POSITIVE FUNCTIONING AMONG CHINESE ADOLESCENTS: CONCEPTUALIZING A FRAMEWORK AND TESTING EFFECTS OF PARENTING

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DEDICATION

This dissertation is dedicated to my parents whose unconditional love,

encouragement and support made it possible

for me to complete this degree.

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ABSTRACT

Chinese adolescents' development has received increasing attention over recent decades. However, following a traditional deficit model, most of the attention has been on problematic functioning of adolescents (e.g. depression). This emphasis is not consistent with evidence that the large majority of Chinese adolescents do not manifest such problem behaviors. Little is known about positive functioning among Chinese adolescents and how it is related to key socialization practices such as parenting. The purpose of the present study was to begin to fill these gaps.

Using theory, past empirical practice, and characteristics of Chinese culture, the study posited a second-order structure for positive functioning in three components: *intrapersonal functioning* (self-esteem and empathy), *interpersonal functioning* (social initiative and peer connection), and *institutional functioning* (academic achievement). Parenting was measured by three commonly investigated dimensions: parental support, behavioral control, and psychological control.

A specialized multivariate model of associations between parenting and adolescents' positive functioning was hypothesized and analyzed using data from the Cross-National Adolescence Project (C-NAP; Barber, Stolz, & Olsen, 2005). The Chinese sub-sample consisted of 1,027 adolescents (453 boys) from 12 to 20 years old in Beijing, China. The three hypothesized paths were: parental support would be positively related to interpersonal functioning, parental psychological control would be negatively associated with intrapersonal functioning, and parental behavioral control would be positively linked with academic achievement.

The results indicated that the second-order model for adolescents' positive functioning fit the data well. In terms of the associations between parenting and positive functioning, all three hypothesized paths were supported. In post-hoc analyses, it became apparent that a *parental support* model fit the data even better than the specialized model. Thus, the best model fit was achieved when all paths from parental support to positive functioning were estimated, revealing that parental support explained unique variance in all three domains of positive functioning. In contrast, parental behavioral control and psychological control did not explain unique variance in any outcome measure beyond that explained by parental support. The predominating role of parental support in Chinese adolescents' positive functioning was discussed, along with limitations of the study, and suggestions for future studies.

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CHAPTER I: STATEMENT OF PROBLEM

China has been the fastest developing country in the contemporary world in the last three decades. Several major reforms and transitions that took place in the late 1970s and early 1980s have had a profound influence on the development of the new generation. First, in 1978 the Chinese government began to implement the "reforming and open-up policy". This policy broke up the old bureaucratic economic system and a Western market system was adopted. It also created increasing opportunities to communicate with the world, which was intensified after China entered the World Trade Organization (WTO) in 2001. Hence, Western ideologies poured into Chinese society and changed Chinese people's thinking (Chen, Wang, & Wang, 2009). Second, in 1979 the Chinese government began the "one-child" policy. This policy changed Chinese family structure essentially into a typical three-member family, especially in urban areas, and consequently it changed people's concern about children and child development as well as corresponding parenting attitudes and practices (Chen, Chen, Kaspar, & Noh, 2000).

Experiencing rapid and significant social and economic development, adolescents could be seen both as the beneficiaries of more social and economic resources and opportunities, and as victims of the accompanying intense social competition (Project of Contemporary Chinese Child and Adolescent Developmental Status, 2006). China has the largest population of adolescents in the world (Hou & Liu, 2005). Because adolescents

undergo many physical, cognitive and social changes and challenges, understanding adolescence has been an increasing concern in Chinese society.

Results of a search of the nine major academic psychological journals in China reveals that there were only seven studies titled with “Qing-shao-nian” (adolescents or youth) in the 1980s. However, in the 1990s, the number of studies increased to 23. During the first decade of the new century, the number continued to increase to over 90. Even more studies on Chinese adolescents appeared in academic journals in English (e.g. Bush, Peterson, Cobas, & Supple., 2002; Chen and colleagues, 2000, 2006, 2009). It is evident, therefore, that interest in Chinese adolescents has increased both within China and outside of China.

Generally, however, adolescence has been negatively portrayed by the media, the public, and the academy. For example, adolescent problems - such as juvenile delinquency, internet addiction, and antisocial behaviors - have been discussed often in the Chinese media (e.g. Wu & Zhang, 2005). In terms of research on Chinese adolescents, the number of studies either on maladaptation (such as hopelessness, depression and internet addiction) or on risk populations (such as delinquent youth and earthquake-affected adolescents) in the last decade is double that of studies on positive functioning (e.g., self-development, social relations and moral development). This emphasis on negative or problematic functioning of adolescents stands in direct contrast to findings from the Project of Contemporary Chinese Adolescent and Child Developmental Situation (2006), which concluded that most Chinese children and adolescents are mentally healthy. Therefore, the traditional emphasis on adolescent

problem behaviors does not appear to be appropriate to understanding adolescent development in China.

This focus on negative functioning that characterizes research on Chinese adolescents is similar to research on adolescents in the Western world. Scholars have noted, for example, that although the "deficit-centered" models that are typically used in studies of adolescents in Western societies help to promote prevention and intervention for adolescent problems, they imply that youth are troublesome and potential hazards to the society (Benson, 1997; Moore, Lippman, & Brown, 2004).

Therefore, it is apparent that research models that are used to study adolescents – both within and outside of China – need to be expanded past a deficit focus to explore the normative and positive functioning of adolescents. Not only would such research be truer to the reality that most adolescents function well, but understanding the positive development of adolescents could be helpful in knowing how to buffer the negative functioning that some do exhibit, and thereby provide a further foundation for prevention and intervention of problem behaviors (Park, 2004).

Conceiving Chinese Adolescents' Positive Functioning

To investigate Chinese adolescents' positive functioning, it is necessary to define what positive development is for Chinese adolescents. Just as with positive development in Western societies in which positive functioning has been characterized as multi-faceted (e.g. the "5 Cs", Lerner, Almerigi, Theokas, & Lerner, 2005), it is logical to presume that positive functioning among Chinese adolescents would be complex. In

other words, positive development is not a "simple a reflection of one outcome", but it is "broad and encompasses multiple and varied types of outcomes" (Moore et al, p. 129).

Most of the existing models of adolescents' positive development have been based on literature on Western adolescents, especially American youth. The intent of this extensive work has been primarily to develop programming initiatives for youth, not to develop or pursue a research agenda into the nature and determinants of positive functioning among adolescents. These program-based models of positive development of adolescents in Western societies are of questionable relevance to understanding the positive functioning of Chinese adolescents. Indeed, neither prevention programs nor positive development programs in communities are popular or widespread in China. For these reasons, this initial effort to understand positive functioning among Chinese adolescents will not be directly guided by this work.

In terms of the research literatures on human development, scholars have tended to investigate child development in a variety of domains associated with developmental tasks (e.g. Moore et al., 2004). For example, theories emphasize fundamental domains, such as *self* development (e.g. Erikson's Psychosocial Theory, Erickson, 1950, 1956; Erickson & Erickson, 1982; and Global Self-esteem, Rosenberg, 1965, 1979, 1989) and *social* development (i.e., relations with the others; e.g. Attachment Theory, Ainsworth, 1967; Ainsworth, Melhar, Water, & Wall, 1978; Bowlby, 1988). Similarly, studies in the area of positive psychology have also made the same split when suggesting that positive personality includes two dimensions: positive *individualism* and positive *relations with others* (Hillson, 1997).

Further, the division between the individual and social domains of child functioning is apparent in the voluminous research on problem behaviors, in which one of the most classic divisions has been between *internalized* and *externalized* problem behaviors (e.g., Achenbach & Edelbrock, 1987). Such models have has also been common in studies of Chinese children and youth (Crijnen, Achenbach, & Verhulst, 1997). Finally, from a cultural perspective, scholars have noted that youth in both individualistic and collectivist cultures emphasize a personal domain (Hasebe, Nucci, & Nucci, 2004) as well as social competence (Chen, Chen, et al, 2000).

Naturally, all theories acknowledge that individual development and social development are interdependent and empirical models typically estimate the covariance between them. However, it is evident that the division between individual and social functioning is a common and useful device in exploring the complexities of child development. Accordingly, this initial investigation into the positive functioning of Chinese adolescents will pursue, in part, a similar framework.

Specifically, this study builds on one framework of positive youth functioning that made the same division (Barber, 2005). Consistent with the work described above, that model dimensionalized positive development into *intrapersonal* functioning and *interpersonal* functioning based on major developmental tasks of children in their second decade of life. Moreover, as will be reviewed later, many of the sub-dimensions of those broad-band domains have been investigated in research among Chinese children or youth. It appears, therefore, to be a reasonable starting point for the current project.

However, in order to maximally apply to the Chinese culture, this study makes an important modification of that basic framework. Specifically, it reflects the critical role of academic achievement in Chinese culture. Adolescence in many cultures is a time when young people begin to think about their academic commitment (Ryan, 2000). Academic performance is especially salient for Chinese adolescents. China has a long tradition of emphasis on education. With limited chances to get higher education, Chinese students spend an exceptional amount of time on their studies, and competition among children begins as early as kindergarten. Given the salience of academic performance in China, academic achievement is considered much more important than other psychosocial competence for Chinese adolescents (Chen et al, 2000). In terms of research, academic achievement has been found to be related to other positive functioning constructs among Chinese adolescents (e.g. peer relations, Chen, Rubin, & Li, 1997; Wang & Chen, 2000; and depression, Chen, Rubin, & Li, 1995). Thus, in addition to the interpersonal and intrapersonal domains of positive functioning, the model will include positive functioning at the institutional level (i.e., academic functioning).

In sum, the framework that will be used in the current study of Chinese adolescents will include measures of *intrapersonal functioning* (self-esteem and empathy); *interpersonal functioning* (social initiative and peer connection); and *institutional functioning* (academic achievement).

Predicting Chinese Adolescents' Positive Functioning

To understand the positive functioning of Chinese adolescents, it is also necessary to examine significant contextual factors which could impact the quality of adolescent

functioning. For example, parenting practices have been shown to have an important impact on Chinese adolescent functioning (e.g. Chen, Liu, & Li, 2000). The literature on parenting in China is mostly based on theory and research findings from studies of Western samples. Much of the work is based on Baumrind's (1971, 1991, 2010) framework of parenting typologies.

However, Chao (1994) has asserted that North American parenting constructs are ethnocentric, and that, specifically, the classic authoritative and authoritarian parenting typologies do not capture the essence of Chinese parenting beliefs and behaviors. Accordingly, Chinese scholars have suggested further that the examination of specific dimensions of parenting (as opposed to typologies or clusters of parenting behaviors) might reveal more meaningful and interpretable results cross-culturally (Lim & Lim, 2003).

Specifically, that work has focused on the three dimensions of *parental support*, *behavioral control* and *psychological control* as they predict adolescent functioning in diverse cultures and ethnic groups. Some research has investigated these three dimensions of parenting (or dimensions similar to them) in data from Chinese youth, and generally found that all of the dimensions are significantly correlated with various measures of youth functioning (e.g., Barber et al., 2005; Chen, Liu, et al., 2000; Shek, 2006a, 2006b, 2007). Given this empirical validation of the salience of these basic dimensions of parenting to Chinese experience, the present study will also employ measures of them.

Nevertheless, in addition to the overall low number of studies, the available research on dimensions of parenting in Chinese families is limited in two ways. First, as would be expected from the traditional deficit focus of research on adolescents, most of the studies have investigated indexes of problem behaviors (e.g., internalized and/or externalized problems) with relatively little attention to positive aspects of youth functioning. As will be reviewed later, some studies, for example have found dimensions of parenting to be related to youth self-esteem, social initiative, and academic achievement.

The second limitation of the available research is that often studies have not employed multivariate models that simultaneously assess multiple dimensions of parenting and multiple outcomes measures. Thus, although the associations between parenting and some measures of the three domains of positive functioning among Chinese adolescents investigated in the current study, the lack of use of multivariate models has prevented the detection of any specialized effect of parenting on specific Chinese adolescents' positive functioning.

The Current Study

The present study proposed and examined a multivariate model of positive functioning and then examined the degree to which it was predicted by multiple dimensions of parenting. A theoretically informed, fully specialized model was hypothesized such that each parenting dimension was hypothesized to be associated with one domain of positive functioning. This model, along with a series of follow-up models designed to maximize fit with the data was tested using AMOS (Byrne, 2001) with self-

reported survey data from over 1,000 adolescents from Beijing, China collected in 2002 (Barber et al., 2005). The hypothesized model fit the data well. Post-hoc analyses revealed, however, that a *parental support* model fit the data even better. In that model, parental support was uniquely predictive of all three levels of positive functioning, while the other two parenting dimensions did not explain unique variance in any outcome beyond that explained by parental support.

CHAPTER II: REVIEW OF LITERATURE

China has the largest population of adolescents in the world (Hou et al., 2005). As the future of the country, Chinese adolescents have received increasing attention by both the academy and the public. However, most of research on Chinese adolescents has followed deficit models focusing on negative functioning (e.g. problem behaviors such as internet addition, depression, etc.). This preoccupation with problems is not consistent with evidence from China that most adolescents are mentally healthy (Project of Contemporary Chinese Child and Adolescent Development Status, 2006). Therefore, to appropriately understand Chinese adolescents' functioning, it is necessary to switch from the traditional view of adolescence and investigate their positive functioning.

Such an effort requires first conceptualizing and organizing the variety of types of positive functioning that might represent the lives of Chinese adolescents. In addition, one important way to improve understanding of adolescent positive functioning is to study key socializing processes such as parenting. The current study pursued both of these goals. Relevant literatures used to inform the construction of the study's models is presented below.

Conceiving Chinese Adolescents' Positive Functioning

Given the absence of attention to positive functioning in literatures on Chinese child or adolescent development, it is important to begin an investigation of it with some discussion and suggestion of how it should be conceived in the first place. In so doing, it is not clear that the recent work on Positive Youth Development in the Western

literatures is particularly relevant (PYD; Silbereisen & Lerner, 2007). Rather, after brief reference to that material, this section will discuss the basic distinction between individual and social development as an approach to determining how to conceive and eventually measure positive development. Further, the importance of academic achievement to Chinese adolescent functioning will be recommended and discussed.

The competent or positive functioning of adolescents has been the focus of much attention in Western literatures recently (e.g., the Positive Youth Development [PYD] movement). It began in the early 1990s and became particularly salient during the first decade of the 21st century (Silbereisen & Lerner, 2007). The new perspective considers that prevention and activities focusing solely on problem behaviors do not necessarily promote adolescents' positive development. Rather, the positive youth development perspective aims to promote normal development and encourage environments full of support and challenges (Roth & Brooks-Gunn, 2003). Various frameworks have emerged. Typically, they involve multiple domains (e.g. Lerner et al.'s, 2005 Model of 5Cs: Competence, Confidence, Connection, Character, and Caring and Compassion), and as many as 15 (Catalano, Berglund, Ryan, & Lonczak et al., 2002) to 20 (Benson, 2007) specific constructs.

Such Western models of adolescent positive development have been based largely on ideas that were developed and tested in the context of programming initiatives for Western youths. Such prevention programs are not common in China. Therefore, their relevance to understanding the essence of positive functioning among Chinese

adolescents is questionable, except to note that positive functioning is apparently complex and multi-faceted.

From an academic perspective, many theorists and researchers have pursued a domain approach to investigating child and adolescent psychosocial functioning. One of the fundamental domains is *self* development. For example, human development theorists such as Erickson placed heavy emphasis on self development, with identity formation particularly critical during adolescence (Erickson, 1950, 1956; Erickson & Erickson, 1987). Similarly, Rosenberg (1979) focused on the self, particularly the evaluative dimension of self-esteem, as fundamental to psychological well-being. Also, from a social learning perspective, Bandura (1997) concentrated on perceived self-efficacy and agency across the life.

Another important theoretical domain in human development is *social* development. This domain is particularly salient for adolescent development as it is at this stage of life that adolescents expand their social interactions outside of the family to include important relationships with friends and peer groups (Berndt, 1982). A large literature has documented the significant impact of adolescents' friendship and peer relations on their psychosocial functioning (Berndt 1982; Bukowsi & Hoza1989; Park & Asher, 1987, 1993; Rose & Rudolph, 2006). Development theories have also emphasized the influence of early social interaction to future social development. For example, attachment theory highlights the strong need of an affective bond between an individual and an attachment figure (usually a caregiver) (Ainsworth, 1967; Bowlby, 1988). The theory holds that children develop an "internal working model" for socioemotional

interaction with attached figures, which would then guide their other social interactions throughout their lives. Further, evidence of the importance of social development is found in theoretical perspectives on prosocial behavior that emphasize such behaviors as sharing, helping and comforting and suggest their relevance to future social development (Eisenberg, 1986).

The distinction between the self and social domains in theories of human development is paralleled by the more recent work on positive psychology. For example, studies in that area define two dimensions of positive personality: positive *individualism* and positive *relations with others* (Hillson, 1998). While positive individualism refers to the acceptance of oneself and having a purpose or sense of making in one's life, positive relations with others reflects a perception of the availability of supportive others and the value and satisfaction with relationships with others. Hillson further found that the two dimensions were related differently to positive functioning variables. For example, in his study of Canadian college students, positive individualism was specifically related to variables such as individualistic life orientation, while positive relations with others tended to be related with friendship and relationship-oriented life quality.

Further, the practice of distinguishing between individual and social domains of functioning is evident in the substantial literatures on problem behaviors. In that voluminous literature, one of the most distinctions is between *internalizing* and *externalizing* problem behaviors (e.g. Achenbach & Edelbrock, 1987). Internalizing behaviors are those that are experienced primarily within an individual, such as withdrawal, inhibition, anxiety, and depression. Externalizing behaviors are those that

typically involve others, such as aggression and delinquent activities (Christie, Nelson, & Jolivet, 2005). This distinction between individually versus socially experienced problem behaviors has been commonly validated in work in China (Crijnen, Achenbach, & Verhulst, 1997) as well as many other cultures (e.g., Barber et al., 2005).

Finally, a division of positive functioning into individual and social domains is reasonable from a cultural perspective given that both Eastern and Western cultures prioritize both domains. For example, regarding the importance of an individual or private domain, Hasebe, Nucci, and Nucci (2004) suggested that "control over a zone of privacy and personal discretion is a psychological need that transcends the individual's specific cultural context" (p. 824). Regarding the value of the social domain, Chen, Wang and Wang (2009) cautioned that "children who prefer solitude and intentionally stay away from the group are often regarded as anti-collective and experience social problems in group-oriented cultures" (p. 1500). Thus, it is reasonable to expect that Chinese adolescents attach importance to both their social interaction with peers and adults and their privacy and personal life.

In sum, from theoretical, empirical, and cultural perspectives, it is logical to investigate positive functioning in both the individual and social domains. Although all theories and frameworks would acknowledge that the two domains are not fully independent, most approaches consider the two domains unique enough to warrant independent study.

One possible starting point for the investigation of Chinese adolescents' positive functioning is Barber's (2005) model of adolescent positive psychosocial functioning.

Even though it was developed based on research among US adolescents, it is a reasonable framework to begin with because the model appears to be relevant to self and social domains. Barber (2005) structured adolescent positive psychosocial functioning into *intrapersonal* functioning and *interpersonal* functioning to reflect basic tasks of adolescent development, including development of internal states (e.g., awareness of self and others) and social behavior (e.g., to learn to interact competently with key social actors). Thus, *intrapersonal* functioning was meant to index internal states, and was measured by self-esteem, perspective taking and empathy. The *interpersonal* domain of positive functioning was meant to cover actual social interactions with key people, and was accordingly measured by the sub-dimensions of social initiative, peer connection, and communication with mother and father.

Although positive functioning among Chinese adolescents has seldom been studied, there is a small amount of empirical research that has investigated some of the specific constructs from both domains of positive functioning that helps justify the usage of the framework in the current study. Specifically, these include self-esteem and empathy (intrapersonal) and social initiative and peer connection (interpersonal). After briefly discussing the general constructs, the findings specific to studies in China will be reviewed below.

The Intrapersonal Domain of Positive Functioning

Self-esteem

Self-esteem is the evaluative component of one's self-development (Shaffer, 2004). It extends beyond self-concept and has to do with adolescents' satisfaction with

themselves, and has been the most frequently investigated aspect of self-development (Bush et al, 2002). Because adolescence is viewed as the most critical period for self-development, researchers have regarded self-esteem as one of the most important psychosocial functions during adolescence, and note that it is considered important to a wide range of effective human behaviors (Bednar & Peterson, 1995).

Rosenberg (1979, 1989) considered self-esteem as fundamental to self-concept development and important in predicting adolescent future psychological functioning. His scale of global self-esteem has been one of the most widely used measures and it has been validated across many cultures (Rosenberg, 1965; Schmitt & Allik, 2005), including China (Cheng & Hamid, 1995).

The human need for self-esteem has been considered salient across the world, including in both individualistic and collectivistic cultures (e.g. China). In Chinese culture, self-esteem was discussed as early as two thousand years ago by Confucius (Morris, 1994). While the collectivist nature of the Chinese culture might suggest less importance on the self than on others (Markus & Kitayama, 1991), the culture has become less group-oriented and more person-oriented in the context of heightened communication between China and Western world (Morris, 1994). For example, studies of young people in Hong Kong have shown that Chinese in younger generations ask for more freedom, independence and individuality (Lau, 1996). Further, self-esteem has been found to be associated with other important aspects of psychosocial development of Chinese adolescents (e.g. life satisfaction, Chen, Cheung, Bond, & Leung, 2006).

In sum, because of its general relevance to human functioning and the evolving salience of self-appraisals in Chinese culture in particular, it is appropriate to include self-esteem in a model of Chinese adolescent positive development.

Empathy

Empathy refers to an affective awareness that is derived from the comprehension of another person's emotional state (Eisenberg, 2007). In other words, empathy is an individual's awareness of another's feelings. The development of empathy reflects healthy individual growth and it is fundamental to moral reasoning, prosocial behaviors, and social competence. For example, Eisenberg (2007) suggested that empathy-related responses could increase adolescents' tendency to treat others with respect and solve conflict in a positive manner and further contribute to youth's psychological well-being. Early studies have found that the relation between empathy and altruism was only modest for preschoolers and lower grade-school students, but stronger for adolescents and adults (Underwood & Moore, 1982). As Eisenberg and colleagues (1998) suggested, the age trend was attributed to the development of social-cognitive abilities of children, their regulation of negative emotionality and previous personal distress to respond sympathetically (Shaffer, 2004).

In studies in China, children's empathy has been related to more helping and prosocial behaviors (Cen, Wang, & Li, 2004) and less bullying behaviors (Du & Feng, 2005). Specifically among Chinese children aged from 6 to 12, those over 8 years old showed stronger empathic responses to situational stories than those in the lower ages (Cen et al., 2004). Otherwise, the training of empathy capability in Chinese elementary

school students was found to effectively decrease children's bully behaviors and increase helping behaviors (Du et al., 2005).

In sum, despite an absence of attention to empathy among adolescents, theory and some literature have demonstrated the salience of empathy to positive functioning in Chinese children. It is therefore appropriate to include it in a model of Chinese adolescent positive development.

The Interpersonal Domain of Positive Functioning

Social Initiative

Social initiative refers to the extent to which youth initiate social interactions outside of the family context (Barber & Erickson, 2001). The capability of social initiative is a core element of positive adolescent development (Larson, 2000). As children experience the transition from childhood to adolescence, they are exposed to a broader range of social interactions outside of their homes making social skills increasingly important.

Social initiative is especially important to include in a model of positive adolescent functioning in China because of the increased attention to social development during the last decade in China. Unlike findings from Western societies that shyness is associated with peer rejection, early studies in China found that the shyness-sensitivity (characterized as social withdrawal and sensitivity) of Chinese children was positively associated with positive peer relationships and school competence (e.g. Chen, Rubin, & Sun, 1992). However, given the rapid social and economic changes in China (including the rise of unemployment and corresponding increase in social competition), shyness no

longer appears to serve an appropriate function for Chinese adolescents. Rather, recent findings have shown that shyness is associated with social and psychological problems in Chinese elementary school students, and that it is considered incompetent by teachers and rejected by peers, especially in urban areas (Chen, Wang, & Wang, 2009).

In addition, social competence has been found to be related to other areas of Chinese adolescent development. For example, Chen and colleagues (2000) found that urban 6th graders' sociable functions were negatively related to their internalizing and externalizing adjustment. Chen and colleagues (2005) further indicated that the sociability of early Chinese adolescents was associated with peer acceptance and teacher-rated competence. Therefore, due to the importance of social competence to Chinese adolescent development in current Chinese society, social initiative will be included in the model of positive adolescent functioning.

Peer Connection

Defined as the acceptance and closeness of interaction between people of the same age, peer connection is another significant facet of interpersonal positive functioning. Because adolescents spend increasing amount of time with their peers (Berndt, 1982), peer relations have been considered fundamental to future social development. Peers serve as an essential source of social support, and having positive peer relations is one of the most important indicators of adolescent development in China (Zhang, 1999). Specifically, it has been found to be related to social functioning as well as academic achievement (Wang & Chen, 2000; Yang, Zheng, Chen, Chang, & He, 2003).

Previous studies have typically focused on peer acceptance as an important indicator of peer relationships. However, according to Bukowski and Hoza (1999), peer relations also included a dyadic, bilateral, and mutual liking component between two close individuals called friendship. Relatively fewer studies have examined adolescent friendships, even though research has found that friendship and peer acceptance have distinctive effects on adolescent development (e.g. loneliness, Park & Asher, 1993; Zou, Zhou, & Zhou, 1998). Additionally, studies have found that having friendships buffers Chinese youth from negative behaviors, such as aggression (Xu, Farver, Schwartz, & Chang, 2003; Xu & Zhang, 2008). Accordingly, the present study focused on friend connection.

The Institutional Domain of Positive Functioning (Academic Performance)

While the intrapersonal and interpersonal domains of functioning are important to positive functioning, they are not adequate in representing the essential domains of positive functioning for Chinese adolescents. One further important aspect would be academic achievement given the particularly strong emphasis placed on it in Chinese culture. With the limited educational opportunities available in China, intense academic competition starts as early as kindergarten. Success in school work is directly related to a high level of education, which may further lead to high socioeconomic status and future success (Chen, Chen, et al., 2000; Chen, Huang, Chang, Wang & Li, 2010; Chen, Rubin, & Li, 1999; Wang & Chen, 2000).

Given these cultural conditions, it is clear that academic achievement plays a central role in adolescent psychosocial adjustment. In fact, performance in school is more

highly emphasized than other types of psychosocial functioning, and the pressure to achieve high scores has been found to be the most salient challenge for Chinese adolescents (Chen, Chen, et al., 2000). Further, academic achievement has been found to be highly related to social competence, such as peer acceptance and depression (Chen, Kaspar, & Noh, 2000). Specifically, high academic achievers were more likely to be accepted by their peers and classmates and less likely to be depressed, while lower achievers were more likely to be depressed and rejected by their peers (Chen, Rubin, & Li, 1995; Chen, Rubin, & Li, 1997; Wang & Chen, 2000).

Because of these cultural prerogatives and empirical findings, it is important to expand Barber's framework for positive adolescent functioning by including academic achievement. Since it refers to functioning in a formal social institution (education), the framework will be expanded to include a domain of *positive institutional functioning* to make it more culturally adequate.

Summary

In summary, in conceptualizing about the nature of positive functioning for Chinese adolescents, a multi-domain model was identified. First, it consisted of a classic division between individual and social functioning that is supported by theory, empirical practice, Chinese cultural priorities, and a recently advanced conceptual framework for positive development. Selected sub-dimensions of that framework (self-esteem and empathy as intrapersonal functioning; social initiative and peer connection as interpersonal functioning) were shown to be relevant to Chinese adolescents. Second, the framework was expanded to include a domain of institutional functioning to acknowledge

the high value placed on academic performance in Chinese culture. The full framework is depicted in Figure 1.

Predicting Chinese Adolescents' Positive Functioning

In efforts to improve the understanding of Chinese adolescent development, some attention has been paid over the decades to significant socializing factors, such as parenting. Although there is substantial literature on parenting in Chinese society, the available research has two basic limitations. First, few studies have investigated the impact of parenting on adolescents' positive functioning (in favor of the traditional deficit model of problem behaviors). Second, most of work has not tested multivariate models that incorporate multiple dimensions of parenting and adolescent outcomes. It has therefore not allowed for any specificity of parenting effects to be observed. The current study sought to address both of these limitations. The review below begins with a general review of parenting, followed by summaries of literature relevant to predicting adolescent positive functioning from parenting. Finally, the hypothesized multivariate model is described.

General Overview of Parenting

Because of the importance of parents to the socialization process, the study of patterns of parenting has a long empirical history (see Barber et al., 2005 for a recent review). One of the most prominent approaches to the study of parenting has been the typological method, wherein many dimensions of parenting are clustered into general types or patterns. Baumrind's extensive investigation of parenting exemplifies this parenting typology approach (Baumrind, 1971, 1991). She suggested four typologies:

authoritative (controlling and flexible), authoritarian (restrictive and punitive), permissive (lax and accepting) and disengaged (unsupportive and extremely lax). These four types of parenting were later clustered into two orthogonal dimensions "responsiveness" (support, acceptance and affection that parents show to their children) and "demandingness" (the monitoring, regulation and supervision that parents undertake of their children) (Baumrind, 1971, 1991; Maccoby & Martin, 1983).

Many studies on Chinese parenting have employed Baumrind's typological approach (e.g. Chen, Dong, et al., 1997; Xu, Farver, Zhang, Zeng, Yu, & Cai, 2005; Zhou, Eisenberg, Wang, & Reiser, 2004; etc.). However, Chao (1994, 2001) has argued that these parenting typologies do not represent Chinese parenting behaviors adequately. This is particularly true regarding authoritarian parenting. Whereas in Western cultures, authoritarian parenting has been found to be consistently negatively associated with development (Steinberg, Mounts, Lamborn, & Dorbusch, 1991), in Asian samples has been shown to actually be predictive of academic achievement (Steinberg, 2001). Instead, scholars have recommended that key parenting dimensions not be combined into what may be culturally specific groupings, but rather attend more explicitly to the key dimensions that make up the typologies (Lim & Lim, 2003). This "unpacking" of parenting typologies is consistent with a trend in studies in the U.S. as well. Thus, beginning around 1990, Steinberg and others made a similar recommendation for more specificity in understanding the effects of parenting (Barber, 1996; Gray & Steinberg, 1999; Steinberg, 1990; Steinberg, Elmen & Mounts, 1989; etc.) In so doing, scholars

have reverted to an explicit study of three key dimensions of parenting that were popularized in the 1960s.

In that grounding work, Schaefer (1965a, 1965b) found evidence for three dimensions of parenting: (1) acceptance versus rejection, (b) psychological autonomy versus psychological control, and (c) firm control versus lax control. Later, Steinberg (1990) and Barber (1996) confirmed the distinctiveness of parental psychological control and firm (behavioral) control. In substantial cross-cultural comparisons, that work has shown evidence of some specialized effects of these three central dimensions of parenting. Specifically, in multivariate studies comparing adolescents in over a dozen cultures, parental support has been found to be primarily related to social competence (e.g., social initiative) and lower level of depression; appropriate behavioral control was uniquely related to lower levels of antisocial behavior among adolescents; and psychological control was associated with both internalizing and externalizing problems (Barber et al., 2005; Barber, Xia, Olsen, McNeely, & Bose., in press).

The Salience of Basic Parenting Dimensions to Chinese Culture

While support exhibited by Chinese parents appears to be less open and free and parental control appears to be more restrictive than parenting in Western culture (Chiu, 1987; Wu, Robinson, Yang, Olsen, et al., 2002), the three key parenting dimensions have been shown to have significant relationships with measures of Chinese adolescents' functioning. Research has found, for example, that support or warmth from Chinese parents was linked with child and adolescent positive functioning such as emotional well-being, self-esteem, and social initiative (Barber, et al. 2005; Scott & Scott, 1998), and

less negative functioning such as depression and antisocial behaviors (Barber, et al. 2005).

On the other hand, the role of parental control is less straightforward. Some have speculated, for example, that parental psychological control might be more acceptable in Eastern societies because of the interdependent nature of those cultures, as well as the emphasis on respect to parents and the older generation in Eastern societies (Pomerantz & Wang, 2009; Wang, Pomerantz, & Chen, 2007). However, a recent review by Pomerantz and Wang (2009) found support for the negative impact of psychological control in China. For example, Qin, Pomerantz, and Wang (2009) found that parents' decision-making over children's personal issues was equally negatively related to emotional functioning in both China and the US. Some studies have also found that psychological control from Chinese parents has positive associations with adolescent hopelessness, depression and antisocial behaviors, and negative relations with mastery, life satisfaction, emotional functioning and self-esteem (Barber, et al. 2005; Olsen, Yang, Hart, et al., 2002; Shek, 2006a, 2006 b, 2007; Wang et al., 2007).

Concerning parental behavioral control, generally research has indicated that it is predictive of lower behavioral problems in China as well as in the US (e.g. Barber et al., 2005; Li, Fang, Stanton, Su, & Wu, 2003). As examples, behavioral control exhibited by Chinese parents was found to be negatively associated with antisocial behaviors but positively related to family cohesion (Lau & Cheung, 1987) and academic functioning (Li et al., 2003; Wang et al., , 2007).

In sum, there appears to be evidence that the three central dimensions of parenting studied in the literatures are also valid among Chinese families. However, few of those studies have measured all three parenting dimensions simultaneously. Also, in much of the work on Chinese parenting, a clear distinction has not been made between parental psychological and behavioral control. Studying the three parenting dimensions simultaneously would be more comprehensive and at the same time it would allow for the detection of any specialized associations between the individual parenting dimensions and distinct domains of positive functioning. Accordingly, the present study will include these three measures of parenting.

Parenting and Chinese Adolescent Positive Functioning

As noted previously, a main limitation of the extant literature on parenting in China is the predominant focus on its associations with problematic functioning. No studies have attempted to systematically examine the relationships between parenting and a comprehensive framework for positive development among Chinese adolescents. However, there are some studies that have addressed various aspects of positive functioning independently as they are predicted by parenting. These studies are reviewed below, organized according to the sub-dimensions of positive functioning that are the focus of the current study.

Parenting and Adolescent Self-Esteem

Much research in Western cultures has documented that parenting is significantly related to adolescent self-esteem, in that adolescents with high self-esteem are more likely to have parents who were supportive and warm, set clear behavioral standards, and

offered autonomy to their children (Coppersmith, 1967; Isberg, Hauser, Jacobson, Powers, Noam, et al., 1989; Shaffer, 2004). Very similar findings have been made in studies of parent socialization of Chinese adolescents' self-esteem. These studies include some that have measured parenting typologies (e.g the association between democratic parenting and higher adolescent self-esteem in Taiwan; Scott, Scott, & McCabe's, 1991) and those that have measured dimensions of parenting similar to those used in the current study.

In terms of these studies that have taken the dimensional approach, early studies, (especially those published in English), typically focused on adolescents in Hong Kong. For example, Cheung and Lau (1985) found that support and functional control from parents were related to higher self-esteem of Hong Kong adolescents. Later, Lau and Cheung (1987) obtained similar results in finding that parents' firm control and independence-granting were positively related to the self-esteem of Hong Kong adolescents. Additionally, some studies have also shown that parental psychological control negatively predicted Hong Kong adolescents' self-esteem (Shek, 2006a, 2007).

Based on the early work among Hong Kong adolescents, Bush and colleagues (2002) investigated adolescents' self-esteem in Mainland China and found that parental reasoning, monitoring, and autonomy-granting behaviors were positive predictors of self-esteem, whereas punitiveness was a negative predictor. These results are similar to those from studies published in Chinese journals. For example, Zhang and Lin (1998) found that higher self-esteem of Chinese middle school students was related to parental

understanding and warmth, whereas lower self-esteem was predicted by parental overprotection, punishment, and rejection.

In general, similar with studies in Western cultures, studies of parenting in Chinese families have shown that parental support, behavioral control and autonomy-granting is positively related to adolescent self-esteem, and that negative parenting behaviors such as psychological control is negatively related to self-esteem, Since especially few studies have been conducted on the self-esteem of adolescents in Mainland China, the present study will contribute to confirming the findings of previous studies (e.g., those conducted on adolescents in Hong Kong).

Parenting and Adolescent Empathy

The study of the effects of parenting on child empathy has concentrated mostly on children as young as toddlers. Theoretically, parents promote their children's empathy-related responses by modeling empathic concern and affective child-rearing behaviors that encourage children's understanding of the harmful results of misfortune to other people (Shaffer, 2004). Even though the impact of the family context on adolescent empathy has been theorized by scholars (Shaffer, 2004), relatively little empirical evidence is available, especially in China.

One of the parenting dimensions that has received some focus is parental warmth or support. Research from different Western cultures has indicated that parental warmth and support were related to adolescents' higher empathy and perspective-taking (Zhou, Eisenberg, Losoya, Fabes, et al., 2002; Soenens, Duriez, & Goossens, 2007) as was open communication with both parents (Heller, Robinson, Henry, & Plunkett, 2006).

Otherwise, adolescents' empathy development has been related negatively to such parenting variables as permissiveness (Schaffer, Clark, & Jeglic, 2009), parental power assertiveness (Krevan & Gibbs, 1996), parental strictness and guilty control (Strayer & Robert, 2004), and negative parental expressivity (Eisenberg, 2007).

Regarding empathy development among Chinese adolescents, no specific studies appear to be available. However, some studies have shown that parental psychological control negatively predicted adolescents' emotional functioning (such as positive emotion and life satisfaction; Wang, et al., 2007), and that parental warmth was positively related to adolescents' general affect (Yang, Wang, Li, Teng, et al., 2008). To the degree that empathy reflects similar emotional states, it is possible that it would be predicted similarly by parenting.

Parenting and Adolescent Social Initiative

There are well-documented, positive associations between parental supportive behaviors and the social development of adolescents in the Western cultures (e.g. Barber & Erickson, 2001). In support of this linkage, in comparative studies of over a dozen cultures, including China, Barber and colleagues have found consistent associations between parental support and social initiative (Barber et al., 2005; Barber et al., in press). Studies specifically on Chinese children have also shown positive relations between parental warmth and the social competence of younger children (Liu, Chen, Zheng, & Chen, 2009), early adolescents (Chen et al., 2000; Chen, Chang, He, & Liu, 2005) and late adolescents (Stewart, Rao, Bond, & McBride-Change, 1998).

In contrast to parental support, parental behavioral control and psychological control have not been found to consistently predict social initiative, including for Chinese adolescents (Barber, et al., 2005; Barber et al, in press). Stewart and colleagues (1998), on the other hand, found negative associations between parental restrictive control and late adolescent girls' interpersonal harmony in China. Chen and Dong (1997) found that authoritarian parenting was negatively associated, while authoritative parenting was positively associated, with Chinese elementary students' sociability. Without much work on the role of parental psychological control and behavioral control in predicting social competence in Chinese children or adolescents, it remains unclear if and to what degree either form of control is salient.

Parenting and Adolescent Peer Relations

Although parents can monitor and coach their adolescent's peer relationship directly, parents can also impact adolescents' sociability through their care-giving and disciplinary behaviors (Parke & Bhavnagri, 1989). Studies in the US have found associations between parenting dimensions and adolescent peer relations. For example, Fuligni and Eccles (1993) found that parents who were assertive, restrictive, and provided few decision-making opportunities usually had adolescents with higher peer orientation. Clark and Ladd (2000) demonstrated that the connectedness of parent-child relations was positively related to number of friendship and peer acceptance. In addition, Brown, Mounts, Lamborn and Steinberg (1993) found that parents could impact high-school adolescents' peer groups indirectly by parenting such as monitoring, engagement, and joint decision-making.

In terms of parenting and Chinese adolescent peer relations, Chen and Dong (1997) found that authoritarian parenting was negatively associated but that authoritative parenting was positively associated with Chinese elementary school students' peer acceptance. Studies on younger Chinese children have also found that maternal punishment and restrictiveness were negatively associated with child peer nomination (Wan, Wang, & Wang, 2001). Although few in number, such studies suggest that positive parenting behaviors are related to better peer and friend relations, and negative parenting behaviors undermine peer relations for Chinese adolescents.

Parenting and Adolescent Academic Achievement

As indicated earlier, studies of parenting typologies have shown that authoritative parenting benefits Chinese adolescent development in almost all areas except school performance (Steinberg, 2001). Instead, the highest-achieving Chinese students have been found to have the least authoritative and highest authoritarian parenting (Leung, Lau, & Lam, 1998).

As for empirical studies of parenting dimensions and academic achievement in China, Stolz and colleagues (2004) conducted research on parenting and adolescent academic achievement in 10 countries and or cultural groups, including China, and found that both paternal and maternal support and behavioral control were positively related to Chinese adolescent academic achievement. Paternal psychological control was negatively related to academic achievement in the Chinese sub-sample. Similarly, Chen and colleagues (2000, 2005) found that paternal support or warmth predicted higher academic achievement in Chinese early adolescents. Li and colleagues (2003) found that parental

monitoring was associated with enhanced education achievement of Chinese middle school students. Wang and colleagues (2007) also found that parental behavioral control positively predicted later adolescents' academic functioning.

Hence, based on the existing studies of Chinese adolescents, all three of the main parenting dimensions have been shown to have significant associations with the academic achievement of Chinese adolescents, with academic achievement positively predicted by parental support and behavioral control and negatively predicted by parental psychological control.

Summary

In sum, although there has not been a large amount of research using Chinese samples on associations between parenting and adolescent positive functioning, there is evidence that supports the relevance of parenting dimensions to one or more aspects of positive functioning. Specifically, parental support has been found to be positively related to nearly all of the positive functioning constructs; parental psychological control has been found to be associated particularly with self-development; and parental behavioral control has been found to be positively related to academic achievement.

However, to more precisely understand the effects of parenting on the positive functioning of Chinese adolescents, it is necessary to conceive, measure, and test a multivariate model that simultaneously includes different dimensions of parenting and different domains of positive functioning. The model constructed for the current study is discussed next.

A Multivariate Model of Chinese Adolescent Positive Functioning and Parenting

One limitation of the available parenting studies reviewed above is that few studies have employed multivariate models when testing for the effects of parenting. The problem is that parenting dimensions are typically significantly correlated with each other, as are domains of outcomes (positive functioning, in the present case). If this covariance is not accounted for, it is not possible to detect if and to what degree there are any specialized associations among parenting and positive development domains. Without accounting for the covariation, it is possible to find that most any parenting variable is related to one or more outcome domains. This has been the case in parenting research in general (Barber et al., 2005) and it is also evident in the limited literature available among Chinese families. Since the purpose of the current study is to gain some precision as to if and how distinct parenting dimensions might be associated with specific domains of positive functioning, it is necessary to conceive of a multivariate model and to hypothesize specific effects.

Accordingly, a multivariate framework was constructed to simultaneously include the three dimensions of parenting and the three domains of positive functioning. Further, a set of specialized hypotheses are advanced that propose that each parenting dimension is specifically related to one of the three domains of adolescents' positive functioning. As Barber and colleagues (2005) reasoned when advancing a similar model that focused on different outcomes, such purely specialized models are simplistic. For example, it is entirely possible theoretically that a dimension of parenting is related to more than one type of outcome. However, beginning with a fully specialized model forces the

researcher's attention to any potentially specific associations among variables in the model when developing theoretically relevant hypotheses. The model is then tested for and systematically revised.

The fully specialized model is depicted in Figure 2. It specifies three specialized associations, between: (1) adolescents' intrapersonal functioning and parental psychological control; (2) adolescents' interpersonal functioning and parental support; and (3) adolescents' academic achievement and parental behavioral control. Following is a justification of the hypotheses.

Parental Support and Adolescents' Interpersonal Functioning

Extensive literature has documented the ubiquitous associations between parental support and different forms of adolescent development. As reviewed in the section above, empirical evidence has shown that parental support is positively related to all of the positive functioning variables for Chinese adolescents (e.g. Barber et al, 2005; Bush et al, 2002; Soenens et al, 2007; Stolz et al, 2004). Because of the collectivistic nature of Chinese culture, Chinese families emphasize the emotional connections among family members (Ho, 1986), and the warmth that Chinese parents show to their children is an important way to keep family harmony. It is hypothesized that such parental support would be specifically predictive (positively) of adolescents' interpersonal functioning.

One important justification for this specific association between social competence and parental support comes from attachment theory (e.g. Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1988). This work shows that the distinction between securely attached children and non-securely attached children is explained in part on how

much support children get from their parents. Securely attached children, who have experienced greater parental support than non-securely attached children, have been found to be more sociable, more likely to approach others, and have more friends (Lamb & Nash, 1989). In essence, according to the theory, the attachment relationship provides a working model that is then carried over by the child into her or his other relationships (Sroufe, 1988). Children, having learned the value of supportive interactions with the parents, utilize the same method of positive, supportive behavior in their relationships with others outside the family. Attachment theory has been tested across cultures, including Asian culture, and evidence suggests that secure attachment is the predominant attachment configuration across cultures and that parents from diverse sociocultural contexts view attachment security similarly (Van IJzendoorn, Bakermans-Kranenburg, & Sagi-Schwartz, 2006).

Similarly, social learning theory (Bandura, 1977) could also serve as an explanation for the positive social consequences of parental support. The theory suggests that children learn through observing others' behaviors and the outcomes of these behaviors. As parents smile, praise, and otherwise communicate care, children and adolescents likely internalize these behaviors as a general social interaction model and show these behaviors when they interact with peers or adults outside of their families.

Empirically, Barber and colleagues (2005) found that parental support was significantly predictive of social initiative in the Chinese sub-sample of the CANP (the same data studied here), as well as all of the other samples in the data set. Importantly, the finding was made in a multivariate model similar to the one studied here that

controlled for the effects of both behavioral and psychological control. In the current study, however, the measurement of positive interpersonal functioning went beyond that earlier work. Specifically, in the current study the measure of social initiative was limited to interactions with adults outside the home so as not to overlap with the measure of peer connection, and together, social initiative and peer connection were used as first order indicators of the second order construct of interpersonal functioning.

Parental Psychological Control and Adolescents' Intrapersonal Functioning

Parental psychological control has been distinguished from other forms of parental control, regulation, or structure in that it represents intrusion into or control of the psychological world of the child (Barber, 1996; Barber, Olsen, & Shagle, 1994). Whether such control is exercised strategically on the part of the parent to change a child (e.g., via love withdrawal, guilt induction, coercion, etc) or whether it is reflects unhealthy boundaries or interaction styles between parents and children, theory and evidence suggests that the prime impact of such control is disturbance of the self system of the child (e.g., self-esteem, self-worth, self-efficacy, etc.). Further, there is substantial empirical evidence that documents the association between parental psychological control and adolescent self-processes across many different cultures (see Barber & Harmon, 2002 and Barber & Xia, in press, for reviews of parental psychological control).

Theoretically, this association can be explained in a variety of ways. One is discussed by social domain theorists who bridge psychological control and control of an adolescent's personal domain. In social domain theory (Smetana, 2006) , the personal domain (one's private life such as diary contents and preference and choice of friends) is

central to psychological development and the formation of self-identity. Parental control or decision making over personal issues violates the sanctity of the personal domain, and is recommend therefore to be considered a type of psychological control (Nucci, Hasebe, & Lins-Dyer, 2005; Smetana, Crean, & Compione-Barr, 2005; Smetana & Daddis, 2002).

Another explanation of the consequence of psychological control to intrapersonal functioning can be found in Self-Determination Theory (STD; Ryan, Deci, Grolnick, & La Guardia, 2006). Recently, parenting scholars have applied the theory directly to the study of parental psychological control of adolescents (Soenens & Vansteenkiste, 2010). According to the theory, parents who engage in psychologically controlling strategies (particularly, love withdrawal) intentionally coerce their children to suppress their feelings and force themselves to conform to parental demands. When facing parental psychological control over time, children would internalize the pressure to change themselves, which in turn impedes children's volitional functioning. Such constrained volition, according to the theory, violates the cardinal principle of autonomy or self-determination. The consequence is that in conforming to their parents' requirement to change out of a desire to avoid the loss of love, guilt and shame, young people do not learn to value their own self or identity (Assor, Roth, & Deci, 2004).

Although there is not much empirical evidence from studies on Chinese adolescents relative to the association between parental psychological control and adolescent self-process, the existing literature is nevertheless suggestive of the effect (e.g., the association between psychological control and internalized problems: Barber et al, 2005; Wang et al, 2007; Pomerantz & Wang, 2009). However, Pomerantz and Wang

(2009) have suggested that because of the different cultural orientation towards independence and interdependence between Western and Chinese cultures, the negative impact of parental psychological control might be explained differently in the two cultures. While the violation of adolescents' autonomy and personal domain appears to be adequate to explain the consequences of psychological control in Western cultures, the fear of being rejected by their parents might be the greater impact of psychological control in the interdependent society of China. Thus, the explanation from SDT might be more appropriate for Chinese adolescents since it more clearly implicates the quality of the relationship between parent and adolescents.

Regardless of the mechanism, it is apparent that psychological control has negative consequences for the self in both Western and Chinese cultures. Accordingly, in the present study parental psychological control was hypothesized to be specifically (and negatively) related to adolescents' intrapersonal functioning.

Parental Behavioral Control and Adolescents' Institutional Functioning

Unlike the relative consistency with which conceptualizations of parental support and psychological control are made, many labels have been used to define parental behavioral control. These include parental monitoring (e.g. Kerr, Stattin, & Burk, 2010), supervision (e.g. Coley & Hoffman, 1996), and structure (e.g. Grolnick & Pomerantz, 2009), among others. Collectively, these and similar variables suggest that the essence of parental behavioral control is the establishment of reasonable and appropriate regulation over children and adolescents' behavior, the effect of which is to promote self-regulation, protect from deviant peer influences, and enhance engagement into socially approved

behaviors (e.g. Barber et al., 1994; Barber & Xia, in press; Kerr & Stattin, 2000; Li et al., 2003; Wang et al., 2007).

When considered in a multivariate model with different dimensions of parenting and positive functioning, it is hypothesized that parental behavioral control would specifically impact adolescents' academic behaviors. The link could be explained especially by the importance of academic achievement in Chinese culture. As indicated previously, China has a long tradition of emphasis on education. Chinese adolescents spend most of their time on academic activities for the purpose of securing one of limited number of slots for higher education, and otherwise to become successful in society. As the most important socializers of adolescents, Chinese parents are understandably concerned about their adolescents' academic performance and expect them to get good grades, to go to good universities, and to become successful in the future and honor their families (Lau, 1996). In order to facilitate the accomplishment of these goals, parents may rely on behavioral control to assure their child's availability to study.

In Chinese culture, Chinese parents do not consider their children to be mature enough to understand and make decisions for their best interest. Further, cultural beliefs suggest that achievement is more dependent on the efforts children make for study than on children's inborn intelligence (Stevenson & Lee, 1990). Given these cultural positions, good parenting includes taking responsibility to regulate their children's behaviors and academic performance (Wu, Robinson, Yang, Hart, et al, 2002).

Chinese parents have been found, for example, to be more involved in school studies than their Western counterparts, via parenting behaviors such as setting limits to

preserve and ensure study time, hiring tutors to help with homework, assigning additionalhomework problems, and offering supplemental courses outside of school (Chao, 1994, 1996, 2001). Further, studies have documented the positive relationships between Chinese parental behavioral control and adolescents' academic achievement (e.g. Li et al., 2003; Wang et al, 2007) after controlling for other dimensions of parenting and child functioning.

Therefore, of the three variables being considered in the current study, parental behavioral control is the most likely to have specialized predictive power for adolescents' academic performance.

Summary of Chapter II

The above literature review has discussed previous studies on Chinese adolescents' positive psychosocial functioning, Chinese parenting, and the relationships between them. It was recommended that scholars should expand from the traditional deficit-focused perspective on Chinese adolescents to include more work that investigates positive functioning. Since there has not been a systematic study of the positive development of Chinese adolescents, it is necessary to begin any such investigation by proposing a framework to assess its structure. To meet this need, the present study proposed a second-order conceptual framework that included theoretically relevant domains and sub-domains of positive functioning (see Figure 1).

Next, relevant theory and research regarding the impact of parenting was examined, focusing particularly on central dimensions of parenting that have been found to be relevant in both Eastern and Western cultures: parental support, psychological

control, and behavioral control. In studies among Chinese children and youths, previous studies have focused mostly on associations between parenting and adolescent negative outcomes, with little work assessing the impact of parenting on positive functioning of adolescents. Specifically all three parenting dimensions have been shown to have significant associations between one or more of the positive functioning constructs investigated in the present study.

To detect the specific effect of parenting on positive functioning, a multivariate model (See Figure 2) was proposed that included three key associations:

- Parental support would be specifically positively related to adolescent interpersonal functioning;
- Parental behavioral control would be specifically positively related to adolescent institutional functioning;
- Parental psychological control would be specifically negatively related to adolescent intrapersonal functioning.

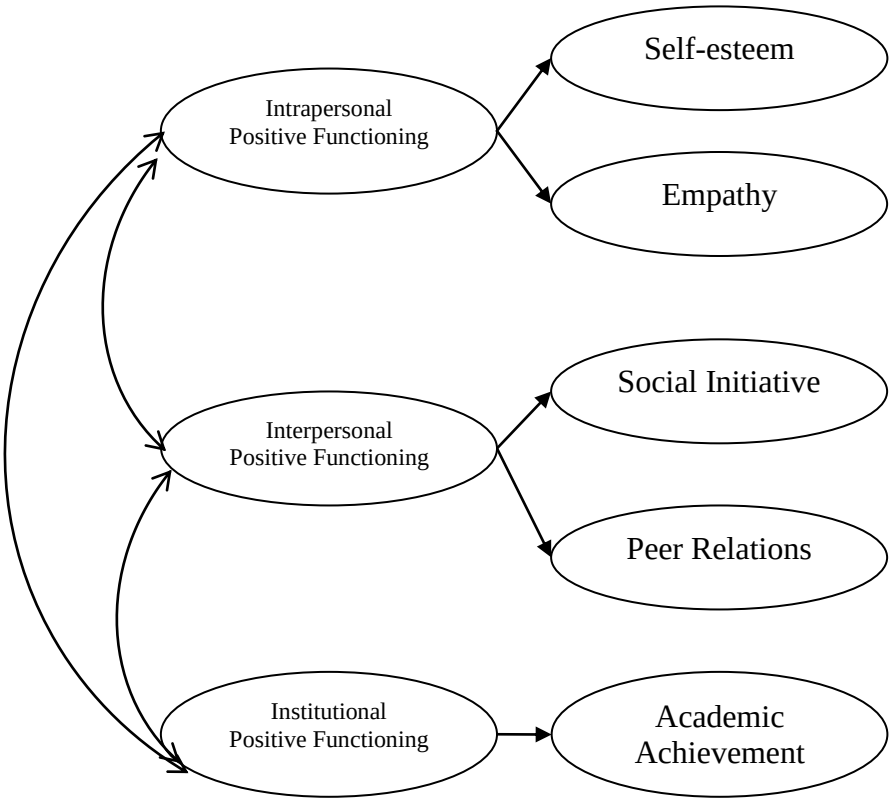


Figure1. Theoretical Model of Chinese Adolescents' Positive Functioning.

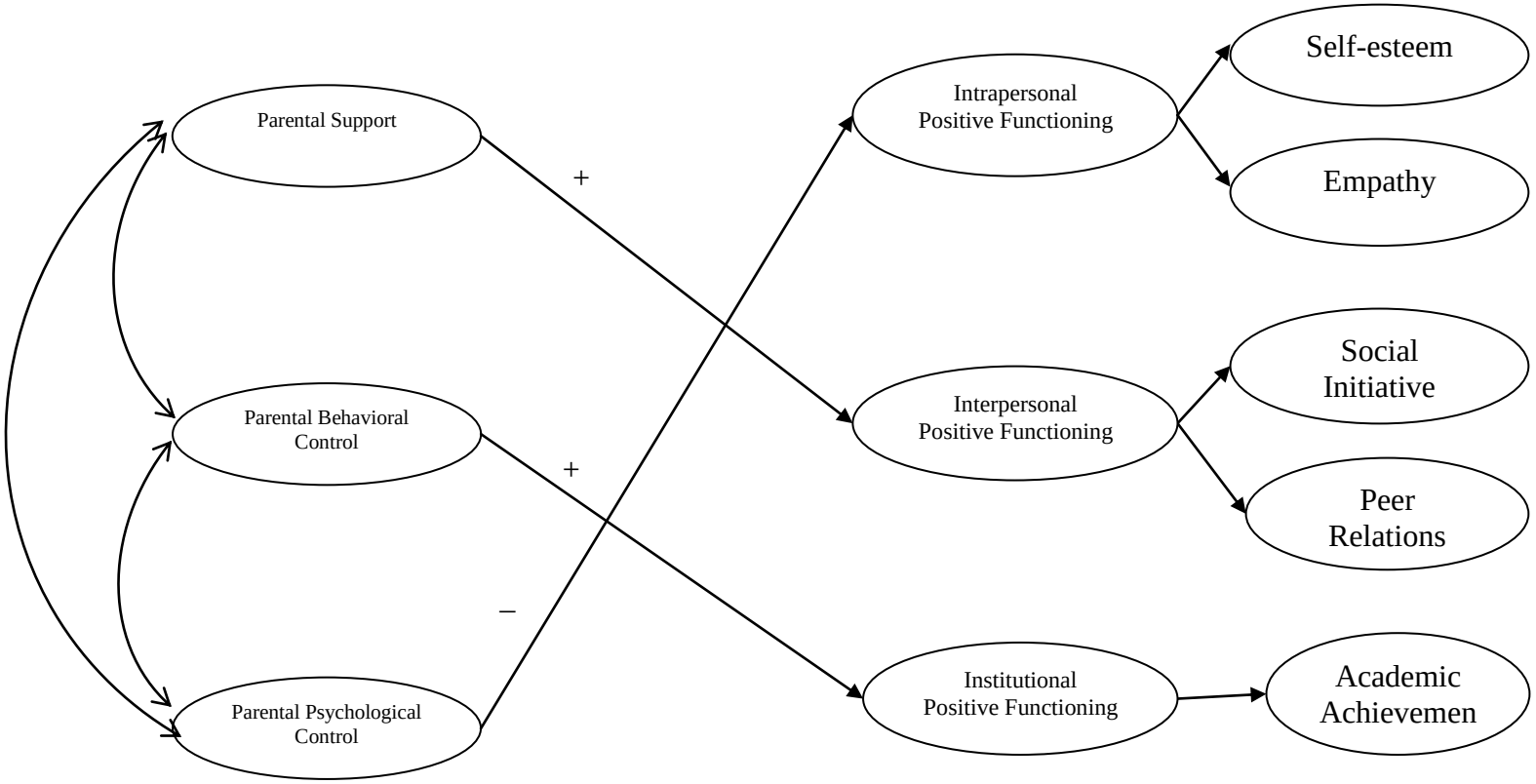


Figure 2. Hypothesized Structural Model of Associations between Parenting and Adolescents' Positive Functioning.

CHAPTER III: METHODOLOGY

Sample

Data for the study come from the Cross-National Adolescence Project (C-NAP), which was conducted in 10 nations or ethnic groups in Africa, Asia, Europe, the Balkans, the Middle East, and North and South America. The C-NAP investigated adolescent development in the significant contexts of home, school, community, and religion (Barber et al, 2005).

The Chinese portion of the C-NAP data was collected in 2002, and included 1,027 adolescents from 12 to 20 years of age (grade 7 through grade 12) in middle schools in Beijing, China. Among them, 453 (44.1%) were boys, 541 (52.7%) were girls and 33 did not specify their gender. The majority of the sample was 14 (*n* = 390, 38%) or 17 years old (*n* = 385, 37.5%). Seven ethnic groups were represented in the sample, with three represented mostly: Han - 87.2%; Man - 5.4%; and Hui - 3.7%. The high proportion of Han in the sample is representative of the overall population of China (Wen, Li, Lu, Song et al., 2004).

Measures

Parental Support

Parental support was measured by the 10-item acceptance subscale of Child Report of Parent Behavior Inventory (CRPBI; Schaefer, 1965). Participants responded to each item for fathers and mothers separately on a 3-point Likert-style scale from *1 = not*

like her (him) to *3 = a lot like her (him)* to assess how well items described their mothers and fathers. The 10-items are:

1. Makes me feel better after talking over my worries with her/him.
2. Smiles at me very often.
3. Is able to make me feel better when I am upset.
4. Enjoys doing things with me.
5. Cheers me up when I am sad.
6. Gives me a lot of care and attention.
7. Makes me feel like the most important person in her/his life.
8. Believes in showing her/his love for me.
9. Often praises me.
10. Is easy to talk to.

Parental Psychological Control

Parental psychological control was measured by the 8-item Psychological Control Scale-Youth Self-Report (PCS-YSR; Barber, 1996). This scale was adapted from an analysis of 10 items in the psychological control/psychological autonomy subscale of the most recent revision of the CRPBI, combined with another set of items written to more adequately tap the hypothesized dimensions of parental psychological control (Barber, 1996). The final 8-item scale kept 3 original items from the CRPBI and includes 5 newly-written items. Participants responded to each item for fathers and mothers separately on a 3-point Likert-style scale from *1 = not like her (him)* to *3 = a lot like her (him)* as to how well items described their mothers and fathers. The 8-items are:

1. Is always trying to change how I feel or think about things.
2. Changes the subject whenever I have something to day.
3. Often interrupts me.
4. Blames me for other family members' problems.
5. Brings up past mistakes when s/he criticizes me.
6. Is less friendly with me if I do not see things her/his way.
7. Will avoid looking at me when I have disappointed her/him.
8. If I have hurt her/his feelings, stop talking to me until I please her/him again.

Parental Behavioral Control

Parental behavioral control was measured by a 5-item scale adapted from a scale often used in family research with adolescents to assess parental monitoring (e.g. Brown, Mounts, Lamborn, & Steinberg, 1993). Although the 5-item scale has been criticized by scholars as measuring only parental "knowledge" of adolescents' activities and behaviors, instead of explicit parental monitoring behaviors (Kerr & Stattin, 2000; Stattin & Kerr, 2000), there are good reasons to consider the measure as reflective, in part at least, of parental behavioral control (Barber et al., 2005; Barber & Xia, in press) as many researchers continue to do. First, in contradiction to the criticism, there is solid theoretical reason to consider "what parents know" as a form of behavioral control (e.g. as in the deterrent role of "psychological presence of the parent" in the mind of adolescence; Hirschi, 1969). Second there is empirical evidence (including in the studies conducted by Stattin and Kerr) that after controlling for various measures of parental control, parental solicitation and adolescent self-disclosure, parental knowledge retained significant

associations with adolescent deviant behavior in a manner consistent with a deterrent effect (e.g. Kerr & Stattin, 2000; Stattin & Kerr; Fletcher, Steinberg & Williams-Wheeler, 2004).

Participants responded to each item for mothers and fathers separately on a 3-point Likert-style scale from *1 = doesn't know* to *3 = knows a lot* as to how much their parents "really know": (1) "where you go at night," (2) "where you are most afternoons after school," (c) "how you spend your money," (d) "what you do with your free time," and (e) "who your friends are."

Adolescent Self-esteem

Adolescent self-esteem was measured by Rosenberg's self-esteem scale (Rosenberg, 1965). Participants responded to each of the 10 items on a 5-point Likert scale from *1 = strongly agree* to *5 = strongly disagree*. The 10 items are:

1. I am able to do things as well as most people.
2. I certainly feel useless at times.
3. At times, I think I am no good at all.
4. On the whole, I am satisfied with myself.
5. I feel I do not have much to be proud of.
6. I wish I could have more respect for myself.
7. I take a positive attitude toward myself.
8. I feel that I have a number of good qualities.
9. All in all, I am inclined to feel that I am a failure.
10. I feel that I'm a person of worth, at least on an equal plane with others.

(Items 1, 4, 7, 8 and 10 will be reverse coded so that higher scores on all items reflect higher self-esteem.)

Adolescent Empathy

Adolescent empathy was measured by a 7-item scale of adolescents' feelings about others adapted from Davis (1983). Participants responded on a 5-point Likert-style scale from *1 = Does not describe me well* to *5 = Describe me very well*. .

1. When I see someone being taken advantage of, I feel kind of protective towards them.
2. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.
3. I often have tender, concerned feelings for people less fortunate than I.
4. I would describe myself as a pretty soft-hearted person.
5. Sometimes I don't feel very sorry for other people when they are having problems.
6. Other people's misfortunes do not usually disturb me a great deal.
7. I am often quite touched by things that I see happen.

(Items 2, 5, and 6 will be reverse coded so that higher scores on all items reflect higher empathy.)

Adolescent Social Initiative

Adolescent social initiative was measured by a 3-item scale adapted from the Monitoring the Future Study (Bachman, Johnston, & O'Malley, 1993). Originally, 13 items were used to measure adolescents' social initiative in interaction with peers and

adults (e.g. Barber & Erickson, 2001; Barber et al., 2005), but after item analysis across many cultures, three items were identified that consistently loaded together as one factor across cultures (Barber, Olsen, Hunter, & Xia, 2011). Such version of the scale is particularly appropriate for the current study because the three retained items index social interaction with *adults*, thereby avoiding an overlap with the other measure of *peer* connection used in the present study. Participants responded on a five-item Likert-style scale from 1 = *never/almost never true* to 5 = *very often/always true*. The 3 items are:

1. I get into conversations with adults (e.g., teachers, staff) at the school.
2. I talk to teachers and staff about things other than class.
3. I am comfortable joking with teacher and staff.

Adolescent Peer Connection

Adolescent peer connection was measured by 7 items assessing how often adolescents connect with their best same-sex friends. Youth rated each item on a 5-point scale from *0 = never* to 4 = *every day*. The 7 items are:

1. How often do you call this friend on the phone?
2. If you needed help with something, how often could you count on this friend to help you?
3. How often do you and this friend go over to each other's houses?
4. How often do you tell this friend things about yourself that you wouldn't tell most kids?
5. How often do you feel like it's hard to get along with this friend?

6. How often do you and this friend go places together, like a movie, skating, shopping, or a sports event?
7. When you do a good job on something, how often does this friend praise or congratulate you?

Adolescent Academic Achievement

Adolescent academic achievement was measured by one item: "In general, how well did you do in school? Would you say your grades were:" Participants responded on a 5-point scale from *1 = well above average* to *5 = well below average*. Self-reported grades have often been found to be an adequate measure of school performance (Dornbusch, Ritter, Leiderman, Roberts, et al., 1987). Because the C-NAP survey was conducted across many cultures that vary in their grading systems, the item did not include specific letter grades as is commonly done in self-reported measures in the US. The item was later recoded so that a higher score reflected higher academic achievement.

Procedure

The C-NAP Chinese data were collected through paper-pencil surveys in participants' classrooms. Surveys were administered in Mandarin and under the supervision and consultation of an on-site, native Chinese researcher. The survey was translated from English into Chinese and back-translated into English to ensure maximum equivalency of the two versions. Also, a native collaborator was consulted on the cultural relevance of the survey questions. No major modification was deemed necessary as a result of this process. Data were collected only from the students who attended class on the day of the survey administration.

Analyses

Different statistical methods were used for the present study. In terms of the test of the framework of positive functioning, the task was to investigate relationships among sets of observed and latent variables. Factor analysis is the appropriate statistical procedure for such tests. Moreover, because a theoretical framework was proposed, Confirmatory Factor Analysis (CFA) was used to test the model (Byrne, 2001).

Regarding the measurement of parenting, previous studies on Chinese parenting have tended to focus mainly on mothering (e.g. Chen et al. 2005). As Stolz and colleagues (2005) indicated, it is important to include both fathering and mothering in the same model in order to capture the impact of parenting. Therefore, the present study analyzed both mothering and fathering as indicators of parenting. The measurement of parenting was also tested with CFA.

Finally, followed by a bivariate correlation analyses among all latent variables, the structural associations between dimensions of parenting and adolescents' positive functioning were tested. Because of the specification of regression structures between parenting and positive functioning, Structural Equation Modeling (SEM) was used to test the hypothesized model and subsequent variations of it (Kline, 2010). All of these analyses were conducted using AMOS (Byrne, 2001).

In terms of the adequacy of the sample size for the analyses, although SEM has been widely used in psychological science, the issue of sample size has not been treated sufficiently to provide useful information for method users (Tanaka, 1987). Bentler and Chou (1987) suggested as low as 5 observations per estimated parameter in SES analyses.

Further, they suggested that “the same model estimated in a small sample may yield such problems as inadequate convergence behavior, boundary or Heywood solutions in which parameters go outside of the permissible range (the classical example being negative variance estimates), inability to impose constraints among parameters, and problems with estimation of standard errors (which may become inappropriately large or very small)” (p. 91). Because the study indicated over 350 parameters in the structural models, the rule is barely met in the study. However, the problems that Benlter and Chou mentioned did not appear in the present study. Therefore, the study still provided precise information.

CHAPTER IV: RESULTS

Four sets of analyses were conducted to examine the hypotheses of this study. Prior to these analyses, various tasks of data preparation were pursued. This section first describes the data preparation, followed by sections on: (1) the measurement of adolescents' positive functioning; (2) the measurement of parenting; (3) correlations between parenting and adolescents' positive functioning; and (4) the structural associations between parenting and adolescents' positive functioning.

Data Preparation

The original dataset was managed to facilitate later data analyses for the study. Among the 1,027 Chinese adolescent participants, 24 (9 males, 12 females, and 3 who did not report gender) did not answer approximately 60% of the items of one or more scales. Therefore, these participants were removed in order to maximize the completeness of data. The final number of participants in the present study was 1,003. All of the items noted in Chapter III that were coded in the reverse direction were recoded accordingly. The EM procedure of SPSS was used to estimate missing data for those participants who answered over 60% of items in one or more scales but did not complete them.

Exploratory and confirmatory factor analyses were conducted in order to initially investigate the measurement of the study's variables. All of the items from the parenting scales loaded significantly on the corresponding latent constructs. However, three items measuring adolescents' positive functioning were excluded because the item loadings were not statistically significant in confirmatory factor analysis. Specifically, these items

were: (self-esteem) “I wish I could have more respect for myself”; (empathy) “When I see someone being treated unfairly, I sometimes don’t feel very much pity for them”; (peer connection) “How often do you feel like it’s hard to get along with this friend”. Although the confirmatory factor analysis will provide necessary information on the measurement adequacy of the remaining sets of items, Cronbach’s alpha for each scale were also calculated and listed in Table 1.

Table 1

Cronbach’s alpha for All Scales

Parenting	α	Positive Functioning	α
Maternal Support	.855	Self-esteem	.827
Maternal Behavioral Control	.810	Empathy	.667
Maternal Psychological Control	.719	Social Initiative	.777
Paternal Support	.859	Peer Connection	.719
Paternal Behavioral Control	.829		
Paternal Psychological Control	.709		

The Measurement of Chinese Adolescents’ Positive Functioning

As indicated in Chapter I, the concept of positive functioning for Chinese adolescents should be complex and multi-faceted, just as it in Western societies (Moore et al., 2004). Specifically, the proposed framework for this study included a distinction between *intrapersonal* and *interpersonal* functioning, a split which is consistent with theory, past empirical practice (e.g., when differentiating among problem behaviors), and

with standard cultural priorities. Additionally, to maximally fit Chinese culture, academic achievement was added to the framework (Chen et al., 2000) as an indicator of *institutional* functioning. Thus, the second-order framework consisted of*: intrapersonal functioning* (self-esteem and empathy), *interpersonal functioning* (social initiative and peer connection) and *institutional functioning* (academic achievement).

The model was tested with confirmatory factor analysis using AMOS (Byrne, 2001).To improve model fit, 11 correlations between error terms within constructs were conducted as suggested by the modification indices (6 error term correlations for self-esteem, 2 for empathy, 1 for social initiative, and 2 for peer connection). For example, the correlation between the error terms for the following two items in the self-esteem scale were estimated: "I am able to do things as well as most people" and "I feel that I'm a person of worth, at least on an equal plane with others." All estimated error term correlations were statistically significant at $p < .001$.

Chi-square (χ^2), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA) were used to determine model fit. Typically, good fitting models have a CFI greater than .90 and a RMSEA less than .05 (Byrne, 2001).

As shown in Table 2, all items loaded significantly on the corresponding first-order latent constructs. As shown in Figure 3, all path weights from the second-order constructs to the first-order positive functioning variables were significant and all of the second-order factors were significantly and positively correlated with each other. The model fit the data well: $\chi^2 = 678.369$, $df = 258$, $p < .001$, CFI = .939, RMSEA = .040.

As an additional step in validating the hypothesized second-order structure of positive functioning, an alternative, single-order model was also estimated. It was indicated by all five of the positive functioning scales. This model also fit the data well: $\chi^2 = 845.697$, $df = 261$, $p < .001$, CFI = .916, RMSEA = .047. However, as shown in Figure 4, although self-esteem, social initiative, and academic achievement loaded significantly on the single-order variable, empathy and peer connection did not. Moreover, model comparison revealed that the single-factor model had a significantly higher Chi-square ($\chi^2 = 167.32$, $df = 3$, $p < .001$) and therefore fit the data less well than the hypothesized second-order framework. Together, these results confirm that in the current data the hypothesized second-order structure of the positive functioning of Chinese adolescents was appropriate.

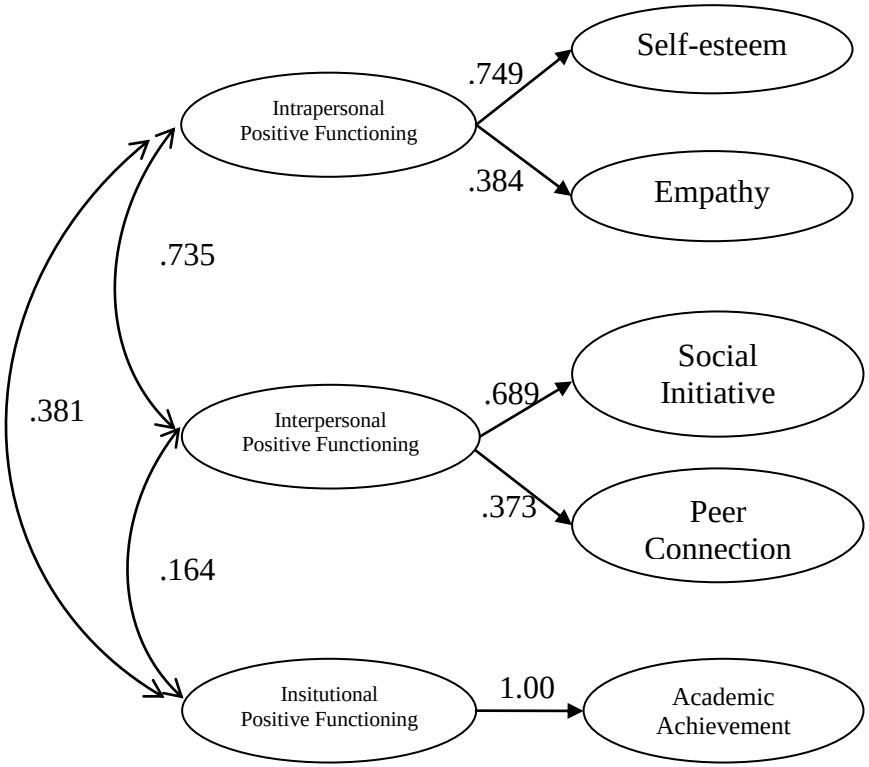


Figure 3. Standardized Path Weights of the Second-Order Theoretical Model of Chinese Adolescents' Positive Functioning (Path weights were all significant at $p < .001$).

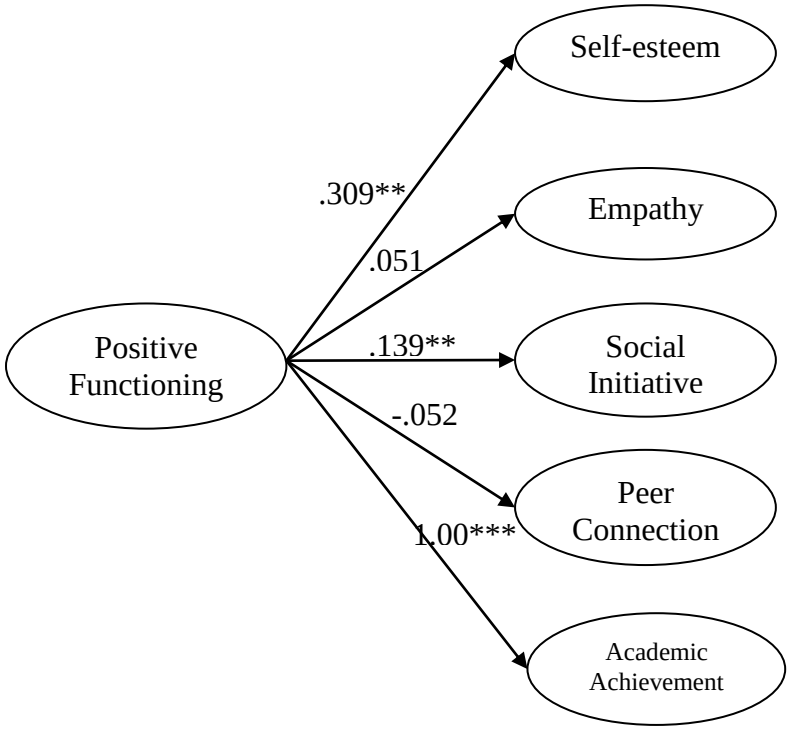


Figure 4. Standardized Path Weights of Alternative, Single-Factor Model of Chinese Adolescents' Positive Functioning (*** $p < .001$).

Table 2

Standardized Item Loadings for all Latent Variables in the Theorized Model of Positive Functioning

Item	Loadings
Self-esteem	
I am able to do things as well as most people. (recoded)	.472
I certainly feel useless at times.	.565
At times, I think I am no good at all.	.580
On the whole, I am satisfied with myself. (recoded)	.642
I feel I do not have much to be proud of.	.623
I take a positive attitude toward myself. (recoded)	.672
I feel that I have a number of good qualities.	.717
All in all, I am inclined to feel that I am a failure.	.673
I feel that I'm a person of worth, at least on an equal plane with others.(recoded)	.655
Empathy	
When I see someone being treated unfairly, I sometimes don't feel very much pity for them.	.588
I often have tender, concerned feelings for people less fortunate than I.	.665
I would describe myself as a pretty soft-hearted person.	.619
Sometimes I don't feel very sorry for other people when they are having problems.(recoded)	.262
Other people's misfortunes do not usually disturb me a great deal.(recoded)	.234
I am often quite touched by things that I see happen.	.505
Social Initiative	
I get into conversations with adults (e.g., teachers, staff) at the school.	.645
I talk to teachers and staff about things other than class.	.757
I am comfortable joking with teacher and staff.	.727
Peer Connection	
How often do you call this friend on the phone?	.526
If you needed help with something, how often could you count on this friend to help you?	.567
How often do you and this friend go over to each other's houses?	.346
How often do you tell this friend things about yourself that you wouldn't tell most kids?	.573
How often do you and this friend go places together, like a movie, skating, shopping, or a sports event?	.511
When you do a good job on something, how often does this friend praise or congratulate you?	.566

Note. All item loadings were significant at $p < .001$.

The Measurement of Perceived Parenting

Adolescents reported their perceptions of *both* their mothers and their fathers on all items used to measure parenting. For example, 10 items were used to assess parental support, all of which were asked separately regarding mothers and fathers. Since it was not a purpose of this study to assess any unique effects of perceived mothering or fathering, all items referring to both parents were used to indicate the latent constructs. Thus, again using parental support as the example, the latent construct of parental support was indicated by all 20 items (10 for mother and 10 for father). Correspondingly, a total of 16 items were used to measure parental psychological control (8 for mothers and 8 for father) and 10 items for parental behavioral control (5 for mothers and 5 for fathers).

Adolescents' reports of mothering and fathering are often quite highly correlated (Stolz, Barber, & Olsen, 2005) and, as a result, it is necessary to model this covariation. The strategy used in the present study was to correlate the error terms between corresponding mother and father items. For instance, the correlation between the error term for the item "My mother is a person who smiles at me very often" in the scale of adolescent-perceived *maternal* support and the error term for the corresponding item "My father is a personal who smiles at me very often" in the perceived *paternal* support scale was estimated. This procedure was conducted among all corresponding items for all three parenting constructs.

Further, correlations among error terms for items *within* parenting constructs were also estimated. For example, regarding parental psychological control, the correlations among the error terms for the 8 items measuring mothers' psychological control were

estimated. The same was done for the 8 items measuring fathers' psychological control, as it was for reports of both the parental support and behavioral control constructs. The reason for estimating these correlations was to constrain the unstructured associations among mothering and fathering and to control for any uniqueness of mothering or fathering. This resulted in latent constructs that reflected what was shared by both mothering and fathering.

The CFA model of parenting described above was tested in Amos (Byrne, 2001). All items loaded significantly on the corresponding parenting latent constructs. The model fit the data well: $\chi^2 = 1688.753$, $df = 798$, $p < .001$, CFI = .957, RMSEA = .033. Therefore, the model was carried forward to be used in the SEM analysis predicting adolescents' positive functioning.

Correlation Analyses between Parenting and Adolescents' Positive Functioning

Correlations among all of the latent variables are presented in Table 3. All three second-order latent constructs of Chinese adolescents' positive functioning (i.e. intrapersonal, interpersonal, and institutional functioning) were significantly and positively associated with each other. In terms of the parenting variables, consistent with past work in these same data (Barber et al., 2005), parental psychological control was negatively related to both parental support and parental behavioral control; and parental support and behavioral control were positively related to each other.

The three hypothesized specialized paths between parenting variables and adolescents' positive functioning variables all were supported by the bivariate correlation analyses. Specifically, parental support was positively related to interpersonal

functioning, parental behavioral control was positively related to institutional functioning, and parental psychological control was negatively related to intrapersonal functioning.

In addition, parental support was positively related to both intrapersonal and institutional functioning. Parental behavioral control was positively related to both intrapersonal and interpersonal functioning. Parental psychological control was negatively linked with adolescent academic achievement. The statistically significant correlations among parenting and adolescents' positive functioning constructs suggested that it was appropriate to move on to SEM analyses.

Table 3

Correlations among All Latent Variables

		2	3	4	5	6
1	Parental Support	-.497***	.440***	.512***	.330***	.210***
2	Parental Psych Control		-.219***	-.220***	-.044	-.070*
3	Parental Behav Control			.308***	.121*	.135***
4	Intrapersonal Functioning				.824***	.393***
5	Interpersonal Functioning					.158**
6	Institutional Functioning					

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

The Structural Associations among Parenting and Positive Functioning

The structural associations between different dimensions of Chinese parenting and adolescents' positive functioning were investigated in a specialized multivariate

model. Specifically, adolescent interpersonal functioning was regressed on parental support; intrapersonal functioning was regressed on parental psychological control; and institutional functioning was regressed on parental behavioral control. All other structural paths were constrained to zero. Correlations of the error terms of the endogenous variables were also estimated. This hypothesized multivariate model was tested in Amos (Byrne, 2001). As shown in Figure 5, all three hypothesized paths were significant. The model fit the data well: $\chi^2 = 4042.753$, $df = 2201$, $p < .001$, CFI = .934, RMSEA = .029.

As further steps to validate this model, a series of alternative models were estimated. That is, just because the hypothesized model fit the data well did not mean that it was necessarily the best fitting model. The first step in the validation was to estimate a saturated model in which all structural paths were freed.

This saturated model also fit the data well: $\chi^2 = 3944.667$, $df = 2195$, $p < .001$, CFI = .938, RMSEA = .028. As shown in Figure 6, parental support was positively related to all three of the adolescents' positive functioning variables. Further, there were no significant pathways between parental behavioral control and positive functioning, and there was one significant pathway between parental psychological control and adolescent interpersonal functioning.

Comparison of the fit of the specialized model and the saturated model revealed that the Chi-square of the specialized model was significantly greater than that of the saturated model ($\chi^2 = 98.086$, $df = 6$, $p < .001$), indicating that the specialized model was *not* the better fitting model in these data.

Although the saturated model fit the data better than the specialized model, not all of its structural paths were significant. Therefore, in order to more precisely define the best fitting model, a series of three further models was estimated. First, because it was apparent from the results of the saturated model that parental support was predominant in predicting positive functioning, a *Parental Support Model* was estimated. In that model, all three second-order latent variables for positive functioning were regressed on parental support. In addition, as a test against the specialized model, the two additional, originally hypothesized paths were also freed for estimation (i.e., between parental psychological control and intrapersonal functioning and between parental behavioral control and institutional functioning).

Second, a *Parental Behavioral Control Model* was estimated that freed all paths between behavioral control and positive functioning as well as the other originally hypothesized paths. Third, the same was done for a *Parental Psychological Control Model*. Each of the three models was compared to the saturated model to identify the best fitting model. The fit of all three models, as well as the results of model fit comparisons are listed in Table 4.

Table 4

Model Fit Indices for Three Additional Models and Comparison with Saturated Model

Model	Model Fit Indices				Comparison with Saturate Model	
	χ^2	*df*	CFI	RMSEA	χ^2 Diff	*df*
Parental Support	3954.143***	357	.937	.028	9.477	4
Parental Psych Control	4036.358***	357	.935	.029	91.692***	4
Parental Behav Control	4011.900***	357	.935	.029	67.233***	4

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

As shown in Table 4, although all three models fit the data well, the Chi-square for the *Parental Psychological Control Model* and the *Parental Behavioral Control Model* was significantly greater than that of the saturated model. However, there was no significant Chi-square difference between the *Parental Support Model* and the saturated model. It was concluded, therefore, that because the *Parental Support Model* fit the data equally as well as the saturated model, but that it was the most parsimonious (i.e., only three significant paths), it was the best fitting model for these data.

The standardized path weights for the *Parental Support Model* are shown in Figure 7. Parental support was significantly and positively related to all three domains of Chinese adolescents' positive functioning (intrapersonal, interpersonal, and institutional functioning). Further, the originally hypothesized specialized paths regarding parental psychological control and parental behavioral control were not significant.

Summary of Results

In summary, in the data analyzed for the current study, Chinese adolescents' positive functioning was captured adequately by a framework of three main dimensions: *intrapersonal* (self-esteem and empathy), *interpersonal* (social initiative and peer connection) and *institutional* (adolescent academic achievement).

In terms of predicting positive functioning by the three dimensions of parenting, the hypothesized specialized model was supported. This was evident in both the bivariate correlations and in the good fit of the hypothesized model. However, further analyses revealed that this model was not optimal in explaining the relationship between parenting and the functioning of Chinese adolescents. Rather, the best fitting model was one that highlighted parental support. In that model, parental support was uniquely predictive of all three levels of adolescents' positive functioning and the other two dimensions of parenting added no unique contribution to any domain of positive functioning.

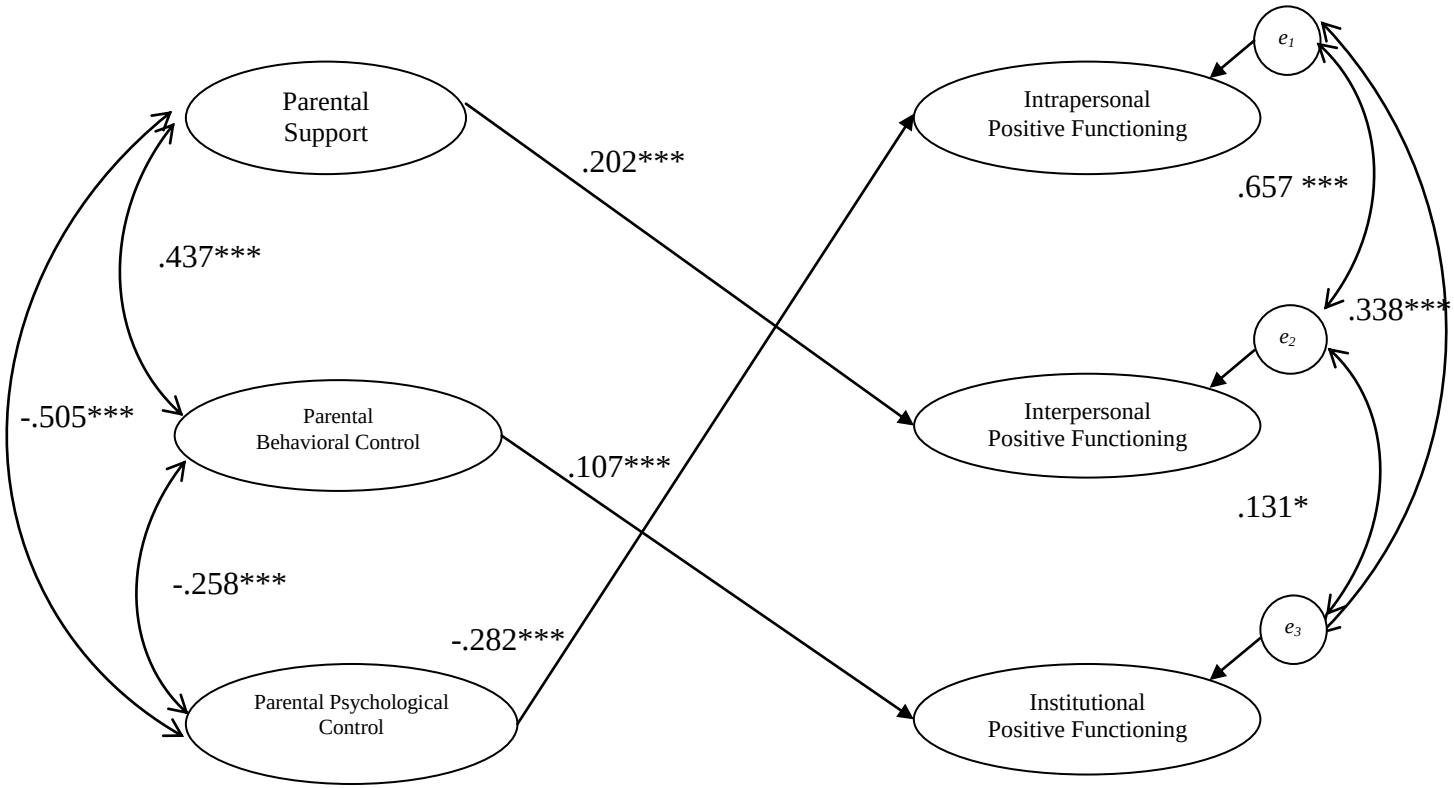


Figure 5. Standardized Path Weights for Specialized Hypotheses in Structural Model of Chinese Adolescents' Positive Functioning and Its Relationship with Parenting (* $p < .05$ *** $p < .001$).

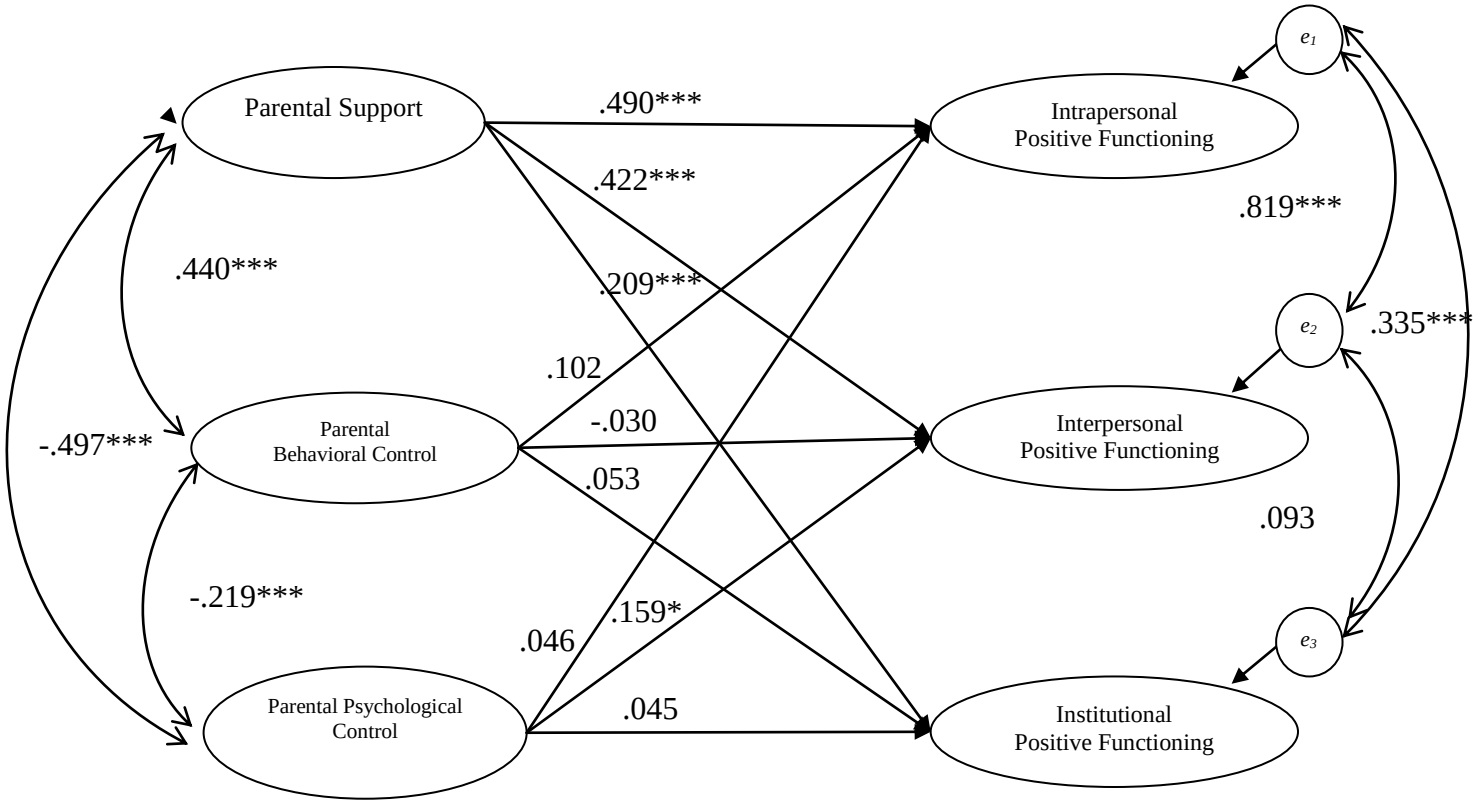


Figure 6. Standardized Path Weights for the Saturated Model of Chinese Adolescents' Positive Functioning and Its Relationship with Parenting (* $p < .05$ *** $p < .001$).

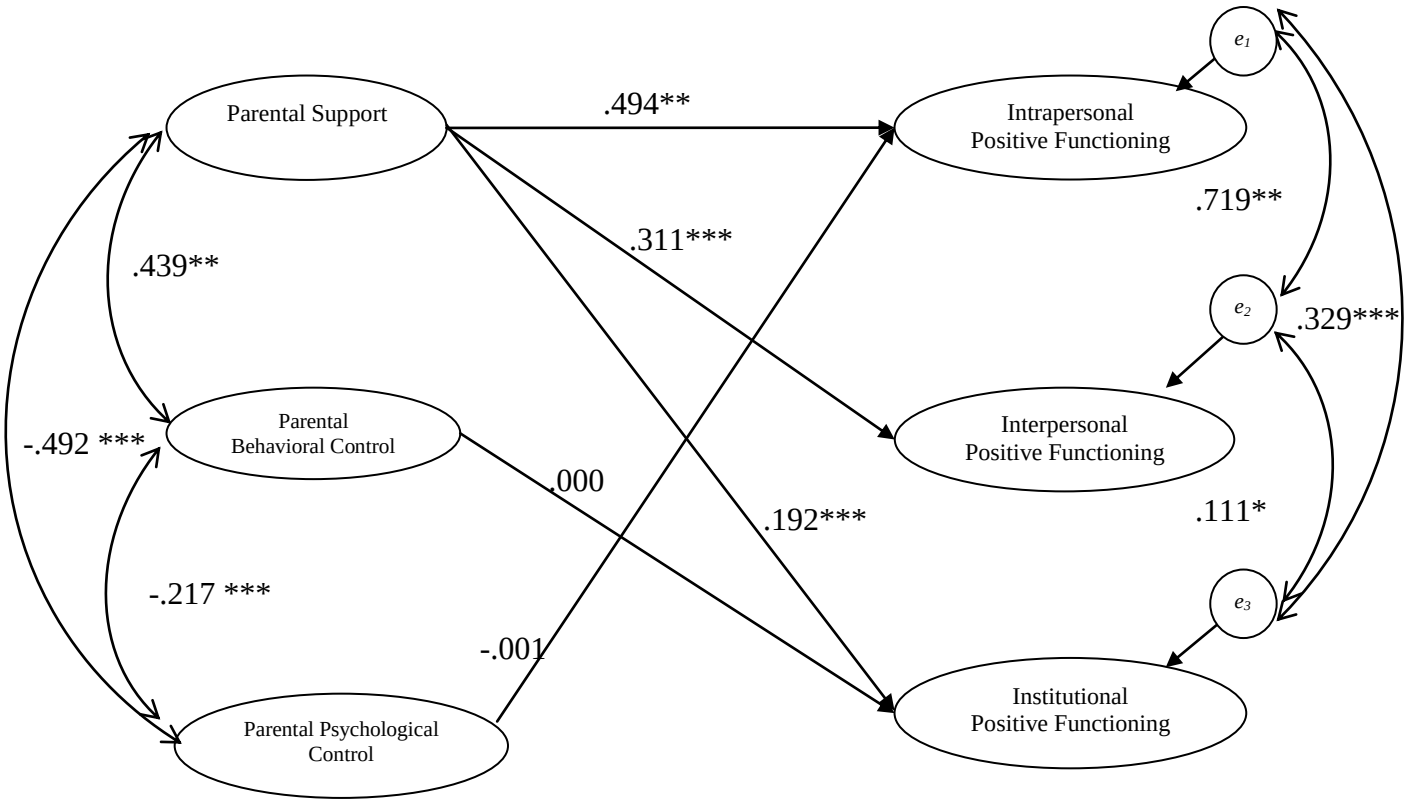


Figure 7. Standardized Path Weights for Parental Support Model in Structural Model of Chinese Adolescents' Positive Functioning and Its Relationship with Parenting (* $p < .05$ *** $p < .001$).

CHAPTER V: DISCUSSION

Over the last three decades, increasing attention has been paid to Chinese adolescent functioning by both researchers and the general public. Although China emphasizes adolescent development substantially, most research has focused on negative aspects of adolescent functioning. Due to the fact that most Chinese adolescents actually appear to function well (Project of Contemporary Chinese Adolescent and Child Development Situation, 2006), there is a need, therefore, to begin to understand the nature of their competent functioning. Further, it is important for researcher to begin understanding how social context impacts positive functioning. Specifically, although parenting is recognized as the one of the most important socialization factors for Chinese adolescents (Chen et al, 2005), little research has been done linking parenting with positive functioning of children or adolescents.

The current study sought to address these needs for the study of Chinese adolescents. Using data on over 1,000 adolescents from Beijing, China, a second-order framework for positive functioning was proposed consisting of three main domains *intrapersonal* (self-esteem and empathy), *interpersonal* (social initiative and peer connection), and *institutional functioning* (academic achievement). The measurement of Chinese parenting included three dimensions: support, behavioral control, and psychological control. For each parenting dimension, adolescent reports of both mothering and fathering were used as parenting indicators to present a relatively comprehensive picture of parenting. With regard to the relationships between parenting

and adolescents' positive functioning, it was hypothesized that parental support would be positively associated with interpersonal functioning, parental psychological control would be negatively related to intrapersonal functioning, and parental behavioral control would be positively associated with institutional functioning.

Support was found for all of these hypotheses in bivariate and structural equation analyses. However, post-hoc explorations determined that a model that focused on parental support fit the data even better. These findings will be discussed below. First, some brief discussion will be offered about the measurement of positive functioning.

Measuring Chinese Adolescents' Positive Functioning

As recommended by scholars of positive development, the structure of the broad construct should be complex and multi-faceted. According to theory, past empirical practice (when measuring problem behaviors), and basic cultural priorities, the proposed framework of positive functioning included a distinction between *intrapersonal* and *interpersonal* functioning. In addition, in order to maximally describe Chinese culture, academic achievement was included in the framework as a measure of *institutional* functioning.

The model fit the data well. Even though there is conceptual overlap among the three domains, treating them as distinct latent constructs fit the data best, indicating that they have notable uniqueness one from the other. Regarding the correlation between interpersonal and intrapersonal functioning, the finding is consistent with previous studies (e.g. Chen et al., 2005) and can be explained in at least two ways. First, since adolescents care about how others feels about them (Berndt, 1982), it would be expected

that the degree and quality of their social connections with peers and adults outside of their families impact their self-appraisals and identity formation (Bishop & Inderbitzen, 1995). Second, adolescents' awareness of others' feelings could arouse their sympathetic concern for others and consequently promote their voluntary behaviors to help others. This, in turn, could impact the quality of their social interaction with other people (Cen, Wang, & Li, 2004; Eisenberg & Miller, 1987; Shaffer, 2004).

As for academic achievement, the indicator of institutional functioning, the finding of positive correlations with both intrapersonal and interpersonal functioning is also consistent with expectations and previous studies (e.g. with self-development, Wei, 1998; Zhang, Zhao, & Yu, 2009; with social competence and peer relations Chen et al, 2000; Wang, 2000). Essentially, the findings confirmed the value of adding academic achievement to the positive functioning model.

In sum, at least for the data analyzed for this study, all three domains of positive functioning were effectively measured and their pattern of interrelationships is as would be expected. They were positively correlated but of a magnitude that recommended they be treated nevertheless independently.

Unique Effects of Parenting

The next step in the study was to predict positive functioning with a model of parenting. The theoretically justified, specialized model fit the data well and will be discussed immediately below. Thereafter the discussion addresses the results and implications of the post-hoc analyses which determined that a better fitting model was

one that highlighted the general salience of parental support to all forms of positive functioning.

The Specialized Model of Chinese Parenting and Adolescents' Positive Functioning

The results of tests of the specialized model indicated that all three hypothesized paths were supported by both the bivariate correlation analyses and the structural equation analyses.

Parental Support and Adolescents' Interpersonal Functioning

At both bivariate and multivariate levels, parental support was positively associated with positive interpersonal functioning as expected. In other words, the more adolescents reported supportive behaviors from their parents, the more likely they were also to report that they initiated social interaction with adults and had higher levels of contact with their best friends. The result is consistent with findings of previous studies which included the same three parenting dimensions and Chinese adolescents' social initiative and problem behaviors (Barber, et al., 2005) and other empirical studies on Chinese adolescents (Liu et al., 2009; Chen et al., 2000; Chen et al., 2005).

By way of interpreting the finding, Chinese parents, especially mothers, are often described as loving and kind (*Ci Ai*; Wu et al., 2002). Further, Chinese parents, again, mothers in particular, are expected to be very involved in their children's development and consistently concerned about their children (Chao, 1994). Chen and Rubin (1994) argued that parental support or similar concepts (e.g. parental warmth or acceptance) have universal value to child development, and that the meaning of support is similar across cultures (Berndt, Cheung, Lau, Hau & Lew, 1993). Theoretically, as reviewed

earlier, the positive relationships between parental support and adolescent interpersonal functioning can be explained with attachment and social learning theories that suggest the carry-over of positive interactions with parents into social relations outside the family (Ainsworth et al., 1978; Bandura, 1977; Bowlby, 1988; Sroufe, 1988).

Parental Psychological Control and Adolescents' Intrapersonal Functioning

As hypothesized, the results supported the hypothesis that parental psychological control would be negatively associated with adolescents' intrapersonal functioning. In other words, the more adolescents reported their parents to have engaged in psychological control, the lower they rated their own self-esteem and empathy. The finding is consistent with much past work that has repeatedly shown psychological control to be negatively related to mental functioning, particularly aspects of the self (Barber & Harmon, 2002; Barber & Xia, in press).

Regarding China, this association might be explained in part with the social domain theory perspective on psychological control as a violation of the private domain of an adolescent's life (Nucci et al., 2005). Despite the traditional focus on the collective in Chinese society, with increasing urbanization and subsequent exposure to Western ideology, Chinese adolescents - especially those in the modern international cities such as Beijing - may have developed an enhanced value on the privilege of privacy. Thus, they, like their Western counterparts, may feel it inappropriate for anyone to invade that space (Shi, 2002).

Even though Chinese young people value their privacy, it is possible, however, that Chinese parenting beliefs have not evolved as quickly to accommodate respect for a

personal domain of their adolescents' lives. Some Chinese parents still employ authoritarian parenting behaviors, such as love withdrawal, threatening and humiliation, which are typical indicators of parental psychological control behaviors (Barber & Harmon, 2002). Chinese parenting has been characterized as "authoritarian, restrictive and controlling" (e.g. Chao, 1994, 1996; Xu et al., 2005). As Baumrind and colleagues (2010) recently acknowledged, psychological control is a major component in the conceptualization of authoritarian parenting. Relatedly, it appears to be easier for Chinese parents to criticize their children than to express support of them (China Youth & Child Center, 2011), and if this is done excessively it would also be a reflection of psychological control (Barber, 1996).

The association could also be interpreted in part with Self-Determination Theory, given the continuing cultural expectation for Chinese adolescents to respect and follow parents and older people in an interdependent society (Ho, 1986; Soenens et al., 2010). Chinese adolescents may be at risk for internalizing parents' intrusiveness and criticism to avoid parental love withdraw and their own feelings of shame, which would undermine their autonomy, self-awareness, and awareness of others (Pomerantz & Wang, 2009; Ryan & Deci, 2002; Soenens & Vansteenkiste, 2010).

Parental Behavioral Control and Adolescents' Institutional Functioning

As hypothesized, parental behavioral control was positively associated with adolescents' institutional functioning (as measured by academic achievement). Thus, the more adolescents who reported parental behavioral control the higher they rated their own academic performance. The finding is consistent with past work in China that has

shown that parental behavioral control positively predicted academic achievement of Chinese adolescents (e.g. Wang et al., 2007; Li et al., 2003).

This association is particularly sensible in China, given the prized value of academic performance. As a recent report makes clear, Chinese parents are naturally heavily involved in their children's academic efforts, serving as tutors for their children, checking and correcting assignments, and assigning extracurricular tasks to their children (China Daily Youth, 2011). Logically, it has also been shown that they exercise control over their adolescents by way of monitoring their activities (Wang et al., 2007; Li et al., 2003). In turn, it is sensible that the more parents demonstrate these various types of involvement and constructive control, the easier it would be for their adolescents to be motivated to engage into academic activities and, thereby, improve their academic performance.

In summary, all the three hypothesized paths were supported by bivariate and multivariate analyses as expected. The findings go beyond previous studies on negative functioning, and indicate that fundamental dimensions of parenting are also related in sensible ways to positive functioning of Chinese adolescents. Given inadequate distinction in studies on Chinese families between parental behavioral control and psychological control, the findings of the specialized effects of both forms of parental control in this study are particularly useful.

The Breadth of Effect of Parental Support

In the process of validating the fit of the hypothesized, specialized effects model described above, it was discovered that although the model fit the data well there was

even a better fitting model. Specifically, in testing the hypothesized model against a saturated model in which all structural paths were freed, two important findings were made. First, the hypothesized model did not fit significantly better than the saturated model; and second, significant paths were evident between parental support and all three domains of positive functioning. Further model testing confirmed that the best fitting model was the one that freed all paths from support. In that model, even though the other originally theorized paths were also freed (i.e., between psychological control and intrapersonal functioning and between behavioral control and institutional functioning), they were not significant.

Essentially, these results indicated that in these data from Chinese adolescents parental support explained unique variance in all forms of positive functioning – beyond that which was explained by the other parenting dimensions. The balance of the discussion is devoted to this finding. First, it is important to clarify the finding. That is, it is not surprising from empirical or theoretical perspectives that parental support would be predictive of all three forms of positive functioning. Empirically, such was evident in these data already in the bivariate correlations, and such associations are fully consistent with past studies (Barber et al., 2005; Bush et al., 2002; Chen et al, 2000; Stolz et al., 2004). What was unexpected was that parental support explained unique variance in all outcomes after controlling for the variance explained by the other parenting variables. The discussion will now briefly attend to the (non-hypothesized) unique associations with parental support and it will then address the salience of parental support more generally.

As reviewed earlier, parental support has been found to predict adolescents' intrapersonal functioning: specifically, self-esteem (Bush et al., 2003; Zhang et al., 1998) and empathy (Zhou, et al, 2002; Soenens et al, 2007). This association could be explained in part by both attachment theory and social learning theory, the same theories used to hypothesize the relationship between parental support and interpersonal functioning. Specifically, parental support is an important facilitator of securely attached children who differ from non-securely attached children in part in their perceptions of themselves (La Guardia, Ryan, Couchman, & Deci, 2000). Securely attached children are more likely to positively evaluate themselves, and are less likely to be self-centered and defensive compared to children who are not securely attached (Soenens et al, 2007). According to Bandura's social learning theory (1977), children learn through observing their parent's behaviors. Because supportive parents are likely to be concerned about other's feeling and needs, children of supportive parents could learn these behaviors from parents and therefore take the perspective of others and further show higher levels of empathy (Soenens et al., 2007).

Additionally, symbolic interaction theory offers another explanation for the associations between parental support and intrapersonal functioning (Rollins & Thomas, 1979; Stryker & Stratham, 1985). Concepts such as reflected appraisals and "looking-glass self" suggest that children's self development is dependent on how they feel others think about them (Cooley, 1902; Mead, 1934). Thus, children could interpret the supportive parent-child interaction as symbols of self-worth and consequently increase their evaluation of themselves.

As for academic achievement, a positive relationship between parental support and the academic achievement of Chinese adolescents has been well-established in literature when studying both Chinese mothering and fathering (e.g. Stolz et al., 2004; Chen et al., 2000; Chen et al., 2005). Cutrona and colleagues (1994) suggested two ways to explain this association. First, positive interaction with parents may facilitate an adolescent's ability to conquer academic difficulties (e.g. the stress of intense competition in education and the high load of homework) and improve coping skills and positive adjustment. Second, according to attachment theory, parental support or warmth facilitates improvement in children's perceptions of self-worth (Ainsworth et al., 1978; Baumrind, 1971; Coppersmith, 1967). This, in turn, promotes children's active exploration and motivation to study hard and improve their academic skills (Hart, 1982; Wanger & Phillips, 1992). Given that traditionally Chinese parenting is characterized as having low levels of warmth and high levels of controlling behavior (Lim & Lim, 2003), those adolescents who do receive higher levels of parental support might be receiving extra help in conquering academic difficulties and improving their academic performance.

The Unique Salience of Role of Parental Support

An interesting finding of the present study is that, in the final multivariate model, neither parental psychological nor behavioral control remained significant. To be clear, these results do not mean that parental control was not relevant to positive functioning. The fact that it was relevant is evident in the bivariate correlations and the results of the specialized model. Rather, the findings mean that neither form of control explain unique

variance beyond that explained by parental support. The finding is actually similar to some previous studies in which Chinese adolescents' self-worth, for example, was predicted uniquely by maternal warmth and not uniquely by maternal strict control and indulgence (Chen et al., 2000). In the US, parental warmth predicted academic competence more so than parental supervision (Gray & Steinberg, 1999).

Why does parental support contribute to the prediction of intrapersonal and institutional functioning for Chinese adolescents beyond parental psychological and behavioral control? The answer may be found in adolescents' understanding of Chinese parenting. Typical Chinese parenting concepts, such as "*guan*", refer to regulation and governance as well as caring and loving (Chao, 1994). Therefore, this concept intertwines parental support and parental behavioral control. It is possible, therefore, that parental behavioral control may in part be perceived by adolescents as evidence of their parents' concern and love for them.

Relatedly, MacDonald (1992) proposed that parental warmth plays a motivational role in facilitating children's acceptance and conformity to parents' values, and promotes family cohesiveness and parental investment in child development. According to MacDonald, parental support may foster adolescents' understanding of parents' supervision and monitoring, and thereby increase the likelihood that adolescents who perceive their parents to be supporting them will accept parental behavioral control and follow parents' values and expectations.

Further, parental support might neutralize some of the negative effects of parental psychological control on adolescents' intrapersonal functioning as it did so for other

negative parenting behaviors (e.g. physical punishment and externalizing behaviors; Deater-Deckard, Ivy, & Petrill, 2006). Chen and colleagues (2000) indicate that parental support is a protective factor for Chinese children's socioemotional functioning, and parental, especially maternal, warmth could "break the chain of mother rejection and child disruption cycle and consequently reduce the continuity of maladaptive functioning in children and adolescents in the long run" (p. 64). Therefore, although parental psychological control might be considered intrusive by adolescents, the fact that they also perceived support from parents may help them ignore or reinterpret the psychological control they experience.

In short, the predominant role of parental support in the final model of this study might be explained in two ways. First is the broader definition that parents and adolescents may give to parental support that incorporates what is traditionally separated out as effective behavioral control in Western models. Second, given the strong value of parental support in Chinese culture, the effects of otherwise negative parenting, such as psychological control, might be reduced.

Limitations of the Study

The study had several limitations. First, because concurrent data were used in the present study, any direction of effect between the variables cannot be verified. The study was conceived from the perspective of parent effects. It is possible, however, that the effects are actually adolescent-driven, where effective parenting is demonstrated by parents to the degree that their adolescents are functioning positively.

Second, the study employed secondary analysis of existing data. Fortunately, the data set that was used had several variables that proved to be useful in this initial investigation of Chinese adolescents' positive functioning. However, the available variables were likely not adequate to capture the breadth of positive functioning. For example, Moore and colleagues (2004) suggested that youth development is usually categorized more broadly than the current study did (i.e., also including emphasis on health and safety, and self-sufficiency, for example).

Third, although assessments of both mothering and fathering were included in the present study, potential parent gender differences were not tested. As some researchers have suggested, Chinese mothers and fathers parent differently. Specifically, mothers have been found to engage in direct child-rearing practices such as a child's physical needs, emotional support, or dealing with daily problems, whereas fathers were more inclined to help with children's academic performance, promoting socially-appropriate values and behaviors (Chen et al., 2000; Ho, 1986). Additionally, researchers have also found that Chinese mothers were perceived as warmer and less controlling than fathers (Berndt et al., 1993). To clarify the impact of Chinese parenting on adolescents' positive functioning, it would be meaningful to examine parent gender differences.

Fourth, adolescent gender differences were also not investigated in the present study. A thorough examination of the relations between parenting and adolescents' positive functioning needs to investigate potential youth gender differences. Although few researchers have focused on youth gender differences of parent-adolescent relationships in Chinese culture, some evidence of differences is apparent. For example,

Chen and colleagues (2005) found evidence for higher academic achievement and sociability among girls compared to boys.

Finally, data were only collected from individuals in Beijing, a largely urban area. As China becomes gradually open to other nations, people, especially those in big cities, are increasingly exposed to Western ideology (Pomerantz & Wang, 2009). Therefore, it is possible that parenting in urban areas is more westernized than in rural areas. Researchers have found that parents in rural areas of China tend to keep traditional childrearing behaviors and ideals, such as filial piety and self-sacrifice (China Youth & Children Research Center, 2007). The findings of the present study, therefore, are more appropriate to explain parent-youth relations in Chinese urban settings.

Implications of the Study for Parents and Practitioners

While the present study contributes to the academic literature on Chinese parenting and adolescents' positive functioning, parents and practitioners (such as program interventionist and parent educators) also may benefit from the findings of this study. One important finding is the model of positive functioning that identifies three important domains. Knowing this might help practitioners target their efforts when promoting positive development. This is especially important because China does not have well-developed practical programs for youth. Should such efforts begin, the findings of this study might serve as one initial guide for them.

. The same point is relevant regarding the findings of the study on parenting, particularly the predominate role of parental support in predicting all forms of positive functioning. This helps parent educators make decisions on what to highlight in education

and training programs. Targeting parental supportive behaviors would be particularly important given some evidence that Chinese parents do not emphasize this aspect of parenting. At the same time, parental psychological control and behavioral control also appear to be relevant to adolescents' positive functioning and should receive attention in practical efforts to help Chinese families.

Recommendations for Future Research

The current studied provided an initial step in the investigation of positive functioning among Chinese adolescents. Future work should continue to refine and test measures of positive functioning across different settings, such as in rural areas or different ethnic groups within Chinese society. Other important concepts of positive functioning, such as physical health, also should be included in positive functioning models to capture a more comprehensive picture of positive development.

In terms of relations between parenting and adolescents' positive functioning, future studies should be conducted with longitudinal designs to better understand direction of effect. Tests for both parent and adolescent gender differences should made to more precisely define the associations between parenting and positive functioning. In addition, since adolescents live in multiple social contexts, future research should also examine positive functioning in and across multiple contexts.

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