritarian parenting in individualist and collectivist groups: Associations with maternal emotion and cognition and children's self-esteem. *Journal of Family Psychology, 20*(1), 68–78. https://doi.org/10.1037/0893-3200.20.1.68

Savina, E. (2014). Does play promote self-regulation in children? *Early Child Development and Care, 184*(11), 1692-1705. https://doi.org/10.1080/03004430.2013.875541

Savina, E., Coulacoglou, C., Sanyal, N., & Zhang, J. (2012). The study of externalizing and internalizing behaviors in Greek, Russian, Indian, and Chinese children using the fairy tale test. *School Psychology International, 33*(1), 39-53. https://doi.org/10.1177/0143034311406821

Schmidt, M. F. H., Butler, L. P., Heinz, J., & Tomasello, M. (2016). Young children see a single action and infer a social norm: Promiscuous normativity in 3-year-olds. *Psychological Science, 27*(10) , 1360-1370. https://doi.org/10.1177/0956797616661182

Schwartz, O. S., Dudgeon, P., Sheeber, L. B., Yap, M. B. H., Simmons, J. G., & Allen, N. B. (2012). Parental behaviors during family interactions predict changes in depression and anxiety symptoms during adolescence. *Journal of Abnormal Child Psychology, 40*(1), 59–71. https://doi-org.proxy1.lib.trentu.ca/10.1007/s10802-011-9542-2

Sears, R. R., Maccoby, E., & Levin, H. (1957). Patterns of child rearing. *Evanston*, IL: Row, Peterson.

Shen, J. J., Cheah, C. S. L., & Yu, J. (2018). Asian American and European American emerging adults' perceived parenting styles and self-regulation ability. *Asian American Journal of Psychology, 9*(2), 140-148. http://dx.doi.org.proxy1.lib.trentu.ca/10.1037/aap0000099

Shi, X. P., Li, X. T., Liang, X., Lu, S., & Wang, Z. Y. (2016). 儿童 9-38 个月期间母亲将心比心变化特点及其与儿童语言发展的关系 [The characteristics of maternal mind-mindedness and its relationship with the development of children's language during children 9 – 38 months]. *China Academic Journal Electronic Publishing House*. https://xueshu.baidu.com/usercenter/paper/show?paperid=13b88959676d43f6ac4d916842de41e2&site=xueshu_se&hitarticle=1

Shuster, Li, Y., & Shi, J. (2012). Maternal cultural values and parenting practices: Longitudinal associations with Chinese adolescents' aggression. *Journal of Adolescence., 35*(2), 345–355. https://doi.org/10.1016/j.adolescence.2011.08.006

Shweder, R. A., & Sullivan, M. A. (1993). Cultural psychology: Who needs it? *Annual Review of Psychology, 44*, 497-523. https://doi.org/10.1146/annurev.ps.44.020193.002433

Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin, 129*(2), 216–269. https://doi.org/10.1037/0033-2909.129.2.216

Smetana, J. G., Yau Jenny, Y. P., & Rote, W. M. (2021). How do chinese youth in hong kong evaluate maternal guilt and shame induction? age, form, and domain differences. *Journal of Youth and Adolescence, 50*(10), 2096-2107. https://doi.org/10.1007/s10964-021-01468-2

Soenens, B., & Vansteenkiste, M. (2020). Taking adolescents' agency in socialization seriously: The role of appraisals and cognitive-behavioral responses in autonomy-relevant parenting. *New Directions for Child and Adolescent Development, 2020*(173), 7–26. https://doi.org/10.1002/cad.20370

Soenens, B., Vansteenkiste, M., & Van Petegem, S. (2015). Let us not throw out the baby with the bathwater: Applying the principle of universalism without uniformity to autonomy-supportive and controlling parenting. *Child Development Perspectives, 9*(1), 44–49. https://doi.org/10.1111/cdep.12103

Soto, J. A., Levenson, R. W., & Ebling, R. (2005). Cultures of moderation and expression: Emotional experience, behavior, and physiology in Chinese Americans and Mexican Americans. *Emotion,* 5, 154–165. http://dx.doi.org/10.1037/1528-3542.5.2.154

Stewart, S. M., Bond, M. H., Kennard, B. D., Ho, L. M., & Zaman, R. M. (2002). Does the Chinese construct of guan export to the West? *International Journal of Psychology, 37*(2), 74–82. https://doi.org/10.1080/00207590143000162

Stewart, S. M., Rao, N., Bond, M. H., McBride-Chang, C., Fielding, R., & Kennard, B. D. (1998). Chinese dimensions of parenting: Broadening western predictors and outcomes. *International Journal of Psychology, 33*(5), 345-358. http://dx.doi.org.proxy1.lib.trentu.ca/10.1080/002075998400231

Su, C., & Hynie, M. (2011). Effects of life stress, social support, and cultural norms on parenting styles among mainland Chinese, European Canadian, and Chinese Canadian immigrant mothers. *Journal of Cross-Cultural Psychology, 42*(6), 944-962. http://dx.doi.org.proxy1.lib.trentu.ca/10.1177/0022022110381124

Sun, L., Fu, Z., Li, P., & Gong, X. (2021). Chinese parenting beliefs in the intergenerational transmission of parental psychological control amongst chinese families with adolescents.

Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues, https://doi.org/10.1007/s12144-021-02125-4

Sun, J., & Tang, Y. (2019). Maternal scaffolding strategies and early development of self-regulation in Chinese preschoolers. *Early Child Development and Care., 189*(9), 1525–1537. https://doi.org/10.1080/03004430.2017.1395874

Tang, N. M. (1992). Some psychoanalytic implications of Chinese philos- ophy and child-rearing practices. *The Psychoanalytic Study of the Child*, 47, 371–389. http://dx.doi.org/10.1080/00797308.1992.11822682

Thompson R. (2008). Early attachment and later development: Familiar questions, new answers. In Cassidy J., Shaver P. (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (2nd ed.), pp. 348–365. New York: Guildford Press.

Triandis, H.C., Bontempo, R., Villareal, M.J., Asai, M., & Lucca, N. (1988). Individualism and collectivism: Cross-cultural perspectives on self-ingroup relationships. *Journal of Personality and Social Psychology, 54*, 323–338. https://doi.org/10.1037/0022-3514.54.2.323

Trinkner, R., Cohn, E.S., Rebellon, C.J., Van Gundy, K. (2012). Don't trust anyone over 30: parental legitimacy as a mediator between parenting style and changes in delinquent behavior over time. *Journal of Adolescence*, *35*(1). 119-132. https://doi.org/10.1016/j.adolescence.2011.05.003

Uttl, B. (2005). Measurement of Individual Differences: Lessons from Memory Assessment in Research and Clinical Practice. *Psychological Science, 16*(6), 460–467. https://doi.org/10.1111/j.0956-7976.2005.01557.x

Van IJzendoorn, M. H. (1995). Adult attachment representations, parental responsiveness, and infant attachment: a meta-analysis on the predictive validity of the adult attachment

interview. *Psychological Bulletin, 117*, 387– 403. https://doi.org/10.1037/0033-2909.117.3.387

Van Petegem, S., Soenens, B., Vansteenkiste, M., & Beyers, W. (2015). Rebels With a Cause? Adolescent Defiance From the Perspective of Reactance Theory and Self-Determination Theory. *Child Development, 86*(3), 903–918. https://doi.org/10.1111/cdev.12355

Vučković, S., Ručević, S., & Ajduković, M. (2021). Parenting style and practices and children's externalizing behaviour problems: Mediating role of children's executive functions. *European Journal of Developmental Psychology*, *18*(3), 313-329. https://doi.org/10.1080/17405629.2020.1768067

Vygotsky, L.S.(1978). *Mind in society: The development off higher psychological processes.* Cambridge, MA: Harvard University Press,86.

Walker, T. M., Wheatcroft, R., & Camic, P. M. (2012). Mind-mindedness in parents of pre-schoolers: A comparison between clinical and community samples. *Clinical Child Psychology and Psychiatry, 17*(3), 318–335. https://doi.org/10.1177/1359104511409142

Wang Q. (2001) "Did you have fun?": American and Chinese mother-child conversations about shared emotional experiences. *Cognitive Development 16*: 693–715. https://doi.org/10.1016/S0885-2014(01)00055-7

Wang, Q. (2003). Emotion situation knowledge in American and Chinese preschool children and adults. *Cognition and Emotion, 17*(5), 725–746. https://doi.org/10.1080/02699930302285

Wang, Q., Doan, S. N., & Song, Q. (2010). Talking about internal states in mother–child reminiscing influences children's self-representations: A cross-cultural study. *Cognitive Development, 25*(4), 380–393. https://doi.org/10.1016/j.cogdev.2010.08.007

Wang, Q., & Fivush, R. (2005) Mother-child conversations of emotionally salient events: Exploring the functions of emotional reminiscing in European American and Chinese

Families. *Social Development 14*, 3: 473–495. https://doi.org/10.1111/j.1467-9507.2005.00312.x

Wang, M., & Liu, L. (2018). Reciprocal relations between harsh discipline and children's externalizing behavior in china: A 5-year longitudinal study. *Child Development, 89*(1), 174-187. https://doi.org/10.1111/cdev.12724

Wang, L., Zhang, Z., McArdle, J. J., & Salthouse, T. A. (2009). Investigating Ceiling Effects in Longitudinal Data Analysis. *Multivariate Behavioral Research, 43*(3), 476–496. https://doi.org/10.1080/00273170802285941

Wang, L., Zhu, L., & Wang, Z. (2017). Parental mind-mindedness but not false belief understanding predicts Hong Kong children's lie-telling behavior in a temptation resistance task. *Journal of Experimental Child Psychology, 162*, 89–100. https://doi.org/10.1016/j.jecp.2017.04.023

Wu, M. S., Li, B., Zhu, L., & Zhou, C. (2019). Culture change and affectionate communication in china and the united states: Evidence from google digitized books 1960–2008. *Frontiers in Psychology, 10*, 8. https://doi.org/10.3389/fpsyg.2019.01110

Wu, P., Robinson, C. C., Yang, C., Hart, C. H., Olsen, S. F., ... Wu, X. (2002). Similarities and differences in mothers' parenting of preschoolers in China and the United States. *International Journal of Behavioral Development.*, 26(6), 481–491. https://doi.org/10.1080/01650250143000436

Xia, X. (2020). Parenting style and Chinese children's school readiness outcomes: The moderating role of socioeconomic status. *Children and Youth Services Review, 118*, 9. http://dx.doi.org.proxy1.lib.trentu.ca/10.1016/j.childyouth.2020.105381

Xie, & Li, H. (2019). “Tiger mom, panda dad”: a study of contemporary Chinese parenting profiles. *Early Child Development and Care, 189*(2), 284–300. https://doi.org/10.1080/03004430.2017.1318870

Xing, X., Wang, M., Zhang, Q., He, X., & Zhang, W. (2011). Gender differences in the reciprocal relationships between parental physical aggression and children's externalizing problem behavior in China. *Journal of Family Psychology, 25*, 699–708. https://doi.org/10.1037/a0025015

Xu, G., Bullock, A., Yang, P., & Liu, J. (2021). Psychological control and internalizing problems: The mediating role of mother-child relationship quality. *Parenting: Science and Practice, 21*(2), 108-117. https://doi.org/10.1080/15295192.2020.1831295

Yang, Y., & Wang, Q. (2016). The relation of emotion knowledge to coping in european american and chinese immigrant children. *Journal of Child and Family Studies, 25*(2), 452-463. https://doi.org/10.1007/s10826-015-0224-5

Yang, J., & Zhao, X. (2020). Parenting styles and children’s academic performance: Evidence from middle schools in china. *Children and Youth Services Review, 113*, 12. https://doi.org/10.1016/j.childyouth.2020.105017

Yu, T., Volling, B. L., & Niu, W. (2015). Emotion Socialization and Children’s Behavioral Problems in China and the United States. *Journal of Comparative Family Studies, 46*(3), 419–434. https://doi.org/10.3138/jcfs.46.3.419

Zaslow, M. J., Weinfield, N. S., Gallagher, M., Hair, E. C., Ogawa, J. R., Egeland, B., . . . De Temple, J. M. (2006). Longitudinal prediction of child outcomes from differing measures of parenting in a low-income sample. *Developmental Psychology, 42*(1), 27-37. https://doi.org/10.1037/0012-1649.42.1.27

Zhang, W., Wang, M., & Andrew, F. (2006). Expectations for autonomy, beliefs about parental authority, and parent-adolescent conflict and cohesion. *Acta Psychologica Sinica*, 38(6), 868-876. http://proxy.lib.trentu.ca/login?url=https://www.proquest.com/scholarly-journals/expectations-autonomy-beliefs-about-parental/docview/621553284/se-2

Zhang, Wei, X., Ji, L., Chen, L., & Deater-Deckard, K. (2017). Reconsidering Parenting in Chinese Culture: Subtypes, Stability, and Change of Maternal Parenting Style During Early Adolescence. *Journal of Youth and Adolescence, 46*(5), 1117–1136. https://doi.org/10.1007/s10964-017-0664-x

Zhou, Q., Eisenberg, N., Wang, Y., & Reiser, M. (2004). Chinese Children's Effortful Control and Dispositional Anger/Frustration: Relations to Parenting Styles and Children's Social Functioning. *Developmental Psychology, 40*(3), 352–366. https://doi.org/10.1037/0012-1649.40.3.352

Zhou, M., & Lee, J. (2017). Hyper-selectivity and the remaking of culture: Understanding the Asian American achievement paradox. *Asian American Journal of Psychology,* 8, 7–15. http://dx.doi.org/10.1037/aap000

Zhou, Q., Wang, Y., Deng, X., Eisenberg, N., Wolchik, S. A., & Tein, J. (2008). Relations of parenting and temperament to chinese children's experience of negative life events, coping efficacy, and externalizing problems. *Child Development, 79*(3), 493-513. https://doi.org/10.1111/j.1467-8624.2008.01139.x

Zhu, W. X. (2003). The one child family policy. *Archives of Disease in Childhood, 88*, 463– 464. https://doi.org/10.1136/adc.88.6.463

Zhu, X., Dou, D., & Pan, Y. (2023). Developing and validating a multidimensional Chinese Parental Psychological Control Scale. *Frontiers in Psychology, 14*, 1116625–1116625. https://doi.org/10.3389/fpsyg.2023.1116625

Zong, X., Zhang, L., & Yao, M. (2018). Parental involvement and Chinese elementary students' achievement goals: the moderating role of parenting style. *Educational Studies, 44*(3), 341–356. https://doi.org/10.1080/03055698.2017.1373634

Appendix A

Telephone Script for Initial Contact with Participants

First Call

- the purpose of the first call is to give the parents a brief description of the study and procedures and to see whether or not they would be interested in participating

- "Hello. May I please speak to [*parent's first and last name*]?

- [*If parent is not home*]
  "Okay, that's alright. Do you know when he/she will be in so that I could speak to them? [*If asked*] "I am calling about a study that we are conducting at Trent University that we would like him/her to participate in."

- [*If parent is home*]
  "Hi, my name is _____. I am a research assistant in Dr. Mowei Liu's lab at Trent University. We are conducting a study regarding parental achievement orientation and children's beliefs about learning. You qualify for the study and we would like to invite you to participate.

- [*If parent asks why they qualify*]
  "We are conducting research based on children of preschool or kindergarten age. We are aware that you have a child at this age."

- [*If parent asks about how we got this information*]
  - birth announcements in the local newspaper from 4-6 years ago
  - specify which issue (all listed next to the child's name)

- [*If parent does not agree to participate*]
  "Okay. That's alright. Thank you for your time. Bye"

- [*If parent asks about the purpose of the study*]
  "The purpose of this study is to seehow parents influence their children's learning. We will collect same information from China and make comparisions as well. "
  The purpose of the study is to:
  1. Examine the cross cultural similarities and differences in parental academic-related beliefs and practices
  2. Examine the cross cultural similarities and differences in children's beliefs about learning
  3. To investigate how parental achievement-related beliefs and practices and linked to children's academic performance in both Canada and China

- [*If parent does agree to participate*]
  "That's great! Participation will involve answering some questionnaires and a

short visit to the university lab. You will be receiving $30 for your participation and compensation for you time. So what will happen first is we will send you some questionnaires regarding general information about family background, child-rearing practices, and parental beliefs about academic performance as well as a consent form stating that you agree to participate. We will be mailing these to you so we will need your contact information [*e-mail, address, postal code, etc.*] How would you prefer we contact you?
The package will contain an addressed, stamped envelope for you to mail the information back to us. Or, you can bring the everything with you when you come to visit the university. Next, we will invite you and your child to visit our research lab at Trent University. You and your child will be spending some time engaging in fun play activities. This visit will be video-taped in order to address the research question. Do you have any questions regarding the study?

- [*If asked, more specifically about the sessions*]
  These sessions will include free play, building a "castle" with lego blocks, completing simple math problems together, reading a book together and your child will be invited to play with the experimenter for a while and asked to complete a story. [*If asked about the story*] "The story is about a little bird who is learning how to fly and your child's answers will be recorded ."

- [*If asked about confidentiality*]
  "All information collected will be stored in secure places and confidential. The information will be identified by a subject number only not by name. If the results are published, your name will not be used and no information that discloses your identity will be released or published.

- [*If asked about how long it will take*]
  "The questionnaires should take about one hour to complete.
  The visit will last a total of about 90 minutes."

- [*If asked about the results/ follow up studies*]
  "When we have tabulated the results of the study we will send out a newsletter with the general preliminary results."
  "We may invite you to come in again in 2-3 years."

- [*If asked about dropping out*]
  "There is no obligation to complete the study once you begin. You are free to drop out at any time."

- [*Wrap up*]
  "Thank you very much for your interest. You will be receiving the questionnaires in the mail shortly and I will call you again in the next couple of days to make arrangements for a visit to the university or I can e-mail you if you prefer. Bye."

Second Call

- the purpose of the second call is to remind parents to complete the questionnaires that they have been given and to schedule a time for the lab visit

- "Hi, may I please speak to [*parent's first and last name*]

- [*If parent is not at home*]
  "Okay, that's alright. Do you know she will be in so that I would speak with her?"
  [*If asked*] "I am calling about a study that she is participating in at Trent University. I will call back later. Thanks. Bye."

- [*If parent is at home*]
  "Hi my name is _____, a research assistant in Dr. Liu's lab at Trent University. We spoke a few days ago and I am calling to do a follow up. I was just checking to make sure that you have received the questionnaires alright and to make arrangements for a visit to the university."

[*come up with a tentative time for a visit*]
"Okay, when would be a good time for you to come to visit the lab? We will be starting anytime in January and after."

- "Do you know how to get to the university?" and "How did you plan on coming (bus, drive, etc.)?"

- [*If mother does not know how to get to the university, provide detailed instructions using a map*]
- [*If driving*] "Go North on Water Street; continue north for 6.5 km; turn right on Nassau Mills Road; continue straight (Nassau Mills Road becomes River Road) and then turn right at East Bank Drive. You will be parking in the OC lot and someone will meet you at the entrance of the building next to the cafeteria."
- [*If taking the bus*] "Take the Trent Express (East Bank Bus) from the bus terminal down town. This will bring you right in between Gzowski and Otonabee Colleges. You'll want to walk towards the building on your right. Someone will be there to meet you at the front entrance."

- [*If mother does know*]
  "Great! Do you have any questions? Alright, we will see you _____. Have a great day!"

Appendix B

Letter of Information and Consent (English)

Dear Parents:

We would like to invite you and your child to participate in a cross-cultural project concerning the role that parents play in children's academic achievement. This research project will help us to understand how parents influence their children's learning beliefs and behaviors.

The participation involves completion of some questionnaires by mothers and a visit of the mother and the child to our research laboratory, located in the Dept. of Psychology, Trent University. During the visit to the laboratory, we will be observing and videotaping each participating mother and child following a specific procedure.

The mother and the child will be in a room with many toys. For the first 15 minutes, the mother and the child will be free to play with a variety of toys present in the room. The experimenter will then enter the room and ask the child to pick up the toys and put them into baskets. In the next session, the experimenter will ask the child to build a "castle" with lego blocks (10 minutes). Next, mother and the child will be asked to complete a booklet of simple math problems (e.g., 1+1) together (10 minutes). When they are finished, the experimenter will ask the mother and the child to read a book together (10 minutes). The whole session will be ended with another 15 minutes of free play. Following the whole session, each child will be invited to play with the experimenter and then be asked to complete a story to assess his/her beliefs about learning. The visit will last for about a total of 90 minutes. Some of the videotaped mother-child interaction will be coded by the researcher in order to answer the research question.

Parents of the child who are interested in the study will complete a set of questionnaires at home concerning general information on family background, child behaviors, child-rearing practices and parental beliefs about academic performance. It will take about an hour to complete these questionnaires. In appreciation for your contribution to the study and to compensate you for research-related expenses, you will be receiving $30 for participation when both the visit to our research laboratory and the questionnaires are completed.

All information collected during the course of this study will be stored in secure places and remain confidential. The information will be identified by subject number only, and not by name. If the results of the study are published, your name will **not** be used and **no** information that discloses your identity will be released or published. Only the researcher and the research assistants will have access to the data for research purpose. Data from this study, including the videotapes, may be used for further studies by the research team. All of the data will be kept in secure places without identifying information when this project and the follow-up studies are completed.

We expect participation will be enjoyable. There are no known risks to participating in this study. Participation in this study is completely voluntary. You may refuse to participate, refuse to answer any questions, or withdraw from the study at any time.

Appendix C

Letter of information and Consent (Chinese)

给家长的信

亲爱的家长：

我们诚挚地邀请您和您的孩子参加我们的“家长对孩子的学业成就的影响”的研究。这项研究是由加拿大社会科学人文研究理事会资助的跨文化研究课题。项目由加拿大川特大学（Trent University）心理学系教授刘漠威和东北师范大学心理学系教授康静梅负责。我们的中加合作小组希望通过这一研究，进一步了解在中国和加拿大，父母对孩子的学习有怎样的影响。

我们将邀请您和您的孩子到我们东北师范大学心理学系的实验室来。实验室里放了很多玩具。我们为您和您的孩子准备了一系列的活动。在前十五分钟里，您和您的孩子可以在房间里自由活动。之后，实验人员将会请您的孩子把所有的玩具收拾到一个篮子里。然后，实验人员将请您的孩子用乐高积木照着模型搭一个一样的房子（10 分钟）。接下来，您和您的孩子将一起做一些简单的数学题目，如 1+1 等（10 分钟）。然后，我们会请您和您的孩子一起读一本书（10 分钟），最后你们将会有 15 分钟在房间内自由活动。在完成整个环节后，我们会给您的孩子讲两个小故事，我们只讲个开头，请您的孩子帮我们来接一个结尾。我们会对您和您的孩子进行录像，以便进一步分析。整个录像大约持续一个半小时。

另外，我们还将请您填一些关于家庭背景，孩子行为，孩子教养方式以及家长对学习的态度的问卷。填写这些问卷大约需要 1 个小时的时间。

我们会将实验的录像和问卷妥善保管。除了实验项目小组，任何其他个人和群体都无权动用。在此项目基础上发表的文章或者书籍中，都不会披露您的身份和姓名。

参与实验与否是完全自愿的，您可以拒绝参加，可以拒绝回答任何问题，也可以在任何时候退出研究。

本研究已经由加拿大川特大学（Trent University）科研伦理道德委员会审核通过，对参与实验者没有人身或者心理上的不良影响。如果你有什么问题或者不清楚的地方，请打电话给_____或者写信给她_____或者发邮件至_____

谢谢。

_____

_____

协议书

我已经读过“家长对孩子的学业成就的影响”项目组给家长的信。

我已经了解信中所述的实验目的和过程。

据我所知，这一项目已经由加拿大川特大学（Trent University）科研伦理道德委员会审批通过。

我已经收到了协议书的复印版。

我_____，作为孩子的母亲，同意我的孩子_____，参与这项研究

_____ _____

签名 日期

我_____，作为孩子的母亲，同意参加这项研究

_____ _____

签名 日期

Appendix D

Observation Protocol (English)

Preparation:
- Clean up the room, vacuum the carpet if necessary. Wipe the one-way mirror, move unnecessary desks, chairs and two purple boards out of the room(I am afraid it is not safe leaving them there while the child is playing)
- Make sure the equipments are connected correctly. DVDs are ready and placed in 3 DVD recorders.
- Snack (cookies) and drink (juice box) for the child.
- Get ready to make coffee for parents.

Materials:

- Toys spread out in the playroom
- Toys:
  1) 2 stacking and sorting toys (in the box labeled as "stacking & sorting")
  2) 2 large vehicles (in the box labeled as "large vehicles")
  3) 2 blocks and Lego (in the box labeled as "blocks")
  4) 2 dinosaurs, 1 tigger puppet (in the box labeled as "stuffed toys")
  5) 2 puzzles
  6) Remote control car
  7) dolly nursing set (including the doll, a face towel, shampoo, baby bath, a diaper, a bottle and a toilet)
  8) coloring board
  9) 5 hot wheels

- Basket for clean-up sessions, books for reading session, math book and flash cards for math session (make sure the marker is inside), castle for castle building session (build two same castles beforehand incase one is broken), pictures for story completing session (child interview)

Meet the child and the parent at the parking lot
- The completed questionnaires will be collected before the experiment begins (ask information about mother's age, name of children's daycare or school if attending one)
- Be sure to have the signed informed consent before starting the observation. If mothers forget to bring the questionnaires and consent forms back, make sure to give them two forms to sign before starting the observation. One copy will be kept by us, the other will be kept by mothers.)
- Mothers will be briefly explained about the observational concept
- Mothers will be instructed that this is not an assessment of the children's cognitive and social skills and the interest of the researcher is in their interactions
- Double check the name to whom the cheque can be issued (usually mother's name) and the mailing address.

- Inform mothers that the cheque will be issued to them upon receiving the completed questionnaires if they forget to bring them back.
- Snacks will be prepared for the children and mothers in the lab prior to the experiment (check with parents if the child is allergic to any food before offering any snack.)
- Children will be asked if they need to use the washroom before we begin

At the beginning of each observation, record the date of the observation, the child's name and ID number (Subject number, start from 001). Put questionnaire for one child in one file folder.

Free Play (15 minutes)
- The mother and the child will be free to play with a variety of toys present in the room

Experimenter: Hello. My name is _____. Welcome to the playroom. (To child) _____ (child's name), all of these toys are for you to play with! You can play with whatever you want to but please stay in this room. I have to go out now but I'll be back soon with another fun activity for you to do with your mom. Are you ready? Ok, have fun. (Toys are already in room) (Instruction to parents: Please make yourself comfortable. You can watch your child play or play with him/her together. It is totally up to you. I will be back in 15 minutes.)

Clean Up (3 minutes)
- The experimenter will re-enter the room and ask the child to pick up the toys and put them into a basket

Experimenter: (bring basket(s) in) Did you have fun playing? (pause for response) Now it's time to clean up! I want you to put all of the toys into the basket ok? (then leaves the room, no instruction will be given to the mother)

(enter the room when the clean up is done or when it is the end of the 3rd minute. If the clean-up is not done, the experimenter should do the rest clean up and get ready for the next session. Remember, acknowledge the child's work even if it is not completed)

"Castle Building" (10 minutes)
- the experimenter will ask the child to build a "castle" same as the model

Experimenter: Wow, thank you for cleaning up the toys. Good job. The next thing that you are going to do is to build a castle! (Show the castle). Do you like Lego? (waiting for response from the child). Here is a castle built with Lego. Can you please build a castle just like this one! Ok, go ahead! (instruction to mother: You can help him/her to build it if you want.) (then leave the room with the full basket, make sure all the toys are cleaned up and there is no toy remained in the room)

This session will be finished in 10 minutes or when the castle is built up, whichever comes first.

Math (10 minutes)
- the mother and the child will be asked to complete a booklet of simple math problems (e.g., 1+1) together

Experimenter: Wow, that castle looks great. Now, I have a math book here. Do you have this book at home? (If the child has it at home, check with the mother and see if she wants to use the book or use flash cards instead) Can you try to do the math please? (If child says no, "why don't you give it a try, it should be fun")(instruction to the mother " You can help if you want"(remove the castle materials and leave the room)

This session will be finished in 10 minutes or when the child and the mother finish the math book and are not doing anything about math, whichever comes first.

Reading (10 minutes)
- when they are finished completing the math problems, the mother and child will read a book together

Experimenter: Ok, did you have fun? I have some story books here for you and your mom to read. (Explain to mom that the books are of different levels. Ask mom about children's level of reading. "How well can he/she read?") The next thing you can do with your mom is reading together. We have a few books here for you to read. You can pick one to start with. You don't have to finish all of these books. I will be back with you shortly. (Instruction to the mother: "Do you read to him/her at home? (waiting for response from the mother) You can read with him/her together if you like. Just do what you do at home) (collect the math book and leave the room)

This session will be ended in 10 minutes

Final Free Play (15 minutes)
- the whole session will be ended with another free play session

Experimenter: Wow! You guys did a great job today. Now, you can play with these toys again! (bring basket of toys back into the room and empty them out in the center of the room). Ok, here you go. Have fun! I'll be back soon.

Cookies and juice box will be provided to the child after the 2nd free play.

"Did you have fun? Would you like some cookies or something to drink?"

The experimenter can use this time to warm up the child, talk to the mother about the child interview and explore the possibility of spending time with the child only for the child interview

Child Assessment (Do we need to have a tape recorder for this?)
- following the whole session, each child will be invited to play with the experimenter and then be asked to complete a story about his/her beliefs about learning

Experimenter: _____ (child's name), would you like to play with me now for a little while? I have something special for you and me to do.

(If child hesitates)
Experimenter: Your mom will wait for you in the next room and she'll come back soon. This is

something just for you and me.

(Mother can stay if they feel not comfortable about the separation.)

Experimenter: I have a story to tell you. Here, you can look at these pictures (the pictures are used to help the child understand the story and complete the task)

Tell the story with the pictures.

The interviewer will then ask standard prompting questions:

Prompt 1: What do you think happens next in the story? (If child says "I don't know", further prompt: Do you think little bird will learn how to fly eventually?)
Prompt 2: It's a neat story, can you tell me more?

Possible Responses:
The child may answer any of the following to your questions. Ask a follow-up question such as the ones provided.

"When the little bird gets bigger, then he(she) will be able to fly"
- How does being bigger help the little bird?

"Mommy bird will stay with him and help him until he learns how"
- How does the mommy bird help him?

"The little bird is too little! He is not ready to fly. When the little bird gets stronger then he will be able to fly"
- What's good about being bigger?

"The little bird will keep trying and then he will get it"
- Why will he keep trying? How does this help the little bird?

Story 2: Nimo learns to swim

Nemo has a dream. He wants to join the school swim team. But Nemo has a little fin. He thinks that he will never win. "I will never win. I have a bad fin." Nemo tries… and tries … and tries.

Prompt 1: What do you think happens next in the story? (If child says "I don't know", further prompt: Do you think Nemo will make the team eventually?)
Prompt 2: It's a neat story, can you tell me more?

When the team part is completed, ask the child to complete the second part of the story. "If Nemo makes the team, do you think Nemo can win the first-place prize"

Further prompts and follow up questions are similar to story 1.

Experimenter: Thank you _____. You did a great job. Now we can go to get your mommy and go home.

Experiment ends (the length of the experiment is approximately 90 minutes)

When the dyad leaves, tidy up everything, wash the coffee maker, store the equipment, put the questionnaires into a folder and store it in the lab. (Anything else you can think of?)

Appendix E

Observation Protocol (Chinese)

“家长成就定向与儿童学习信念的跨文化比较研究”

实验程序

实验材料包括：

除录象中所展示的各种玩具、读书阶段要读的书、数学题书和数学卡片、搭积木时需要的城堡模型(事先已由实验员做好两个一样的城堡模型）、儿童完成故事需要的图片外，还有收拾玩具时候需要的装玩具的大纸箱子。

实验准备：

1、打扫房间，地毯，擦干净单向玻璃和监控器，把不需要的桌椅、家具，以及对孩子可能有潜在危险的物品挪出游戏室。

2、检查设备工作是否正常，连接是否正确，准备好录制程序。

3、将玩具均匀的散放在房间的地上，以便观察孩子能否积极的到房间各个位置去玩。

4、准备好写有孩子的姓名、被试号及实验日期的纸版作为录象标签。

实验进程：

一、在接待室会见孩子与家长

1、孩子与家长将乘出租车来，实验员随时与家长保持联系以便他们准时到达正确实验地点。

2、为家长和孩子提供饮料、茶水、小吃等，并向家长解释观察实验的概念和目的（其中包括此研究不是对孩子智能、社会技能等的评估，而侧重于孩子与家长的互动)。

3、回收给家长的问卷（已填写完整的，由家长带来)，并签署实验同意书两份（一份备案，一份由家长保留)。

4、在实验前问孩子要不要先上厕所。

二、录制实验过程

每一次录制实验前，将孩子的姓名、被试号及实验日期标在纸版上作为录象开头。

（一）自由游戏（15 分钟）

孩子与妈妈在放满玩具的观察室自由活动。

[主试指导语：你好，我是……。欢迎……（孩子小名）到阿姨这儿来玩儿。这里这么多玩具你都可以玩儿，但只能在这个屋里，不能出去。阿姨现在有事要出去一下，一会儿再回来给你带其他好玩儿的东西，好吗？那好，你就好好玩儿吧。(转向妈妈：您可以随意一些，就象平时一样，您看着孩子玩儿或是和他一起玩儿都行，您自己看着办，我 15 分钟后就会回来。)]

（二）收拾（3 分钟）

实验者回来并要求孩子把玩具都收拾到箱子里。

[主试指导语：（带着箱子进来）玩儿得高兴吗？……好，现在得收拾一下了。来，把所有这些玩具都装进这些箱子里，好吗？（不对妈妈说指导语，离开。）]

3 分钟后（或不到三分钟，但是已经收拾完后）主试进来，并感谢孩子的劳动，不管其是否完成了收拾玩具的活动。如果任务尚未完成，实验者就完成它。

（三）“搭城堡”游戏（10 分钟）

实验者要求孩子搭一个与提供的模型一样的“城堡”。

[主试指导语：啊，玩具都收拾完了，好样的！那么下面你的伟大任务就是建造一座象这样的城堡（展示带来的城堡模型）。喜欢这样的玩具吗？……那么你要建一个跟它一模一样的城堡，好吗？（或者：不喜欢？可建个城堡也不容易的，来，试试看，能不能建个和它一模一样的。）加油！（转向妈妈：如果你想帮孩子那就帮。）]

实验者抱着装满玩具的箱子离开，确保屋子里没有留下一点刚才的玩具。当孩子搭成积木或是 10 分钟到了，实验者再进来。(如果妈妈或者孩子问是否颜色都要一样，说明颜色也要一样)

(如果 10 分钟到了，孩子就差最后一两块就搭好了，可以多给孩子点时间，让她（他）弄完再进去，这样孩子会有一定的成就感。如果差很多，10 分钟的时候结束)

（四）作数学题（10 分钟）

要求妈妈和孩子一块儿做一些简单算术题。

[主试指导语：呀，这城堡真好看。阿姨这儿现在有本儿算术书，你家里有没有？（如果孩子说有~~~）要不作几道题试试？（如果孩子拒绝，就说：为什么不试试呢，其实挺有意思的）（转向妈妈：你觉得需要的话，可以帮他）]

实验者离开，带走城堡玩具，10 分钟后、或是母子作完了算术书又不再做跟算术有关的事情时再进来。

（如果孩子家里有同样的书，或者以前做过同样的书，孩子或者妈妈可以挑选还做这本书或者做数学卡片。这一个程序的主要目的是看家长和孩子在做数学时候的互动情况。要求家长平时在家怎么做的，在实验室也随意就可以了。如果家长和给孩子另外出题，也不要打断。做足 10 分钟）

（五）阅读（10 分钟）

算术后，母子共同读一本书。

[主试指导语：怎么样，做算术题挺有意思吧？我这儿还有一些故事书，你可以和妈妈一起读。（向妈妈解释故事书分不同水平，向妈妈询问孩子的阅读水平“他阅读怎么样”。）接下来你要和妈妈一块儿读书，这儿有好几本书，你可以自己先挑一本开始，也不用非要把所有的书读完。一会儿我就回来陪你。（转向妈妈：你在家里给他读书吗？……，要是觉得好，你也可以和她一块儿读，你在家怎么做的现在还怎么做。）]

实验者离开，带走算术书。整个过程持续 10 分钟。

（六）最后的自由游戏（15 分钟）

母子完全自由游戏。

[主试指导语：啊，今天你可真了不起。现在你又可以玩儿这些玩具了。（将装满玩具的箱

子再次拿回来，并把它倒空。 均匀摆放在房间里）好了，玩儿吧，使劲儿玩，我一会儿就回来。]

游戏结束时为孩子提供小吃和饮料，并问：玩儿的高兴吗？来点儿吃的、喝的怎么样？

让孩子充分活动起来，并让妈妈允许接下来对孩子的单独面谈。

（七）儿童学习信念评估（15 分钟左右）

整个过程中儿童都与实验者一起玩耍，实验者会令他补全一个有关学习信念的故事。（需要录音笔）

[主试指导语：……想不想和我玩儿一会儿？咱俩可以一块儿做些好玩儿的事情。（如果孩子犹豫：）没关系的，你妈妈就在隔壁呢，一会儿她就回来。你就陪阿姨一会儿好吗？哪，阿姨给你讲个故事。你看这些画片。]

实验者翻着图片讲故事。实验者会提一些标准的提示问题。并对有可能的回答做出适当反应。（故事 1：小鸟学飞；故事 2：小猫学捉老鼠[见 ppt 文件]这个故事有待商榷。我觉得故事内容不太合适。第一，不很突出小猫的缺点，第二，最后的结束问题不合适。我们这里的第二个故事是讲一条小鱼，她（他）特别想加入学校的游泳队，但是她（他）的鱼鳍特别小，然后问孩子两个问题，第一个问题是，你觉得小鱼能加入游泳队吗，第二个问题是，如果他（她）加入了游泳队，你觉得她（他）比赛的时候能拿第一名吗？ 看看你的学生能不能照这个故事做个 PPT。）

实验结束：

整个实验大约 90 分钟。之后实验者打扫房间，清洗擦拭玩具，收拾给孩子和家长的小吃、饮料等，将录制的结果通过移动硬盘导入另一计算机并转换格式、加以压缩、刻录 DVD（一式三份），将孩子和家长的问卷及光盘单独收入文件夹，并按年龄、性别将文件夹保存好，最后将所有设备检查一下关闭。

实验结束后报酬问题：

每位家长给 20 元打车钱；小朋友可以挑选一样小玩具带走（种类包括小娃娃、小车模型、小纱巾、小饰物、小枪炮玩具等，价值在 20 元左右）；承诺给家长一张此次观察过程的盘（待后期烧制完成后）。

学生主试的注意事项：

1、保证实验指导语的规范和正确性，保证对孩子的话语和行为给予合乎情理和符合实验目的反应。

2、负责玩具、图书及其他实验材料和设备的使用和保养，保证其安全、清洁。

3、负责从接待到录制到实验引导等全部实验过程的进行，并及时处理任何意外的突发状况。

4、负责记录和汇报实验进展，有任何疑虑或建议都要及时向负责人提出。

Appendix F

Demographic and General Information Questionnaire

Demographic and General Information

1. Your child's birth date is ____/____/____(YY/MM/DD)
2. Your child's gender __ boy __ girl
3. Mother's Age _____
4. The language you speak most frequently at home is _____
5. Other languages spoken by your child: _____
6. Number of siblings:_____
7. The child's birth order:_____
8. Does your child attend child care center? ___ Yes ___ No
   If yes, in what language? _____
   Name of the child care center _____
   Grade/Class _____
9. Does your child attend School? ___ Yes ___ No
   If yes, in what language? _____
   Name of the school _____
   Grade _____
10. Family annual income: _____
11. Mother's occupation: _____
    Full time? ___ Yes ___ No
    If no, hours at work per week _____
12. Father's occupation: _____
    Full time? ___ Yes ___ No
    If no, hours at work per week _____
13. Mother's level of education. Please circle one of the following
    1) Less than high school graduation
    2) High school
    3) Vocational or correspondence school
    4) College
    5) Bachelor's degree
    6) Honours degree
    7) Master's degree
    8) Doctorate
    9) Other, please specify _____
14. Father's level of education. Please circle one of the following
    1) Less than high school graduation
    2) High school
    3) Vocational or correspondence school
    4) College
    5) Bachelor's degree
    6) Honours degree
    7) Master's degree
    8) Doctorate
    9) Other, please specify _____
13. The highest level of education you expect your child to attain. Please circle one of the following
    1) Less than high school graduation
    2) High school
    3) Vocational or correspondence school
    4) College
    5) Bachelor's degree
    6) Honours degree
    7) Master's degree
    8) Doctorate
    9) Other, please specify _____

Appendix G

Child-Rearing Practices Report Questionnaire

Child Rearing Practices

In trying to gain more understanding of children, we would like to know what is important to you as a parent and what kinds of methods you use in raising your child. Please read the statements below and put a check on the line that indicates how you agree or disagree with them.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I respect my child's opinions and encourage him/her to express them.	___	___	___	___	___
2. I encourage my child always to do his/her best.	___	___	___	___	___
3. I put the wishes of my mate before the wishes of my child.	___	___	___	___	___
4. I help my child when he/she is being teased by his friends.	___	___	___	___	___
5. I often feel angry with my child.	___	___	___	___	___
6. If my child gets into trouble, I expect him/her to handle the problem mostly by himself/herself.	___	___	___	___	___
7. I punish my child by putting him/her off somewhere by himself/herself alone.	___	___	___	___	___
8. I watch closely what my child eats and when he/she eats.	___	___	___	___	___
9. I don't think young children of different sexes should be allowed to see each other naked.	___	___	___	___	___
10. I wish my spouse were more interested in our children.	___	___	___	___	___
11. I feel a child should be given comfort and understanding when he/she is scared or upset.	___	___	___	___	___
12. I try to keep my child away from children or families who have different ideas or values from our own.	___	___	___	___	___
13. I try to stop my child from playing rough games or doing things where he/she might get hurt.	___	___	___	___	___

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
14. I believe physical punishment to be the best way of disciplining.	____	____	____	____	____
15. I believe that a child should be seen and not heard.	____	____	____	____	____
16. I sometimes forget the promises I have made to my child.	____	____	____	____	____
17. I think it is a good practice for the child to perform in front of others.	____	____	____	____	____
18. I express affection by hugging, kissing, and holding my child..	____	____	____	____	____
19. I find some of my greatest satisfactions in my child.	____	____	____	____	____
20. I prefer that my child not try things if there is a chance he/she will fail.	____	____	____	____	____
21. I encourage my child to wonder and to think about life.	____	____	____	____	____
22. I usually take into account my child's preferences in making plans for the family.	____	____	____	____	____
23. I wish my child did not have to grow up so fast.	____	____	____	____	____
24. I feel a child should have time to think, daydream, and even loaf sometimes.	____	____	____	____	____
25. I find it difficult to punish my child.	____	____	____	____	____
26. I let my child make many decisions for himself.	____	____	____	____	____
27. I do not allow my child to say bad things about his/her teachers.	____	____	____	____	____
28. I worry about the bad and sad things that can happen to a child as he/she grows up.	____	____	____	____	____
29. I teach my child that in one way or another punishment will find him/her when he/she is bad.	____	____	____	____	____

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
30. I do not blame my child for whatever happens if others ask for trouble.	____	____	____	____	____
31. I do not allow my child to get angry with me.	____	____	____	____	____
32. I feel my child is a bit of a disappointment to me.	____	____	____	____	____
33. I expect a great deal of my child.	____	____	____	____	____
34. I am easy going and relaxed with my child.	____	____	____	____	____
35. I give up some of my own interests because of my child.	____	____	____	____	____
36. I tend to spoil my child.	____	____	____	____	____
37. I have never caught my child lying.	____	____	____	____	____
38. I talk it over and reason with my child when he/she misbehaves.	____	____	____	____	____
39. I trust my child to behave as he/she should, even when I am not with him/her.	____	____	____	____	____
40 I joke and play with my child.	____	____	____	____	____
41. I give my child a good many duties and family responsibilities.	____	____	____	____	____
42. My child and I have warm, intimate times together.	____	____	____	____	____
43. I have strict, well-established rules for my child.	____	____	____	____	____
44. I think one has to let the child take many chances as he/she grows up and tries new things.	____	____	____	____	____
45. I encourage my child to be curious, to explore and question things.	____	____	____	____	____
46. I sometimes talk about supernatural forces and beings in explaining things to my child.	____	____	____	____	____
47. I expect my child to be grateful and appreciate all the advantages he/she has.	____	____	____	____	____

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
48. I sometimes feel that I am too involved with my child.	____	____	____	____	____
49. I believe in toilet training a child as soon as possible.	____	____	____	____	____
50. I threaten punishment more often than I actually give it.	____	____	____	____	____
51. I believe in praising a child when he/she is good and think it gets better results than punishing him/her when he/she is bad.	____	____	____	____	____
52. I make sure that my child knows that I appreciate what he/she tries or accomplishes.	____	____	____	____	____
53. I encourage my child to talk about his/her troubles.	____	____	____	____	____
54. I believe children should not have secrets from their parents.	____	____	____	____	____
55. I teach my child to keep control of his/her feelings at all times.	____	____	____	____	____
56. I try to keep my child from fighting.	____	____	____	____	____
57. I dread answering my child's questions about sex.	____	____	____	____	____
58. When I am angry with my child, I let him/her know it.	____	____	____	____	____
59. I think a child should be encouraged to do things better than others.	____	____	____	____	____
60. I punish my child by taking away a privilege he/she otherwise would have had.	____	____	____	____	____
61. I give my child extra privileges when he/she behaves well.	____	____	____	____	____
62. I enjoy having the house full of children.	____	____	____	____	____

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
63. I believe that too much affection and tenderness can harm or weaken a child.	___	___	___	___	___
64. I believe that scolding and criticism makes my child improve.	___	___	___	___	___
65. I believe my child should be aware of how much I sacrifice for him/her.	___	___	___	___	___
66. I sometimes tease and make fun of my child.	___	___	___	___	___
67. I teach my child that he/she is responsible for what happens to him/her.	___	___	___	___	___
68. I worry about the health of my child.	___	___	___	___	___
69. There is a good deal of conflict between my child and me.	___	___	___	___	___
70. I do not allow my child to question my decisions.	___	___	___	___	___
71. I feel that it is good for the child to play competitive games.	___	___	___	___	___
72. I like to have some time for myself, away from my child.	___	___	___	___	___
73. I let my child know how ashamed and disappointed I am when he/she misbehaves.	___	___	___	___	___
74. I want my child to make a good impression on others.	___	___	___	___	___
75. I encourage my child to be independent of me.	___	___	___	___	___
76. I make sure I know where my child is and what he/she is doing.	___	___	___	___	___
77. I find it interesting and educational to be with my child for long periods.	___	___	___	___	___
78. I think a child should be weaned from the breast or bottle as soon as possible.	___	___	___	___	___

Appendix H

Mother-Child Free-Play Interaction Coding Scheme

Maternal Behaviors

Polite request/ Suggestion / Indirect command = mother actively provides general suggestion or guidance while allowing the child to direct/ structure the activity (example – mother might say "how about drawing a picture on the board?")

Direct command or request without force (neutral) = mother provides clear and direct command without obvious emotional expression or power assertion. Tone is typically plain. Direction is clear but not fully explained (example – "Play with the blocks.")

Direct command or request with force = mother directs child's behavior with impatience, criticism or coerciveness. Physical index such as asking the child to go back to playing or ending the activity by grabbing the toy the child is playing with. NOTE that it is very important to listen to the tone of the mother's vocalization to determine whether the command is given forcefully. The tone and emotion the mother is communicating is more informative than content (example – Pick a toy to play with! What is taking so long?!")

Explanation / reasoning = mother actively provides detailed interpretation or reasons about an activity with patience (example – child asks how a toy works and mother explains or she teaches the child to play with a specific toy) or mother attempts to set limit by explaining the rules.

Positive reinforcement (reactive) / encouragement = mother actively comments on how well the child is doing to help him/her progress to the next step (example – "What do you think comes next? A smart boy like you can figure this out.) or to encourage the child to continue with an activity (example – "That is such a beautiful picture. Keep working at it)

Criticism/ reprimand and punishment = mother uses negative comments toward the child showing disapproval or that she is upset by the child's performance (example – "You are so stupid. You won't finish this.)

Intrusiveness = mother interrupts or takes over the child's activity, distracts the child from an ongoing activity (examples – grabbing objects the child is using, shoving objects into the child's space, dragging the child away from toys, acting on child's toy in a way that disrupts the child's activity such as if a child is busy playing with a toy and the mother directs his/ her attention to something else)

Prohibition = mother does not allow the child to engage in a particular activity (example – "Don't touch that doll.")

Threatening = mother attempts to stop the child from engaging in an activity by intimidating him / her (example – "If you don't be good you're not getting dessert later")

Appendix I

Maternal Mind-mindedness Coding Scheme (English & Chinese)

Variable	Variable Definitions for Maternal Mind-mindedness Coding Scheme
Initiator 发起人	A conversation is defined as one speaker's utterance (or utterances) bounded by the vocal response of the other speaker. Each conversation is coded for the initiator. 一段对话被定义为:一位发言者的言论(或提问)伴随着另一个发言者的口头答复. 每段对话及其对话发起人都需编入编码. The initiation of a conversation must be verbally clear, and the speaker of the utterance is coded as the initiator, ex., child holds up puzzle and Mom says 'Do you want to play with that?', Child responds 'Yes please' Even though the child's behaviour initiated a response from the mother, the mother was the first to speak, therefore she is the initiator of the conversation. 一段对话的开端必须要言辞清晰,并对进行对话的发言者以"发起人"的名义进行编码, 例如, 当孩子拿起拼图时, 母亲问 TA: "你想玩这个?", 然后孩子回答: "想(玩)". 在这种情况下,虽然母亲的提问(言论)是被孩子的行为触发的, 但母亲作为第一个说话的人, 她仍应被记录为这段对话的最初"发起人".
子(C)	A new conversation is considered initiated following a sufficient lull in the conversation prior (i.e., at least 3 seconds). Extended or rambling talking, in which there is no lull in conversation (i.e., at least 3 seconds) is considered one utterance and coded one time. For example, self speech, puppet play, or mother's explanations to child. 当一段对话拥有足够长的间歇时间时(至少 3 秒),这段对话将作为一段新的对话进行编辑. 但对于在对话中没有停顿（至少 3 秒）的长时间谈话或喃喃自语则被视为一次发言并被编码一次。 例如，自言自语，拇指玩偶或母亲给孩子的讲解。 Child initiates conversation 由孩子发起的对话

母(M)	Mother initiates conversation 由母亲发起的对话
Response 反应	Following Fishburn et al. (20??) mother's responses to their child's utterances were assessed and coded for response, form and content: 根据 Fishburn et al. (20??), 母亲对其孩子发言(或提问)的回复应在仔细评估后从"反应","形式"和"内容"的层面进行编码:
ACK *答*	Acknowledge: 承认/作答 Utterances in which the mother acknowledges the child's comment during a conversational turn or responds to a question they have asked , e.g. 'C: I've seen that movie' 'M: Yup, you watched it at Tracy's' or 'C: I'll be the teacher you be the student' 'M: What class are we in?' or 'C: Eleven' 'M: No, it's nine' 母亲对孩子的发言给予回话或回答, 例如, "子:我以前看过这个电影了","母:对,你在 Tracy 家看过"或"子:我来当老师,你来当学生","母:那我们要上什么课呢?"或"子:这是十一","母:不对,这是九"
IGN *无*	Ignore: 无视/忽略 Comments which are not a response to the child's statements or questions, although the mother recognized her child was speaking to her, e.g., 'C: look at that toy over there mummy' 'M: pass me that marker', or 'C: Mummy can we play with the puzzle?' 'M: If I put the bottle in he dolls mouth then she is eating' *Note*. It must be clear that the mother heard the child, and chose not to reply 尽管母亲意识到孩子正在和她说话，但并没有对孩子的言论或问题给予话题有关的回复, 例如, "子:妈妈你快看那个玩具!","母:给我递一下那只马克笔"或"子:妈妈我们来玩这个拼图","母:如果我把这个瓶子放在洋娃娃嘴边,那她就是在吃东西啦" 注意: 必须明确的是:母亲听到了孩子的声音，但选择去无视 TA

REJ *拒*	Reject: 拒绝/否决 Comments which deny the child's prior suggestion, idea or input, without making a factual correction, e.g. 'C: Let's play with the puppets mummy' 'M: No, we are writing on the chalkboard right now' or 'C: can we play on the chalkboard?' 'M: No, I think we should try playing with the puzzle' 母亲的回复否认了孩子提出的建议和想法,且未给出事实性的纠正, 例如"子:妈妈我们一起玩这个拼图吧!","母:不行,我们现在要在黑板上写东西"或"子:我们可以在这个黑板上玩吗?","母:不行,我觉得我们应该玩拼图" *Note.* Responses in which the mother factually corrects the child are coded as acknowledgements not rejections, e.g. 'M: What is five plus four?' 'C: Eleven' 'M: No, it's nine' or 'C: I've seen that movie, it's called Sky' 'M: no, it's called Sky High' 注意: 如果母亲的回答实际上纠正了孩子的错误言论,则该回复被编码为"承认/作答"而不是"拒绝"，例如 "母: 五加四等于几？","子: 十一","母: 不对，等于九"或"子：我看过那部电影，叫 Sky","母：不是 Sky，是 Sky High"
Form 形式 *QST* *问*	Should a mother initiate a conversation, the first maternal utterance is coded for form and content only (i.e., she is not responding to the child, so response need not be coded). A secondary maternal utterance, which follows a response to the child (i.e., child speaks, mom answers, mom then asks a question or makes her own comment) is coded for form and content only. 当母亲是对话的发起人时,则只需针对母亲的言论进行"形式"和"内容"上的编码 (母亲未曾回复孩子的言论, 因此无需对母亲的"反应" 进行编码). 母亲续孩子的发言或提问后进行的二次发言（即孩子说话，母亲回答后又问一个问题或发表自己的评论）仅被编码为"形式"和"内容". Question: 提问: An utterance in which the child is expected to respond, and through which there is no attempt to scaffold the child's behaviour e.g. 'What toy do you want to play with?' 'How many puppets are there?' 'Have you seen that movie?' 'What is your favourite puppet' 'Do you remember when we went to the zoo and you saw the penguins?' 'What game should we play on the chalkboard?'

	刺激孩子做出回应的发言,且不企图搭建(影响)孩子的行为，例如 “你想玩什么玩具？”“那里有多少人偶啊？”,“你有没有看过那部电影？”,“你最喜欢哪个人偶?”,“你还记得我们去动物园时看到的企鹅吗？ “我们应该在黑板上玩什么？”
	Note. Questions which were descriptions phrased as questions or rhetorical in nature are coded as statements, not questions e.g. ‘That’s a lion, isn’t it?’ or ‘That characters name is Ron eh?’ or ‘Polar bears tend to like the cold better than the heat wouldn’t you say?’. (反问/设问)
	注意:如果问题带有描述或措辞性质则被编码为“陈述”，而不是“提问”, 例如“那是一头狮子，对不对呀？”或“那个角色的名字是不是叫罗恩·埃赫？”或“北极熊比冷热更喜欢冷酷，对不对？”
	Note. Questions which attempt to scaffold the child’s behaviour are coded as suggestions, e.g. ‘Do you think we should set the corner pieces of the puzzle first?’ or ‘Do you think the alligator might like it better in the water?’ or ‘What happens if you turn the controller left, does the car go that way too?
	注意:如果问题企图搭建(影响)孩子的行为或活动,则被编码为“建议”,而不是“提问”,例如“我们是不是应该从拼图的最边缘开始呢?”或“(你觉得)鳄鱼会不会更喜欢待在水里呢?”或“你试试把遥控器向左转,看看小汽车会不会跟着你的手一起左转?”
DIR 指	Directive: 指向性 Maternal directives which may be stated as clear requests, orders, rules, or suggestions, of which there is no option for the child to refute, e.g. ‘Put the toys away’, ‘We are not writing on the chalkboard until you clean up the other toys’, ‘Grab that puzzle over there’, ‘Hand me the tiger puppet’, ‘Don’t do that’, ‘Wait your turn’

SUG *建*	母亲的指向性言论被定义为孩子无权反驳的明确要求，命令，规则或建议，例如 “把玩具放下”，“等你把玩具收拾干净了才可以玩黑板”，“把那块拼图放这边”，“把老虎布偶给我”，“不可以这样”，“轮到你了再玩“. Suggestion: 建议: An utterance in which the mother attempts to scaffold or influence the current play scenario, or in which she attempts to stimulate play in an indirect manner, e.g. ‘Maybe we should put the other toys away before we draw on the chalkboard’ or ‘I think the doll is probably hungry, do you think she would want a bottle?’, ‘try sounding the word out when you spell it’, ‘how about we do the corner pieces of the puzzle first’, ‘should we try putting the lion in the savannah habitat?’ 母亲试图搭建或影响当前游戏场景的言论,或者试图以间接方式刺激游戏进行的言论，例如 “要不我们先把玩具收拾起来再来玩黑板?”或“洋娃娃可能饿了哦，她会不会想要吃饭了？”，“拼写时把这个词说出来试试”，“我们从最边缘开始拼拼图怎么样?”，“要不然我们把狮子放到热带草原栖息地看看？”
STA *述*	Statement: 陈述: General remarks, narrative related to instructions for play, what is happening or will happen, or responses which make an expansion on the child’s utterances, e.g. ‘We’ll put the toys in here, and then grab this one’, ‘you’re funny’, ‘that’s silly’, ‘you’re right’, ‘If we put the lion in the water he probably won’t be very happy’, ‘If the dolly doesn’t get burped she might have an upset stomach’ , ‘I liked that movie too’ 一般性评语，对游戏规则的解说，正在或将要发生的事情有关的叙述，或使孩子的话语进行扩展的回答，例如 “我们先把玩具放到这里，然后拿着一个”，“你真是个宝藏男孩(女孩)/你真有意思”，“这也太奇怪了/这也太蠢了”，“你说的对”，“如果我们把狮子放在水里的话它可能会不高兴”，“如果洋娃娃没办法打出这个嗝,她可能会肚子痛”，“我也喜欢那部电影”
MIN	

	Minimal content: 微内容 Comments of little content, e.g., 'Oh', 'Mhmm', 'Uh-oh' or self speech 只具备少量内容的言论,例如, "哦","嗯","哎呀"或自言自语
Content 内容 Mental 心理相关 *C* 子	Comments relating to metacognitive capacity including thoughts, beliefs, desires, emotion and knowledge in which a clear metacognitive term was used (e.g. think, like, want, know, clever, sneaky, remember) were divided into four exclusive categories of mental-state talk: 与元认知能力有关的发言将分为四个心理状态的互斥类别，其中包括思想，信念，欲望，情感和包含明确的元认知术语的有关知识（例如，想法，喜好，想要，知道，聪明，鬼鬼祟祟，记忆）: Child: 孩子 Comments relating to the mental state of the child, e.g. 'What do you <u>want</u> to do?' 'What do you <u>think</u> we should do next?' 'Where do you <u>want</u> to put the doll?', 'Do you <u>know</u> what that is?' 与孩子的心理状态有关的言论,例如,"你想要做些什么呢?""我们接下来要怎么做?""你想要把这个娃娃放在哪里?""你知道这是什么吗?"
M 母	Mother: 母亲 Comments relating to the mother's own mental state, e.g. 'I <u>want</u> to play with the doll' 'I don't <u>remember</u> your teacher's name', 'I <u>think</u> we should put the toys away' 与母亲自己的心理状态有关的言论,例如,"我想要玩这个娃娃""我不记得你老师的名字了""我觉得我们可以把玩具收起来了"

B 双	Both: 双方 Comments relating to the mental state of both the mother and child, e.g. 'We mustn't forget to put the toys away', 'We love to play puzzles, right?' 与母子(女)双方的心理状态有关的言论,例如,"我们不能忘了把玩具收起来", "我们最喜欢玩拼图了,对不对呀?"
O 另	Other: 其他 Comments relating to the mental state of someone other than the child or mother, e.g. 'Your sister really loves to play with dolls too' 'Daddy doesn't like to read either does he?', 'Your little brother knows how to spell his name too' 除母子(女)外他人的心理状态的有关言论,例如,"姐姐也喜欢玩这个娃娃", "爸爸也不喜欢读书,是不是呀?","弟弟也知道怎么拼自己的名字了"
Non-mental 非心理相关	All remaining comments which did not relate to mental state activity or contain mental state terms including descriptions (e.g. 'the doll's hair is very fluffy'), bids for the child's attention (e.g. ' watch mommy do it, are you paying attention?'), affect expressions and feedback on the child's ongoing activity (e.g. 'Good Job!' 'Well done') and comments which relate to the child's everyday life or past experience (e.g. 'This looks like the doll you have at home') were coded as non-mental state talk. 其余所有无关心理活动的评论或与心理状态术语的注释，其中包括描述（例如"洋娃娃的头发好蓬松呀"），引起孩子的注意（例如"来看看妈妈是怎么做的,你在看吗?"），对孩子正在做的活动进行的感想和反馈（例如，"真棒！"，"很好"）以及与孩子的日常生活或过去的经历有关的言论（例如，"这个洋娃娃和家里的那个一模一样"），这些将作为非心理相关言论进行编码。

Appendix J

Child Behaviour Checklist (Items for Internalizing & Externalizing Behaviours)

Internalizing Problems:

- cries a lot,
- fears certain animals, situations or places other than school,
- fears going to school,
- fears her or she might think or do something bad,
- feels too guilty,
- would rather be alone than with others,
- refuses to talk,
- secretive/keeps things to self,
- shy or timid,
- feels dizzy,
- feels her/she needs to be perfect,
- fears or complains no one love him/her,
- nervous/high strung/ tense, nightmares,
- too fearful or anxious,
- overtired,
- physical problems without known medical cause,
- self conscious or easily embarrassed,
- talks about killing self,
- under active/ slow moving or lacks energy,
- unhappy/sad or depressed,
- withdrawn/ doesn't get involved with others
- and worries.

Externalizing Problems:

- argues a lot,
- cruel to animals,
- cruelty/ bullying or meanness to others,
- demands a lot of attention,
- gets in many fights,
- physically attacks people,
- screams a lot,
- stubborn/ sullen or irritable,
- destroys things that belong to his/her family,
- steals outside the home,
- sudden changes in mood or feeling,

- suspicious,
- teases a lot,
- unusually loud,
- hangs around others who get in trouble,
- prefer being with older kids,
- runs away from home,
- sets fires,
- steals at home,
- swearing or obscene language,
- destroys his/her own things,
- disobedient at home,
- disobedient at school,
- doesn’t seem to feel guilty after misbehaving,
- lying or cheating,
- temper tantrum or hot temper,
- and threatens people.

Appendix K

Participant Feedback Sheet

Thank you very much for participating in our research. We hope you have found the participation enjoyable. This feedback sheet has been designed to provide you with further information of the research project.

For the past thirty years, many cross-cultural studies have been conducted to examine the academic achievement in Chinese and Western children and adolescents. It has been found Chinese children outperform North-American children in certain academic subjects, most notably mathematics and science. Because the ethnic differences are evident as early as first grade, it has been argued that cultural and family factors such as parental involvement may contribute significantly to the ethnic differences.

In order to understand the cultural and family factors, our research will investigate (1) the cross-cultural similarities and differences in parental achievement-related beliefs and practices; (2) the cross-cultural similarities and differences in children's beliefs about learning; and (3) how parental achievement-related beliefs and practices are linked to children's academic performance in both Canada and China.

The research is funded by Social Sciences and Humanities Research Council of Canada. To make the cross-cultural comparisons, children at 4-6 years of age and their mothers in Canada and China are invited to participate in the study. Same research materials and procedures are used for both Canada and China. The research will contribute to the further understanding of the roles that parents play in children's academic achievement in both cultures.

If you would like to know more about the role that parents play in children's academic achievement, the following is a useful list of articles.

Campbell, J. R., & Mandel, F. (1990). Connecting math achievement to parental influences. *Contemporary Educational Psychology, 15*, 64-74.

Dornbusch, S., Ritter, P., Leiderman, R., Roberts, D., & Fraleigh, M. (1987). The relation of parenting style to adolescent school performance. *Child Development, 58,* 1244-1257.

Kinlaw, C.R., Kurtz-Costes, B. & Goldman-Fraser, J. (2001). Mothers' achievement beliefs and behaviors and their children's school readiness: A cultural comparison. *Journal of Applied Developmental Psychology, 22*, 493-506.

Li, J. (2004). Learning as a task or a virtue: U.S. and Chinese preschoolers explain learning. *Developmental Psychology, 40*, 595-605.

Thank you very much again for your participation. Best wishes to you and your child.