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Few studies have considered how adolescent development is influenced by parenting in mainland China, and fewer yet have considered using indigenous or culturally relevant measures to assess aspects of the parent-adolescent relationship. The primary purpose of the study was to explore the relationship between a global indicator of optimal Chinese parenting behavior, *guan jiao*, and adolescent adjustment, with *xiao* (operationalized as a proper attitude towards parents according to Confucian beliefs) as a mediator. Adolescent adjustment was indicated by perceived self-efficacy, depression, and school misconduct. Data were collected from a sample of 70 early adolescents in a southern Chinese city. Results generally supported that parents' *guan jiao* was associated with good behavior, good mental health, and good self-regard in adolescents, and this association was mediated by *xiao*. The importance of utilizing indigenous concepts, such as *guan jiao* and *xiao*, in research on adolescent development in mainland China was discussed.

PARENTING BEHAVIOR AND CHILD ADJUSTMENT IN A SAMPLE OF  
MAINLAND CHINESE ADOLESCENTS

by

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## CHAPTER I

### INTRODUCTION

The effectiveness of traditional parenting in bringing up well-adjusted adolescents has become an issue of concern in mainland China in recent years. As China has undergone tremendous economic growth in the past two decades, there is concern that young Chinese are being lured away from Confucian values which emphasize order and hierarchy within families (Chen, 2005; Ho, 1986). These arguments suggest that Chinese people are increasingly exposed to sociocultural viewpoints typically associated with capitalism that result from globalization and promote individualism. Chinese scholars have expressed concern that Chinese young people are becoming less collectivistic and more materialistic as a result of these dramatic and rapid sociocultural changes (Zhao, 2007). The shift from more traditional modes of interaction is more readily apparent for adolescents as they are increasingly likely to question the authority of their parents and less willing to accept rules and discipline (e.g., Xinhua News Agency, 2007). All of these changes create significant implications for parent-adolescent relationships in China. The social changes towards individualism and materialism, for example, are expected to create tension between adolescents and their more traditional, collectivism-oriented parents because adolescents are more open to exploration of newer and more modern value systems than are adults (Pinquart & Silbereisen, 2005). These conflicts may undermine how effective traditional modes of parental authority are in controlling adolescent behaviors. Currently no studies, however, exist to understand how social

change has modified traditional family process in China. As such, the current study aims at examining how traditional Chinese parenting *guan jiao*, and its immediate goal, *xiao*, are related to adolescent depression, self-efficacy, and school misconduct.

*Guan jiao* and *xiao* comprise the core of Chinese family socialization processes. Conceptualizations of Chinese parenting emphasize the promotion of impulse control and early training of children as the primary goals of family socialization and child development. These emphases are derived from qualitative observations and theoretical interpretations of earlier scholars like Ho (1986) and Wu (1996), rather than by empirical research. Ho, for example, suggested that dependency, obedience, and achievement motivation are the major themes of family socialization, as opposed to western societies where parents typically emphasize independence, high self-esteem, and assertiveness. Wu also suggested that the term *xiao* be used to represent feelings of filial devotion, which is expected to represent the most important outcome related to the successful socialization of children in Chinese families. Children's dependency on parents, obedience to parental authority, and achievement motivation in reference to school performance comprise the major outcomes associated with *xiao*. According to Chinese scholars children are expected to be considered to have been successfully socialized when they demonstrate a high level of *xiao*.

In reference to Chinese conceptions of optimal parenting, Wu (1996) proposed the term *guan jiao* to define primary parental responsibilities in governing and teaching children. According to Wu, *guan jiao* involves parental monitoring, training, and organization for children. While these notions of parental socialization may be viewed as consistent with the collectivistic image of Chinese socialization, few

empirical studies have tested the validity of these notions in reference to the developmental paths of Chinese children. Moreover, studies have not considered (a) how the current sociohistorical background has changed adolescent attitudes towards *guan jiao* and *xiao*, (b) how adolescents might develop *xiao* differently for mothers and fathers, and (c) whether or not *xiao* may mediate the association between *guan jiao* and adolescent adjustment outcomes. To address this gap in the literature on Chinese parental socialization, this thesis employs social cognitive theory to explore the relationship between *guan jiao*, and adolescent adjustment, indicated by depression, self-efficacy, and school misconduct, with adolescents' *xiao* as a mediator.

*Mixed Findings in Reference to Optimal Parenting Using Western Constructs*

A combination of high levels of supportive parenting, monitoring of adolescent activities, and low levels of harsh discipline are considered as optimal parenting in research with western families. Studies suggest that across family structure, family socioeconomic status, and ethnicity, that these aspects of parenting are linked to low internalizing and externalizing problems in children and adolescents. (Amato & Fowler, 2002; Shucksmith, Hendry, & Glendinning, 1995). Studies on Chinese parenting using common constructs such as warmth and monitoring, however, have produced mixed findings. In a study with Shanghai adolescents (Chen, Liu, & Li, 2000), parental warmth was found to contribute to adolescents' emotional adjustment, whereas parental support and love withdrawal were not related to adolescent self-esteem in a sample of Beijing adolescents (Bush, Peterson, Cobas, & Supple, 2002). Parental monitoring might explain low misconduct (Chen, Greenberger, Lester, Dong, & Guo, 1998) and high academic achievement (Chen, Lee, & Stevenson, 1996) in Chinese adolescents, but parental control (which was measured by items tapping

parents' monitoring behavior) was not a significant predictor for a series of adjustment variables in Chen et al.'s (2000) study including leadership, social competence, aggression, academic performance, and depression. This latter study even found that father's monitoring might elicit additional adjustment problems for adolescents who already had adjustment difficulties.

Such inconsistent findings might be due to measurement issues because measures designed for western participants might not capture the experiences of Chinese parents and Chinese adolescents. It is possible that general constructs such as warmth and monitoring make sense to Chinese participants, but the behavioral expressions of warmth and monitoring might take different forms in Chinese families compared with their western counterparts. For example, Chinese adolescents might not feel parental warmth from parents' outward displays of affection, such as hugging and kissing, but from parents' concern and support for children's future success (Lau & Cheung, 1987). Consequently, measurement items such as "my mother always tells me that she loves me" might not measure parental warmth as experienced by Chinese adolescents. As Lim and Lim (2003) suggested, more culturally sensitive conceptualization and operationalization in research on Chinese parenting is needed in order to learn about how parenting influences adolescent development in China in more depth.

*Guan Jiao and Xiao: Key Constructs in Understanding Chinese Socialization*

As an attempt to capture the process of how parenting influence adolescent adjustment for youth in China, two common terms in the Chinese language, *guan jiao* and *xiao* are used in the current study. Wu (1996) claimed that Chinese parenting practices can be best summarized in one single Chinese word, *guan*, which denotes

governing, monitoring, controlling, training, and teaching. These behaviors are expected to play a key role in realizing the goal of Chinese socialization. The more commonly used term, *guan jiao*, is a combination of governing and controlling (*guan*), and training and teaching of children to conform to societal expectations for what it means to be a good child (*jiao*). The goal of mothers' *guan jiao* is to build a close mother-child relationship and to promote success in the child (Chao, 1994), whereas the goal of father's *guan jiao* is to make sure that the child views his or her father with awe and reverence (Wu). Taken together, for Chinese parents, *guan jiao* promotes raising loyal, respectful, and obedient children who are close to mothers and in awe of fathers, and such children will be recognized as having developed a high degree of *xiao*.

As the general goal of Chinese family socialization is to promote filial piety (*xiao*) and obedience to authority (*tinghua*), Chinese parents hope to instill *xiao* in children through the daily execution of *guan jiao* because children characterized as *xiao* are likely to have socially desirable outcomes (Wu, 1996). That is to say, *xiao* might be the first step for Chinese children to have proper behavior and positive psychological health. However, although Chinese scholars and parents would argue that it is common sense that parents' *guan jiao* would lead to children's *xiao*, the relationship between these two variables has never been tested empirically. Furthermore, research is needed to understand how *guan jiao* and *xiao* in combination might contribute to adolescent adjustment, which would, as a result, shed light on the culturally expected process of family socialization in China.

## CHAPTER II

### REVIEW OF LITERATURE

#### *Theoretical Rationale*

Three key principles derived from social cognitive theory guide the rationale of the current study: (a) parenting counts in shaping children's development; (b) parenting influences adolescent outcomes through shaping adolescents' cognitive appraisal of the parenting that they have experienced; and (c) a person's behavior and cognitive appraisal can only be understood against the larger cultural context.

According to social cognitive theory (Bandura, 1986), adolescents are active agents in shaping their development because they have vicarious learning capabilities and self-regulatory capabilities. First, vicarious learning capability enables adolescents to internalize cultural norms and social rules that prescribe an individual's roles in society. A person learns about the requirements of his or her different roles as well as the appropriate ways to perform those roles by observing and modeling relevant role models such as parents, peers, and media representations. Second, self-regulatory mechanisms enable adolescents to regulate their own behavior and emotions based on the social rules they have learned without constant outside monitoring and controlling. The execution of self-regulation depends on internal standards and external monitoring. Given the assumption that parents are the most immediate modeling agents for children, parenting facilitates the internalization of social roles and rules in children through children's vicarious learning capability.

Moreover, parents provide necessary monitoring and guidance to ensure that children are well-regulated according to the requirements of social roles and rules.

In reference to parental socialization in China, these theoretical tenets would suggest that *guan jiao* provides children with instruction and organization that guides children as they are socialized to internalize the social expectations of their roles as a son or a daughter, or *xiao*. Specifically, *xiao* consists of affect towards parents and self-standards for proper behavior. In other words, children exposed to culturally appropriate parenting develop culturally appropriate attitudes and behavior. Since *xiao* is a demonstration of internalized social roles and rules, it is then expected to lead to positive behavioral and emotional outcomes, as well as a positive sense of self.

A key suggestion from social cognitive theory is that personal cognitive appraisals mediate the relationship between environmental influences and individual behavior (Bandura, 1986). Specifically, environmental influences affect individuals by modifying their thoughts and attitudes, adjusting their self-standards, suppressing or exacerbating their affective patterns, and degrading or enhancing their self-concept. Further, behavioral outcomes are affected by environmental forces through such *person* factors as affect and self-standards. In regard to parenting influences on adolescent development in China, social cognitive theory suggests that developmental outcomes are affected by *guan jiao* through adolescents' *xiao* because *xiao* represents adolescents' internalization of parental expectations in reference to their role as a son or a daughter. Based on these theoretical principles, the current study aimed at explaining how parenting (as an environmental force) influenced adolescent outcomes, indicated by depression, self-efficacy, and school misconduct, through *xiao*, as a product of adolescents' cognitive processing of the parenting they experienced.

According to Bandura (1986), the environment-cognition-behavior process cannot be understood without considering the larger sociocultural environment where individuals are located. In the Chinese context, the optimal product of Chinese adolescents' cognitive processing of the parenting they have experienced is *xiao*, which can be viewed as a demonstration that a child enacts the culturally expected social role as being a son or a daughter (Wu, 1996). The development of *xiao* is an illustration of how sociocultural group membership provides a context within which children learn about culturally accepted and valued behavioral codes. *Xiao* is the goal of Chinese parenting, so parents are assumed to instill the concepts and principles related to *xiao* into their children during the process of family socialization. Children learn about their social roles and appropriate behavioral codes through modeling their parents, internalizing their parents' expectations, and receiving necessary monitoring from their parents.

While adolescents develop *xiao* as a result of parental influence, the sense of *xiao* in adolescents becomes a foundation for the development of desired outcomes. That is, only when adolescents accept parents' expectations and internalize the expectations as behavioral guidelines of their own, will children actually behave as expected. *Xiao* is mainly composed of affection, respect, and a sense of filial responsibility. A high level of *xiao* means respecting and trusting one's parents, and a belief that children have the obligation to follow their parents' instruction and teaching. Not surprisingly, children characterized by *xiao* are likely to listen to their parents, perceive a positive parent-child relationship, behave well at school, and feel themselves as effective persons because they have the quality that is desirable and appreciated in society. Thus, consistent with the theoretical tenets of social cognitive

theory, children's *xiao* represents the cognitive appraisal of parents' *guan jiao* and is hypothesized as a mediator linking parenting and adjustment outcomes, indicated by depression, self-efficacy, and school misconduct. As shown in Figure 1, parents' *guan jiao* is hypothesized to be associated positively with children's *xiao*, which is in turn hypothesized to be associated with lower depression, higher self-efficacy, and less school misconduct.

### *Chinese Parenting: Guan Jiao*

#### *Conceptualization and Indicators of Guan Jiao*

Cultural research on parenting is necessary because parental attitudes and behaviors vary as a function of culture (Chen et al., 2000). For example, Chinese people have unique beliefs about ideal methods to train ideal children (Wu, 1996), including strong discipline with firm control. However, Chinese parenting is often compared with American parenting in cross-cultural studies which often set American parenting principles and behavioral expressions – with the typical focus on promotion of independence and self-esteem – as the criteria for comparison, and Chinese parenting is described as overly controlling (Chao, 1994). Such comparison is not appropriate because certain parenting and child behavior may have different meanings in American contexts and Chinese contexts, and Chinese family processes may be different from American patterns. Moreover, it is inappropriate to judge the processes and outcomes of Chinese socialization in reference to American standards because “the American pattern may be more atypical than typical in a world-wide perspective” (Ho, 1986, p. 34). Thus, in the processes of model development, data collection, and data interpretation in the current study, a cultural research approach was adopted by using an indigenous construct in regard to parenting, *guan jiao* to study parenting

influences on adolescent adjustment.

In the Chinese language, *guan* as a verb has rich connotations. It means administering, managing, leading, taking the responsibility for, taking charge of, concerning oneself with, controlling, restraining, as well as providing and entertaining. In regard to parent-child relationship, people often speak of “*guan jiao*” (Wu, 1996, p. 11). Besides managing, controlling, and providing for (*guan*) their children, parents also have to teach, discipline, and train (*jiao*) their children. *Guan jiao* is the primary task of parents, which connotes parental involvement, love, and care. In other words, behavioral indicators of *guan jiao* mainly include monitoring and control, while parental warmth is intertwined with monitoring and control instead of being expressed outwardly. A key difference between *guan jiao* and authoritative parenting (i.e., high levels of monitoring, high level of warmth, and low levels of harsh discipline) is that *guan jiao* is not intended to promote independence or self-esteem. Rather, according to Confucian principles, the goal of *guan jiao* is to promote obedience to authority and a sense of familial responsibility, which is primarily academic achievement and commendable school performance for school-age children and adolescents.

Ideologies about *guan jiao* are represented in common Chinese sayings such as “children are by nature born good” (*ren zhi chu, xing ben shan*), “a child is a piece of jade to be burnished” (*yu bu zhuo, bu cheng qi*), and “it is parents’ fault if a child is not well-disciplined” (*yang bu jiao, fu zhi guo*). A person who behaves in socially unacceptable ways or who seems lazy and slack would be considered as “lack of family discipline and care” (*mei jiao yang, or in want of guan jiao*). The goal of *guan jiao* is obedience to authority, acceptance of social obligations, impulse control, hard work, as well as academic and career achievement (Ho, 1986). Episodes of *guan jiao*

are described vividly in Wu's (1996) summary of his observation in the early 1990s:

At meal-time, for instance, parents try all kinds of tricks to induce the child to eat more. In leisure time, parents or grandparents often demand that the child demonstrate skills learned in school as well as do "homework," such as reading, writing, singing, playing the piano, ...drawing, or reciting English alphabet or even learning English words. They hope parental efforts and homework will insure the child's outperforming other children in school and being competitive enough in the future to guarantee a higher level of education. (pp. 16-17)

Both Wu (1996) and Chao (1994), who were among the pioneers to call for indigenous constructs, studied primarily young children, so the behavioral characteristics described by Wu and the ideology described by Chao in reference to *guan jiao* might not necessarily be relevant for parents whose children have reached adolescence. When children reach adolescence, even though parents may still believe in the indispensability of *guan jiao*, the behavioral expressions on the part of parents, and the extent of acceptance on the part of children, will change as children mature. However, the basic principle of *guan jiao*, which is to bring up socially competent and successful children, is believed to remain unchanged. Unfortunately, no research explicitly examines the influences of *guan jiao* on adolescent children. Thus, the current study addresses this gap by examining how adolescent adjustment is influenced by parenting behaviors which are daily expressions of *guan jiao*.

#### *Operationalization of Guan Jiao*

The themes most frequently discussed in literature in reference to *guan jiao* include control, monitoring, and expectation, whereas warmth, love, and care are intertwined with control, monitoring, and expectation (Ho, 1986; Wu, 1996). A working definition for *guan jiao* is an index of optimal Chinese parenting behavior

based on Confucian beliefs. Indicators of *guan jiao* include behavioral monitoring, inculcating Confucian principles on filial responsibility, and training children on proper social etiquette. Since *guan jiao* is a generic term for parenting in the Chinese language, it is possible that the measurement of *guan jiao* might be best represented by a multidimensional construct. Thus, the first purpose of the current study, consequently, was to assess the construct validity of *guan jiao* measured by a combination of items which described parental monitoring, and control as perceived by adolescents.

### *The Proper Attitude towards Parents: Xiao*

#### *Conceptualization of Xiao*

*Xiao*, primarily meaning respect for parental authority and belief in one's obligations as a son or a daughter, is a virtue that is highly valued in Confucian China. In the Confucius classic "Book of *Xiao*", *xiao* is taught as the root of all human virtues, which is the key to keep society orderly and prosperous by making it a born obligation that young children follow parents' teaching, adult children take care of senior parents, workers are loyal to employers, and ultimately authority is to be respected and obeyed. Even though some of the traditional elements involved in *xiao* have been adjusted or lost in over 2000 years of history since the time of Confucius, *xiao* is still an important goal of parenting. "Have respect for teachers and seniors; have *xiao* for parents", is written in national behavioral codes for primary school students and high school students. In short, *xiao* is an important part of a child's life growing up in a Chinese family because *xiao* is believed to be the first step of desirable development.

*Xiao* is a core notion in understanding Chinese socialization. As Wu (1996)

suggested, *xiao*, or filial piety if literally translated, is an important goal of Chinese family socialization. *Xiao* is an attitude towards parents (a symbol of *the* family) that includes respect for one's parents, devotion to one's family, belief that one should repay parents' love and efforts, and belief that one should earn a good reputation for the family. The essence of *xiao* is personal responsibility for the family. The value of a person's life is represented by how well his or her personal responsibility for the family is carried out. This attitude affects parent-child relationship, children's choice-making, and children's social performance. It is part of *xiao* that children strive for good performance at school, to be self-disciplined and to be well-behaved. In other words, because *xiao* is seen as an indicator and motivator of good social development, it would make adolescents try to behave in a conventional manner, which is an important way to achieve social status and acknowledgement as a "good child".

#### *Operationalization of Xiao*

A working definition for *xiao* is social expectations for the role of being a son or a daughter based on Confucian principles. Indicators of *xiao* include affect towards parents, appreciation for parents' discipline, respect for parental authority, and understanding of filial obligations. Similar to *guan jiao*, *xiao* is also a generic term in the Chinese language, so it is unclear whether it is best represented by a uni-dimensional construct or a multi-dimensional construct. Therefore, the second purpose of the current study was to assess the construct validity of *xiao* based on measurement items used in the questionnaire.

#### *Relationship between Guan Jiao and Xiao*

Although scholars have discussed the critical value of *guan jiao* and *xiao* in

studying Chinese family socialization, these two constructs have never been empirically linked to one another. As a result, while there is a large body of research suggesting that *guan jiao* leads children to develop *xiao*, no data exist to test and support this relationship. Any possible association between *guan jiao* and *xiao*, consequently, is largely theoretical. The current study is designed to fill this gap in the literature by examining the relationship between *guan jiao* and *xiao*.

*Hypothesis: Guan Jiao as a Predictor for Xiao*

Social cognitive theory (Bandura, 1986) suggests that environmental influences affect a person's cognitive understanding of social roles and rules. Thus, parents' *guan jiao*, as a source of influence from the immediate family environment, affects what adolescents know about what they should do and what they should not do as a son or a daughter, which is represented as *xiao*. As a self-regulatory mechanism for proper behavior, *xiao* is a set of social roles and rules internalized through children's modeling of parental behavior (e.g., how parents treat grandparents) as well as parents' instillation of external standards and expectations. In other words, *guan jiao* provides the daily interactions with parents that serve as the foundation from which children develop *xiao*, whereas *xiao* is a direct manifestation of acceptance of parents' *guan jiao*. Thus, *guan jiao* is hypothesized to be associated positively with *xiao*.

*Theoretical Model: Xiao as Mediator Linking Guan Jiao to Child Outcomes*

Bandura (1986) suggested that environmental forces produce behavioral outcomes through cognitive processing. Therefore, an important mechanism linking parenting influences on adolescent outcomes is adolescents' thoughts and feelings about both their parents and the expectations that parents have for the child.

According to Confucianism, *xiao* is the proper thoughts and feelings that a child should have towards parents. Thus, *xiao* is a strong candidate to mediate the relationship between *guan jiao* and adolescent outcomes in China. That is, according to social cognitive theory, parental influences do not directly result in child outcomes, but through children's interpretation and internalization of parent's requirement, instruction, and expectations. For Chinese people, *xiao* is the optimal result of the internalization process, which is supposed to lead to socially desirable developmental outcomes.

An important purpose of the current study was to examine the process of how parenting influence adolescent outcomes through adolescent's cognitive processing of their roles and responsibilities in China. *Xiao*, a product of children's internalization of parents' *guan jiao*, is hypothesized as the mediator for *Guan jiao* to lead to positive outcomes in adolescents, including lower depression, higher self-efficacy, and less school misconduct. In other words, parents' *guan jiao* was hypothesized to lead to higher level of *xiao* in adolescents, which in turn led to a series of desirable outcomes including little deviance and good mental health, in terms of low depression and high self-efficacy (see Figure 1).

#### *Path 1: Guan Jiao---Xiao---Depression*

##### *Overview of Depression among Chinese Populations*

Research with depression in Chinese populations indicates that family correlates of depression primarily include lack of parental warmth (Chen, Rubin, & Li, 1995; Sun, Hui, & Watkins, 2006) and excessive parental control (Kim & Ge, 2000; Stewart et al., 1998). For example, Chen et al. (2000) conducted a 2-year longitudinal study with a sample of initially 12-year-old mainland Chinese adolescents. They

studied the influences of parental warmth, control, and indulgence on adolescents' social, academic, and psychological adjustment. Results indicated that only maternal warmth negatively predicted depression at Time 2. For another example, Kim and Ge (2000) examined parenting practices (inductive reasoning, monitoring, and harsh discipline) and adolescent depressive symptoms in a sample of Chinese American families. Results suggested that adolescents' perception of disruptive parenting, indicated by a low level of inductive reasoning, a low level of active monitoring, and a high level of harsh discipline, was positively associated with adolescent depressive symptoms. Although the majority of studies on family socialization in China rely on American measures, one exception was a study conducted by Stewart et al. (1998) who included retrospective accounts of mother's training behavior to represent *guan*. Results indicated that *guan* was associated positively with psychological well-being.

The studies reviewed above might suggest that parental warmth and monitoring are associated negatively with Chinese adolescent depression, whereas harsh discipline and restrictive parenting are associated positively with Chinese adolescent depression. Nevertheless, even though similar patterns of associations between depression and parenting variables such as warmth and restrictive parenting have been established in Chinese samples compared with western samples, studies using such western indicators might risk presenting a biased picture of how parenting behavior influences adolescent depression. For example, it is possible that some items representing psychological control for western audience are not typical to Chinese families, whereas some elements of psychological control that are considered necessary for Chinese people are not familiar to western audiences. As Chao (1994) has noted, control measures adopted by Chinese parents actually have different

cultural meanings from what western scholars understand as authoritarian parenting. As a result, this study represents an effort to study Chinese family socialization from a Chinese perspective by assessing *guan jiao* perceived by adolescents and its association with adolescent depression through *xiao*.

#### *Linking Depression to Guan Jiao and Xiao*

*Guan jiao and depression.* According to social cognitive theory (Bandura, 1986), adolescent depression is an emotional reaction that is affected by environmental forces including parenting. However, the relationship between *guan jiao* and adolescent depression needs to be understood in the specific cultural niche where participants are located. In the sociocultural context of China where family organization and hierarchy are supposed to be taken for granted, children will benefit psychologically from parents' *guan jiao*. That is, children are more likely to feel safe and protected because *guan jiao* is considered a necessary component in promoting positive development. The three elements, control, monitoring, and warmth, which represent parents' *guan jiao*, act together to communicate to children that they have responsible and capable parents as well as a healthy family. With responsible and resourceful parents, children are less likely to experience events that might harm their development on the one hand, and are less vulnerable even when they experience events that are upsetting psychologically on the other hand. Thus, *guan jiao* is hypothesized to be associated negatively with depression.

*Xiao and depression.* Social cognitive theory (Bandura, 1986) suggests that a person's cognitive understanding of a situation affects his or her emotional reaction. In the current study, it is hypothesized that *xiao* is associated with positive emotional reaction towards oneself and as well as the environment, hence fewer depressive

symptoms. *Xiao* is the proper thoughts and feelings a child has for parents as a result of his or her internalization of social roles and rules, which primarily refers to feeling close to parents and respecting parental authority. First, a high level of *xiao* involves a child's belief that he or she has a supportive and close relationship with parents, which might protect children from suffering depression (Chen et al., 1995). Second, the development of *xiao* indicates that a child is well-socialized in a culturally appropriate manner. That is to say, a child characterized as *xiao* "fits in" with the cultural expectations on the role of being a son or a daughter. Research suggests that there is an association between fulfilling one's social role and depression (Bosc, 2000). A deficit in social functioning, indicated by inability to fulfill one's roles in environments including work and family, might lead to depression (Tse & Bond, 2004). Therefore, children who have fulfilled the culturally dictated expectation of developing a strong sense of *xiao* might be less likely to develop depression. Taken together, *xiao* is hypothesized to be associated negatively with depression.

*Xiao as the mediator.* As adolescents are active agents in shaping their development, the manner in which environmental forces affect developmental outcomes depends on the interpretations and decisions made by them (Bandura, 1986). That is, whether *guan jiao* can be effective in protecting children from suffering depression depends on the development of *xiao* in children, which is the result of reception and acceptance of *guan jiao*. First, a high level of *xiao* indicates children's willingness to establish and maintain close relationship with parents, which ensures that children are given the best possible care and support by parents. In this way, *xiao* mediates parents' support and care, manifest as *guan jiao*, to protect children from suffering depression. Second, a high level of *xiao* means children's willingness to

appreciate and follow parents' *guan jiao* so as to keep themselves on the right track and be recognized as "good children", which makes children feel good about themselves. Taken together, it is hypothesized that *xiao*, elicited by *guan jiao*, is associated negatively with depression from the perspective of social cognitive theory.

*Path 2: Guan Jiao---Xiao---Self-efficacy*

*The Construct of Self-efficacy for Chinese Participants*

Self-efficacy is an indicator of positive development related to one's sense of self and is defined as people's judgment of their capabilities to attain objectives or desired performance (Bandura, 1986). According to Bandura, low self-efficacy, acting as psychological hindrance to optimal performance, is likely to lead to failure in achieving one's goals. In today's densely populated and fast-developing China where competition is a reality either at school or at work, low perceived self-efficacy which undermines feelings of self-worth might be deleterious for adolescents, as they are exposed to values and necessity of individual competitiveness. Adolescents with low self-efficacy might suffer from cycles of poor performance and depression because they are at a disadvantage in social competitions (Bandura, Pastorelli, Barbaranelli, & Capara, 1999; Stewart et al, 1998). Likewise, adolescents with high self-efficacy are more likely to be able to carry out parental expectations, withstand school-related pressure, and become high achievers. Given the potential of self-efficacy in promoting positive development, the current study aims at examining the relationship between Chinese parenting and adolescent self-efficacy.

However, caution should be taken when applying constructs such as self-efficacy in research on Chinese adolescents because these constructs originate from western societies where independence and individual development are

emphasized. There is no equivalent expression for self-efficacy in the Chinese language. In contrast, Chinese people are known to emphasize humbleness and appreciate self-effacement in social interactions (Yao, 1983). This cultural emphasis leads to the assumption that people are not supposed to assert one's capabilities and achievement in public, especially when talking with seniors. Even though logically it seems that self-efficacy, the quality of believing "I can do it", might play an important role in adolescent development in China, the role of self-efficacy as a product of parental socialization is questionable. In other words, the items commonly used to assess perceived self-efficacy of western samples might not be able to fully capture the psychological state and life experiences of Chinese samples. In order to justify this precaution, construct validity of self-efficacy is examined based on results of factor analysis and patterns of correlation with other variables.

#### *Linking Self-efficacy to Guan Jiao and Xiao*

*Guan jiao and self-efficacy.* Based on social cognitive theory, parents play a prominent role in either promoting or undermining children's perceived self-efficacy (Bandura, 1986). Nonetheless, few studies have actually examined how parenting influences the development of self-efficacy in Chinese adolescents. Although the association is somewhat questionable in China, *guan jiao* is expected to promote adolescent feelings of self-efficacy. *Guan jiao* requires that adolescents conform to socially expected behaviors, especially in reference to academic achievement and proper social behavior. Thus, *guan jiao* provides a culturally appropriate degree of control and support for adolescents to fulfill their culturally required obligations. *Guan jiao* might be able to help adolescents feel efficacious in fulfilling their social roles, including having high academic achievement, behaving properly, and being a

good son or a daughter. That is to say, *guan jiao* is likely to be a positive source of self-efficacy for adolescents. Thus, from the perspective of social cognitive theory, *guan jiao* is hypothesized to be associated positively with adolescents' perceived self-efficacy in the current study.

*Xiao and self-efficacy.* *Xiao* is hypothesized to be associated positively with perceived self-efficacy because the quality of *xiao* makes one believe that he or she is an effective person according to social standards. The development of *xiao* demonstrates that adolescents have internalized proper cultural beliefs. Adolescents who fulfill their cultural obligations, in turn, are more likely to have a higher appraisal of their personal capability. In addition, behaviors generated and guided by the principles of *xiao* might help to gain social support and recognition for adolescents. Social recognition is an important source and reinforcement of self-efficacy (Bandura, 1986). In other words, a child characterized by *xiao* is more likely to win social support to develop high self-efficacy. Taken together, a higher level of *xiao* is hypothesized to be associated with a higher level of self-efficacy.

*Xiao as the mediator.* If there is a positive association between parents' *guan jiao* and self-efficacy, this relationship is likely to be mediated by *xiao*, since the development of *xiao* is the primary indicator of the effectiveness of *guan jiao*. Given the assumption that self-efficacy is a facilitator of success at school or at work, ideas related to self-efficacy might be embraced and encouraged by Chinese parents who are also exposed to the importance of individual competitiveness, and who emphasize achievement through hard work (Chen et al., 1996). That being said, children who demonstrate a high level of *xiao* are more likely to accept parents' ideas and benefit from parents' encouragement because such children are close to parents and have high

respect for parental authority. Thus, *xiao* is likely to be the mediator for the link between *guan jiao* and self-efficacy.

*Path 3: Guan Jiao---Xiao---School Misconduct*

*Conceptualization and Overview of School Misconduct in China*

School misconduct in the current study is conceptualized as common violations of school rules and regulations. Indicators includes cheating on exams, copying homework, skipping school, being inattentive in class (such as reading comic books when the teacher is lecturing or other people are presenting), being irresponsible for one's weekly duty such as cleaning the classroom, bullying classmates, and vandalism.

School misconduct has not been considered by researchers as an issue of concern for Chinese adolescents partly because Chinese society places great emphasis on impulse control, and social sanctions of aggression tend to be severe (Ho, 1986). Also, research supports the idea that Chinese parents are successful in promoting controlled behaviors in children because comparative studies suggest that Chinese children are often characterized as quiet, well-behaved, and obedient (Feldman, Rosenthal, Mont-Reynaud, Leung, & Lau, 1991). Moreover, good academic performance is taken for granted when people speak of Chinese children (Chen et al., 1996). School misconduct is usually assumed to be irrelevant to children who have high academic achievement. As a result, most research has focused on Chinese children's academic performance rather than on school misconduct. The current study aims to fill this gap in research by focusing on misconduct as an outcome measure.

Research with Chinese adolescents generally suggests that parental control and value in tradition are associated negatively with school misconduct. As reviewed

below, studies indicated that Chinese adolescents seemed to be more receptive to parental monitoring and demandingness compared to their western counterparts (Chen et al., 1998). Research also supports the popular belief that individualism is not highly valued in Chinese families. However, when Chinese adolescents endorse individualistic values, they are also more likely to report engaging in school misconduct (Feldman et al., 1991). In other words, traditional values such as *xiao*, which prescribe that adolescents should behave according to social convention, are likely to be associated with less school misconduct.

The few studies that have focused on misconduct among Chinese adolescents provide some evidence for the link between *guan jiao*, *xiao*, and misconduct. For example, Chen et al. (1998) conducted a cross-cultural study comparing misconduct and its correlates in early adolescents from four cultural backgrounds: European Americans, Chinese Americans living in the US, Taiwan Chinese, and Beijing Chinese. Results indicated that parental monitoring was important in reducing misconduct for Beijing Chinese adolescents, and not associated significantly with parent-adolescent conflict for Beijing Chinese, which was different from the patterns revealed in the European American sample. Thus, compared to European American adolescents, Beijing adolescents seemed to be more receptive to parental monitoring which might protect them from getting involved in misconduct. For another example, Feldman et al. (1991) conducted a cross-cultural study comparing adolescents in Australia, Hong Kong, and the US to examine adolescent misconduct and its correlates. Compared with US adolescents, Hong Kong adolescents reported higher value of competence, tradition, and prosocial beliefs. Moreover, values in tradition and being well-socialized were negatively related to misconduct for Hong Kong

adolescents, but they were not significantly related to misconduct for US adolescents. Value in individualism was positively related to misconduct for Hong Kong adolescents, but it was negatively related to misconduct for US adolescents (even though the relationship did not approach significance). Results of this study suggested that value in tradition might be an important protective mechanism for Chinese adolescents to avoid getting involved into misconduct. Taken together, *guan jiao* and *xiao* are expected to have negative associations with adolescent school misconduct because *guan jiao* features culturally valued parental control and monitoring, *xiao* features culturally valued respect for parental discipline, and both *guan jiao* and *xiao* represents traditional Confucian values.

Taken together, an emerging theme in the above cross-cultural studies is that parental supervision and value in tradition are associated negatively with misconduct for Chinese adolescents. However, no studies have examined the influences of Chinese parenting, conceptualized in an indigenous way, on adolescent misconduct. Also, no studies have examined the potential mediational role of *xiao* for the association between *guan jiao* and adolescent misconduct. Therefore, the current study is designed to assess to relationship between *guan jiao*, *xiao*, and school misconduct.

#### *Linking Misconduct to Guan Jiao and Xiao*

*Guan jiao and misconduct.* According to Confucian principles, proper conduct in children is an important outcome that is considered to be a goal of and an indicator of how successfully parents have performed *guan jiao*. That is, Chinese parents expect that their children will not get involved in school misconduct as long as children experience high levels of *guan jiao*. Parental monitoring for proper behavior,

for example, is a salient feature of *guan jiao*, and is intended by parents to reinforce traditional Chinese beliefs regarding valued aspects of child development. Consistent with these arguments, previous research suggests that parenting monitoring and parental valuation of tradition reduce the likelihood that Chinese children will engage in problem behaviors (Feldman et al., 1991). Based on the previous research and theoretical work on Chinese parental socialization, *guan jiao* was hypothesized to be associated negatively with adolescent school misconduct in the current study.

*Xiao and school misconduct.* *Xiao* might be expected to reduce adolescent misconduct as behavioral problems in school are viewed as a violation of parental expectations. The principle of *xiao* encourages children to obey parents and authority figures and, when successfully instilled in children, encourages them to behave according to social conventions. A high level of *xiao* means that adolescents respect parental authority and have internalized messages regarding what behaviors are appropriate for them and, as a result, will obey rules and avoid misconduct at school. Previous research with Hong Kong adolescents suggests that filial piety, a literal translation of *xiao*, was associated negatively with youth misconduct (Feldman et al., 1991). Both adolescents' traditional belief which corresponded with a respectful and loyal attitude towards parents and family encapsulated in the word *xiao* were found to be associated negatively with misconduct.

*Xiao as the mediator.* Given that *xiao* is expected to derive from *guan jiao*, and given that *xiao* is a self-regulatory mechanism that links internalized values to one's actions, the expectation is that adolescents who are high in *xiao* will conform their own behaviors to parents' expectations and requirements and that *xiao* will be associated negatively with school misconduct. Therefore, if parents' *guan jiao* can

successfully elicit adolescent *xiao*, adolescents will be less likely to get involved in school misconduct. In other words, *xiao* might mediate the relationship between *guan jiao* and school misconduct.

No research exists examining the relationships between *guan jiao* and *xiao*, as well as how *guan jiao* and *xiao* act together to influence developmental outcomes. Establishing construct validity of these two indigenous variables would make an important contribution to cultural research on Chinese families. Also, results of the mediation tests, linking *guan jiao* and child outcomes with *xiao*, would help cultural researchers understand the process of Chinese family socialization to a deeper level.

#### *Moderator: Child Gender*

Research suggests that boys and girls are parented differently in Chinese families. For example, sons in Chinese families are expected to assume more responsibility in family decision making than girls because sons carry on the family names (Ho, 1989, cited in Xia et al., 2004). These gender differences in expectations for children based on gender likely influence parenting behaviors and children's response to parenting behavior. Further, boys and girls might perceive or benefit from the same parenting behavior differently. There is evidence to suggest that girls are likely to perceive a closer relationship with their parents even when parent-child communication is equally positive for boys and girls (Xia et al., 2004). As the current study is designed to assess the processes of how *guan jiao* influences child outcomes through *xiao*, it is valuable to examine whether *guan jiao* influences *xiao* and other developmental outcomes differently for boys and girls. Therefore, gender is treated as a moderator in path analyses to evaluate whether significant gender differences exist in the way parenting influences adolescents' *xiao*, depression, self-efficacy, and

school misconduct.

### *Model Summary*

The current study aims at examining the construct validity of *guan jiao* and *xiao* in a southern mainland Chinese sample of early adolescents. The relationship between *guan jiao* and adolescent adjustment, with *xiao* as a partial mediator, is tested. Tentative hypotheses are summarized as follows (see Figure 1).

1. *Guan jiao* is associated negatively with adolescent depression. *Xiao* is a partial mediator between *guan jiao* and adolescent depression.
2. *Guan jiao* is associated positively with adolescent perceived self-efficacy. *Xiao* is a partial mediator between *guan jiao* and adolescent perceived self-efficacy.
3. *Guan jiao* is associated negatively with adolescent school misconduct. *Xiao* is a partial mediator between *guan jiao* and adolescent school misconduct.

The current study was different from previous studies in several ways. First, the construct validity of indigenous notions is examined. Second, mediation models with the indigenous concept *xiao* that had not been considered in previous research were tested, which provided a richer explanation of the process of parenting influences on adolescent outcomes in mainland China. Third, both indigenous and American concepts were incorporated in the same models. Fourth, attention was focused on problems in adolescent development, instead of the popular outcome measure of academic achievement. Finally, data were collected from an area in China that was infrequently studied by western researchers.

## CHAPTER III

### METHOD

#### *Sample*

Early adolescents from a primary school in Guangzhou, the capital city of Guangdong province, China, were surveyed. Guangzhou is a city of 10 million people located in the Pearl River Delta of southern China that dates back 2,200 years (“About Guangzhou,” n. d.). During the past two and a half decades of economic reform in China, Guangzhou has been transformed from an agricultural to an industrial economy with an average annual increase in Gross Domestic Product (GDP) of 13% during that time span. Also, Guangzhou is one of the fastest developing cities in China with a 2005 per capita GDP of nearly 7,000 US dollars, which ranked first among the 10 biggest cities in mainland China. Guangzhou, like many other coastal cities of southern China, is considered a wealthy city. The sample for this study, consequently, might not be representative of an “average” Chinese adolescent, but rather students residing in medium to large coastal cities in southern China. Although the generalizability of findings to Chinese youth as a whole may be questionable, this sample is desirable as the youth do represent young Chinese with the greatest exposure to western media, a capitalist economy, and western influences (due to distance from Beijing and proximity to Hong Kong).

The sample was recruited through personal contacts with administration, teachers, and staff at participating schools. All students from the 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> grades

(245 in total) were invited to participate in the survey. The final sample was comprised of 70 students for whom parental consent forms were obtained. Seven participants were dropped from the data set due to incomplete data on most measurement items. Among the remaining 63 participants, 30 were boys and 32 were girls (the value for gender was missing for one participant). Participants were between 10 and 13 years of age (mean=11.47, standard deviation = 1.02).

According to feedback from school teachers who were in charge of collecting consent forms and administering student surveys, the low response rate (29%) resulted from parental confusion and mistrust regarding consent procedures. Given that most Chinese parents are not familiar with consent procedures to participate in research and, rather, trust what schools would ask them and their children do to, when asked for consent from an American institution, the parents likely interpreted the research project as unknown and significant risk.

The final sample might be biased towards good students from two-parent families. 87.1% of participants reported that they lived with both of their parents. 27.9% of the participants reported that their families' income level was above average, and 67.2% chose the "about average" category, whereas 4.9% perceived that their families' income level were below average. Only 1 student reported that he or she ranked below the 40<sup>th</sup> place in tests and exams out of 43 children in each classroom, about one third of the students were between 20<sup>th</sup> and 39<sup>th</sup> , one third were between 11<sup>th</sup> and 19<sup>th</sup> , and another one third of the students reported that they ranked within the top ten in their class.

#### *Procedure*

The questionnaire and consent forms were first translated into Chinese by the

author. Subsequently, a group of Chinese graduate students currently studying in the US were asked to read over both the English and Chinese versions of the questionnaire and consent form. They were asked to complete the questionnaire and give their opinions about inappropriateness in translation or in wording of the items. Chinese versions of the questionnaire and consent form were finalized based on these students' suggestions.

As required by the university Institutional Review Board, school consent was obtained through the principal of the school before parental consent forms were mailed to the school principal who helped to obtain parental consent and student assent. Students brought home the parental consent forms to obtain parental signatures, and the school administration also followed up with a parent-teacher-association meeting to further explain the purpose and procedures of the research project. Finally, parental consent and student assent were obtained for 70 students, who completed the questionnaires in their classrooms during class time in an afternoon, supervised by the head teachers of each class as well as the principal herself.

### *Measures*

Principle component factor analyses were performed for all scales measuring the 5 study variables: *guan jiao* (monitoring, Chinese style control, and warmth), self-efficacy, depression, *xiao*, and school misconduct (see Appendices). A varimax rotation procedure was adopted to extract factors with eigenvalues of above 1.0. The purpose of exploratory factor analyses was to assess the construct validity of scales based on information in the current data set. Exploratory factor analyses were appropriate in the current context because most scales were constructed specifically for this study, and the two popularly used scales, CES-D and the General Self-efficacy

scale, have not been previously used with samples of young adolescents in southern China. Based on results from these analyses, some items were deleted from the original scale because of low factor loadings, whereas some scales were broken into multiple factors that represent distinct constructs within a particular measure.

Reliability was assessed for the scales retained in final analyses. Composite scores were calculated for each study variable and used in following analyses. Means and standard deviations of each variable were provided for the study variables (see Table 1).

*Chinese parenting: guan jiao.* *Guan jiao* was operationalized as a combination of active monitoring and Confucian style control. The 7-item Parental Monitoring Scale (PMC) and the 11-item (one item is omitted from the original scale) Chinese Parental Control Scale (CPCS) developed by Shek (2005) were selected to assess *guan jiao* as perceived by adolescent participants in the current study. Response choices were in terms of a Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). For paternal *guan jiao*, two factors emerged which accounted for over 36% of the variance in the items in principle factor analysis. The first factor was composed of the following items with factor loadings of above .50: (a) “my father usually checks my homework”, (b) “my father actively understands my situation in school”, (c) “my father takes initiative to understand my academic progress”, and (d) “my father takes initiative to understand who my friends are”. The second factor was composed of the following items with factor loadings of above .50: (a) “my father expects me to have good virtues and behavior”, (b) “my father expects me to be obedient”, and (c) “my father expects me to be mature”. Inspection and comparison of the two components revealed that the first factor primarily assessed father’s

behavioral monitoring of children, labeled as “*guan*”, with a Cronbach’s alpha of .76, whereas the second factor primarily assessed father’s encouragement of filial piety, labeled as “*jiao*”, with a Cronbach’s alpha of .87. The results for maternal *guan jiao* were similar. The same two factors were extracted with the exception that one additional item loading with *jiao* which stated “my mother expects me to interact with older people with respect and courtesy”. Cronbach’s alpha was .78 for mother’s *guan* and .82 for mother’s *jiao*.

*Self-efficacy.* General self-efficacy was assessed with the 15-item general subscale of the Self-Efficacy Scale (Sherer et al., 1982). This scale assessed participants’ belief in their ability to deal with challenges in general situations. Response choices ranged from 1 (strongly disagree) to 4 (strongly agree) and items included sentences such as “I am a self-reliant person”. Ten items with negative valence were reverse coded. Principle component factor analysis extracted two major factors, with one labeled as “general self-efficacy” and the other labeled as “work-related self-efficacy”. The general self-efficacy variable was composed of the following 4 items: (a) “when I set important goals for myself, I rarely achieve them”, (b) “I feel insecure about my ability to do things”, (c) “I give up easily”, and (d) “I give up on things before completing them”. Cronbach’s alpha was .70 for this summary measure. Items assessing work-related self-efficacy included the following 4 items (a) “one of my problems is that I cannot get down to work when I should”, (b) “I avoid trying to learn new things when they look too difficult”, (c) “if something looks too complicated, I will not even bother to try it”, and (d) “when unexpected problems occur, I don’t handle them well”, with a Cronbach’s alpha of .58. The reliability was low, which could be due to the few number of items. However, the

composite variable demonstrated significant or marginally significant correlations with several other variables, which indicated that the measure was likely to have adequate validity for this sample. Thus, the measure was retained in the analyses.

*Depression.* Depression was assessed with the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). The 20-item scale assessed the frequency that participants have depressive symptoms such as fearfulness, loneliness, and poor appetite during the past two weeks. Sample items included “I felt that everything I did was an effort” and “people were unfriendly”. Responses choices ranged from 0 (rarely) to 3 (most or all of the time). The most important factor extracted from the 22 items, accounting for over 40% of the common variance, was composed of 10 items which mainly assessed depressive mood. This component was not highly correlated with other components describing other depressive symptoms such as somatic complaints. The 10 items retained to construct the summary variable of adolescent depression included (a) “I was bothered my things that usually don’t bother me”, (b) “I had trouble keeping my mind on what I was doing”, (c) “I felt depressed”, (d) “I thought my life had been a failure”, (e) “I felt fearful”, (f) “I was unhappy”, (g) I felt lonely”, (h) “people are unfriendly”, (i) “I felt sad”, and (j) “I could not get going”. Cronbach’s alpha was .92 for the items, which indicated a high degree of internal consistency for the refined measure.

*Xiao: proper attitude towards parents according to Confucian beliefs.* A 10-item scale was constructed to assess adolescents’ *xiao* towards both mother and father. Items comprising this scale were designed specifically for this study and were derived from the literature on Chinese parental socialization (Chao, 1994; Ho, 1986; Shek & Chan, 1999). Sample items included “I respect my mother/father”, “I should

live up to my mother/father's expectations of me", and "I should do something to repay my mother/father's efforts". Also, two items selected from the Satisfaction with Parental Control Scale developed by Shek (2005) were included: "I feel that how my father/mother disciplines me is reasonable" and "I believe how my father/mother disciplines me is beneficial to me". On the whole, the statements indicated a proper attitude towards parents according to Confucian beliefs. Participants responded in terms of a Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Two factors were extracted from the both the mother scale and the father scale. The first component assessed children's affection and emotional obligation towards' parents, labeled as "*xiao*-filial obligation", whereas the second component assessed children's respect for parental authority, labeled as "*xiao*-filial piety". The first component was composed of the following items: (a) "I love my father/mother", (b) "I respect my father/mother", (c) "I should do something to repay my father/mother's efforts", and (d) "I should live up to my father/mother's expectations on me". Cronbach's alpha was .85 for the mother scale and .87 for the father scale. The second component included the following items: (a) "I think my father/mother understands me", (b) "I feel that my father/mother's discipline is reasonable", (c) "I believe how my father/mother disciplines me is beneficial to me", and (d) "I turn to my father/mother for advice". Cronbach's alpha was .79 for the mother scale and .81 for the mother scale.

*School misconduct.* A 10-item scale was constructed for this study to assess the frequency of adolescents' school misconduct. Items were based on telephone interviews (conducted prior to the school-based survey) with Chinese teachers who identified typical problem behaviors among their students. Based on responses from

these teachers, items were constructed to assess how often participants fight, bully classmates, are inattentive in class, steal things, fail to turn in homework, copy homework, cheat on exams, lie to parents or teachers, and fail to complete group tasks such as cleaning the classroom. These problem behaviors were typically labeled by local teachers as conventional school misconduct for students between the ages of 10-13. Adolescent participants indicated their responses on a Likert scale ranging from 1 (never) to 5 (always). The item “not attentive in class” and the item “theft” were dropped from the scale due to low factor loadings in the principle component analysis. Cronbach’s alpha for the revised scale for school misconduct was .81. A higher composite score indicated higher frequency of getting involved in school misconduct.

### *Plan of Analysis*

#### *Preliminary Analyses*

First, descriptive statistics were provided for participants’ demographic information and study variables. Second, zero-order correlations were performed for all the study variables, and these results are used as evidence to support the construct validity of measurement scales, and to make decisions regarding mediation and moderation tests.

#### *Mediation and Moderation Tests*

First, regression analyses were used to test the 3 hypothesized paths (see Figure 1). Baron and Kenny’s (1986) procedure were used to test mediation effects. For each path, mediation was established with the following four steps

1. The dependent variable (e.g., depression) is regressed on the independent variable (*guan jiao*), and a significant regression weight is obtained.

2. The potential mediator (e.g., *xiao*) is regressed on the independent variable, and a significant regression weight is obtained.
3. The dependent variable is regressed on the potential mediator, and a significant regression weight is obtained.
4. The dependent variable is regressed on the independent variable controlling for the potential mediator, the regression weight is no longer significant or is smaller than that obtained in Step 1.

Second, moderation effects were tested and interpreted following the procedures outlined in Aiken and West (1991). Product terms were created by multiplying gender by each independent variable (these variables were mean centered prior to creating product terms) and entered after control variables and independent variables in regression analyses to assess their statistical significance. In cases where product terms were statistically significant, simple slopes were analyzed further for boys and girls separately.

## CHAPTER IV

### RESULTS

#### *Preliminary Analyses*

##### *Descriptive Analyses*

Means and standard deviations of each variable were presented in Table 1. Because few students reported ever getting involved in school misconduct, the school misconduct scale was highly skewed. Since skewness of a variable might violate assumptions of regression analyses and decrease statistical power, a new variable, labeled “misconduct count”, was created to remedy this problem. A count of 1 was applied whenever a student reported a “once in a while” (B), “sometimes” (C), “very often” (D), or “always” (E) for any of the 8 items retained in the scale. As a result, the new variable indicated the number of behaviors listed in the scale that participants reported that they were ever involved in. Skewness for the variable of “misconduct count” was reduced from 3.3 to 1.3 compared with the original scale.

##### *Zero-order Correlations (see Table 2)*

*Guan jiao* and *xiao*. Mother’s *guan* correlated positively with father’s *guan* ( $r = .39, p = .00$ ), and mother’s *jiao* correlated positively with father’s *jiao* ( $r = .40, p = .00$ ). There were no significant correlations between *guan* and *jiao* for either mother or father, suggesting that *guan* and *jiao* were distinct parenting strategies as perceived by adolescents. Filial obligation for mother, filial piety for mother, filial obligation for father, and filial piety for father were correlated positively with each other, suggesting

that adolescents who reported a high level of *xiao* for mother also tended to report a high level of *xiao* for father. Mothers' *guan* had significant correlations with both filial obligation for mother ( $r = .32, p = .01$ ) and filial piety for mother ( $r = .31, p = .02$ ), but not with either of the indicators of *xiao* for father. On the contrary, mother's *jiao* correlated positively with indicators of *xiao* for both mother and father (filial obligation for mother,  $r = .54, p = .00$ ; filial piety for mother,  $r = .37, p = .01$ ; filial obligation for father,  $r = .57, p = .00$ ; filial piety for father,  $r = .45, p = .00$ ). Out of the four indicators of *xiao*, father's *guan* demonstrated significant correlation only with filial piety for father ( $r = .38, p = .00$ ), whereas father's *jiao* correlated positively with filial obligation for mother and filial piety for mother. Taken together, a higher level of *guan jiao* experienced from parents generally was associated with a higher level of *xiao* towards parents, even though the patterns of correlation suggest that the various dimensions of *guan jiao* might have different influences on adolescent *xiao*.

*Guan jiao* and outcomes. Mother's *jiao* correlated negatively with child depression ( $r = -.60, p = .00$ ) and school misconduct ( $r = -.35, p = .01$ ), which indicated that adolescents who reported higher levels of mother's *jiao*, or encouragement of filial piety, were likely to report lower levels of depression and misconduct. There was a marginally significant correlation between father's *jiao* and work-related self-efficacy ( $r = .23, p = .07$ ), which might signal the trend that the more encouragement of filial piety from father adolescents experienced, the higher work-related self-efficacy adolescents would develop. Neither mother's nor father's *guan* demonstrated significant correlations with any of the outcome variables.

*Xiao* and outcomes. Both indicators of *xiao* for mother, filial obligation and filial piety, were negatively associated with depression ( $r = -.27, p = .05$  for filial

obligation;  $r = -.42$ ,  $p = .00$  for filial piety), while only filial piety for mother correlated significantly with school misconduct ( $r = -.28$ ,  $p = .03$ ). Filial piety for father correlated significantly with both depression and work-related self-efficacy ( $r = -.34$ ,  $p = .01$  for depression;  $r = .31$ ,  $p = .02$  for work-related self-efficacy). Taken together, the patterns of correlation between indicators of *xiao* and outcome variables suggested that a higher level of *xiao* reported by adolescents was associated with a higher degree of positive adjustment outcomes, including lower depression, less misconduct, and higher work-related self-efficacy.

Based on the patterns of correlation between variables, the model was tested with specific indicators of those constructs. That is, the theoretical model was examined only with variables that demonstrated significant correlations with each other, because if there were no significant correlations among the independent variable, mediator, and outcome variable, mediation would not be supported (Baron & Kenney, 1986). Thus, the hypothesized paths were tested with the following three sets of variables (see Figure 2):

1. Mother's *jiao* (mother's encouragement for filial piety) was entered to predict depression through filial obligation for mother, which was denoted as Path 1.1.
2. Mother's *jiao* was entered to predict depression through filial piety for mother, which was denoted as Path 1.2.
3. Mother's *jiao* was entered to predict school misconduct through filial piety for mother, which was denoted as Path 3.

Hypothesis 2 (Path 2 in Figure 1) suggested that *xiao* would partially mediate the association between *guan jiao* and self-efficacy was dropped because none of the

indicators of *guan jiao* demonstrated significant correlations with either general self-efficacy or work-related self-efficacy (even though father's *jiao* was marginally correlated with both work-related self-efficacy,  $\beta = .23$ ,  $p = .07$ ). As a result, Hypothesis 2 was not supported.

### *Mediation*

#### *Path 1.1: Mother's Jiao – Filial Obligation for Mother – Depression*

Path 1.1 represented Hypothesis 1 and suggested that *xiao* would partially mediate the association between *guan jiao* and adolescent depression. Results indicated that mother's *jiao* was a significant predictor of both adolescent depression ( $\beta = -.60$ ,  $p = .00$ ) and filial obligation for mother ( $\beta = .54$ ,  $p = .00$ ). Filial obligation for mother was also a significant predictor of child depression ( $\beta = -.27$ ,  $p = .05$ ). When both the mediator and the independent variable were entered in the same regression equation, mother's *jiao* remained a significant predictor of child depression ( $\beta = -.61$ ,  $p = .00$ ) even with *xiao* (filial obligation for mother) in the model. In other words, the beta weight of the independent variable was not affected by controlling for the mediator. Taken together, these results suggested that filial obligation for mother was not a mediator for the association between *jiao* and adolescent depression. Mother's *guan jiao*, indicated by *jiao* (encouragement of filial piety), had a strong direct effect on adolescent depression, but not an indirect effect through adolescents' *xiao* (filial obligation for mother) and, as a result, hypothesis 1 was not supported (see Table 3).

#### *Path 1.2: Mother's Jiao – Filial Piety for Mother – Depression*

Path 1.2 also represented Hypothesis 1 which suggested that *xiao* would partially mediate the association between *guan jiao* and adolescent depression.

Support for this proposed mediated association was observed as results suggested that mother's *jiao* was a significant predictor of adolescent depression ( $\beta = -.60, p = .00$ ), mother's *jiao* was a significant predictor of filial piety for mother ( $\beta = .57, p = .00$ ), and filial piety for mother significantly predict adolescent depression ( $\beta = -.42, p = .00$ ). In the final step, both the mediator and the independent variable were entered into the same regression equation. Mother's *jiao* was still a significant predictor of adolescent depression even with filial piety for mother in the model ( $\beta = -.52, p = .00$ ). Since there was a decrease in the beta weight of the independent variable in predicting the dependent variable after controlling for the mediator, the Sobel test (Preacher & Leonardelli, 2006) was performed to examine the significance of the decrease in beta weight. Results of the Sobel test indicated that the indirect effect of mother's *jiao* on adolescent depression via filial piety for mother was significantly different from zero ( $t = -2.8, p = .00$ ). Taken together, these results suggested that filial piety for mother partially mediated the influence of mother's *jiao* on adolescent depression. In other words, mother's *guan jiao*, indicated by *jiao* (encouragement of filial piety), had both a direct association on adolescent depression, and an indirect association through *xiao*, indicated by filial piety for mother (see Table 3). In sum, Hypothesis 1 was supported with this set of variables entered into the model. There was partial mediation by *xiao* for the association between *guan jiao* and adolescent depression.

*Path 3: Mother's Jiao – Filial Piety for Mother – School Misconduct*

Hypothesis 3 suggested that *xiao* would mediate the association between *guan jiao* and adolescent school misconduct. Results in reference to Hypothesis 3 suggested that (a) mother's *jiao* was negatively associated with school misconduct ( $\beta = -.35, p = .01$ ), (b) mother's *jiao* was positively associated with filial piety for

mother ( $\beta = .57, p = .00$ ), and (c) filial piety for mother was negatively associated with school misconduct ( $\beta = -.28, p = .03$ ). Taken together, these results suggested that these Chinese adolescents who experienced greater demands for filial piety from mothers might respond with greater respect for mothers. These adolescents who demonstrated greater respect for mothers, in turn, might avoid engaging in problem behaviors in school. As a final step to assess whether or not filial piety for mother would mediate the association between mother's *jiao* and school misconduct, both mother's *jiao* and filial piety for mother were entered in the same regression equation to predict school misconduct, and results suggested that mother's *jiao* was no longer a significant predictor of school misconduct with filial piety for mother included in the model ( $\beta = -.26, p = .09$ ). Based on Sobel tests (Preacher & Leonardelli, 2006), it seemed that the indirect effect of mother's *jiao* on school misconduct via filial piety for mother was significantly significant, or that, filial piety for mother fully mediated the influence of mother's *jiao* on adolescent school misconduct. In sum, there is support for Hypothesis 3 because the relationship between *guan jiao*, indicated by mother's *jiao* (encouragement for filial piety), and school misconduct was mediated by *xiao*, indicated by filial piety for mother (see Table 4).

#### *Moderation*

After mean-centering all continuous variables, interaction terms were created by multiplying gender with indicators of *guan jiao*. The dependent variables (depression, general self-efficacy, work-related self-efficacy, misconduct, filial obligations for mother and father, filial piety for mother and father) were regressed on gender, the indicators of *guan jiao*, and the interaction terms. Results suggested that there was a significant interaction between gender and father's *guan* (behavioral

monitoring), as well as between gender and father's *jiao* (encouragement of filial piety), in predicting general self-efficacy (see Table 5). Post hoc analyses were conducted by regressing general self-efficacy on the two paternal variables for boys and girls separately (see Table 7). Results indicated that the association between father's *guan* and general self-efficacy was positive for boys ( $\beta = .43, p = .03$ ), but negative for girls ( $\beta = -.33, p = .08$ ). In contrast, the association between father's *jiao* and general self-efficacy was negative for boys ( $\beta = -.20, p = .31$ ), but positive for girls ( $\beta = .34, p = .07$ ). Results suggested that the associations between father's *guan* and general self-efficacy might vary by gender, or father's *guan* and father's *jiao* have opposite influences on general self-efficacy for girls and boys. There was also a significant interaction between gender and mother's *jiao* in predicting filial obligations for mother (see Table 6). Post hoc analysis (see Table 7) indicated that there was a stronger association between mother's *jiao* and filial obligations for mother for girls than boys ( $\beta = .74, p = .00$  vs.  $\beta = .42, p = .04$ ). This result might signal that mother's *jiao* was a stronger predictor of filial piety for mother for girls compared with boys.

## CHAPTER V

### DISCUSSION

#### *Summary of Results*

The purpose of the current study was to examine how *guan jiao* influenced adolescent adjustment through adolescents' *xiao* in a sample of mainland Chinese adolescents. Results suggested that both *guan jiao* and *xiao* were significantly associated with positive adjustment, indicated by lower levels of depression, higher levels of self-efficacy, and lower levels of school misconduct. Moreover, there was evidence to support that *xiao* mediated the association between *guan jiao* and depression, as well as the association between *guan jiao* and school misconduct. Results also suggested that the influence of *guan jiao* might vary by gender in predicting adolescent outcomes.

Both *guan jiao* and *xiao* are everyday terms in the Chinese language in reference to family socialization. *Guan jiao* is an index of optimal parenting behavior according to Confucian principles. *Xiao*, a direct goal of parents' *guan jiao*, refers to children's loyal and respectful attitudes towards parents, which are considered to be the product of individuals' understanding and appreciation of the responsibilities inherent in their roles as a son or a daughter. Parents' *guan jiao* and children's *xiao* are believed to provide the foundation for positive developmental outcomes (Ho, 1986; Wu, 1996). These two intuitively important constructs in understanding Chinese family socialization, however, have never been empirically examined in the same study.

To bridge this gap in the literature, the current study applied social cognitive theory to incorporate indigenous constructs along with typical indicators of adolescent outcomes to assess parental socialization processes with a sample of young Chinese adolescents. Bandura (1986) posited that individuals' cognitive processing mediates the relationship between environmental influences and individual development. Accordingly, in the current study, *xiao* was conceptualized as children's cognitive processing of the parenting they experienced and was, thus, expected to mediate the relationship between *guan jiao* and child outcomes. Results provided support for the mediation hypotheses and consequently, for the application of social cognitive theory in understanding adolescent development in China.

#### *The Constructs of Guan Jiao and Xiao*

A major contribution of the current study was providing empirical support for the utility of two important indigenous constructs in research on Chinese adolescent development: *guan jiao* and *xiao*. Although *guan jiao* and *xiao* are central elements of parental socialization in China, they have not been empirically assessed. One important preliminary finding of the current study, as a result, was that principle component factor analysis suggested that *guan jiao* was best represented by two variables, labeled as *guan* and *jiao*. *Xiao* was also best represented by two variables, labeled as filial obligation and filial piety. One important implication of these results (which will require replication) is that *guan jiao* and *xiao* may be comprised of distinct elements that, in and of themselves, should be considered as influences on child outcomes in China.

#### *The Construct of Guan Jiao*

In the factor analysis with the measure of *guan jiao*, two distinct variables

were retained: *guan*, which assessed parents' supervision over children's schoolwork and school-related activities, and *jiao*, which assessed parental expectations communicated to children in regard to socially proper behavior for a son or a daughter. Further evidence for the distinctiveness of these two constructs was the lack of significant correlations between the two dimensions for reports of either mothers or fathers. Lack of correlations between the two indicators of *guan jiao* suggested that even though *guan jiao* is an overarching paradigm of parenting for Chinese people, *guan* and *jiao* may be best represented as two distinct dimensions. Further, the distinctiveness between *guan* and *jiao* implies that Chinese parents who focus on *guan* or *jiao* alone are unlikely to fulfill their responsibility of *guan jiao* or to realize the socialization goals inherent in *guan jiao*.

Findings in reference to patterns of correlations between indicators of *guan jiao* and adolescent adjustment outcomes indicated that *jiao* was associated with lower levels of misconduct, less depression, and higher self-efficacy, which provided support for arguments that *guan jiao* is important in promoting desired adolescent outcomes (Chao, 1994; Wu, 1996). More specifically, mother's *jiao* correlated negatively with school misconduct, as well as adolescent depression, and a marginally significant correlation was obtained between father's *jiao* and work-related self-efficacy. This trend might imply that father's *jiao* was more important for children's work-related development, whereas mother's *jiao* was more important for children's social-emotional development, indicated by depression and misconduct.

Neither mother's nor father's *guan* demonstrated significant correlations with any of the adolescent outcomes. The fact that adolescents who reported higher levels of *guan* did not necessarily report lower levels of school misconduct and better mental

health might signal that there is great variability among adolescents growing up in today's China and that the efficacy of parental behavioral monitoring might be fading. Traditionally, Chinese children have been characterized as obedient and Chinese parents have been characterized as highly controlling (Ho, 1986). However, results of the current study suggested that *guan* might not be uniformly effective for Chinese adolescents. For example, a father who actively tries to understand how his child is doing at school might have no idea, or cannot do much about, the fact that his child actually fails to turn in homework, suffers from depression, or considers himself incapable of doing well at school. Whereas the father continues to follow Confucian principles in his parenting, his child grows up in a changing society that increasingly values individualism and independence (Chen, 2005). That is to say, young people might not benefit from mere behavioral monitoring from parents whose primary concern is how well their children do at school (Tian, 2004). Adolescents should benefit more from parents who concern about children's overall development besides academic achievement and who respect children's need for independence. Further, for adolescents who start to learn to value of independent thinking, their own internalization of what they should do and what they should not do might be more important for their adjustment than behavioral monitoring from parents. Also, the efficacy of parental behavioral monitoring might vary as a function of adolescents' internalization of behavioral standards in influencing adjustment outcomes.

Alternatively, the lack of significant correlations between *guan* and adolescent outcomes may be due to measurement issues. The outcome variables in this study did not directly assess children's schoolwork, whereas the measure of *guan* mainly assessed how often parents check homework or follow up with adolescents' academic

progress. As such, *guan* might be more relevant to outcome variables such as academic achievement or academic motivation. That being said, it was surprising that *guan* did not correlate with school misconduct, which was measured by items such as “copying homework”, “failing to turn in homework”, and “cheating in exams”. Nevertheless, the limited variability in the school misconduct variable may be another reason why a significant association between *guan* and school misconduct was not observed.

By conceptualizing Chinese parenting in term of *guan jiao* with its multiple dimensions, these data suggested that *guan jiao* be an important influence for adolescent development. Moreover, the patterns of correlation between indicators of *guan jiao* and outcome variables suggested that *jiao* seemed to be more important or influential than *guan* for adolescent adjustment. That is to say, adolescents might benefit more from parents’ encouragement for the development of personal behavioral standards than from parents’ actual outward control.

#### *The Construct of Xiao*

*Xiao* is a generic term in the Chinese language meaning that children have a sense of filial obligations to parents, which is believed to be the proper attitude towards parents and the foundation of all good outcomes in children. Principal component factor analysis revealed that *xiao* was best represented by two variables, filial obligation and filial piety. Filial obligation referred to the obligation to feel close to parents and live up to parents’ expectations. Filial piety referred to appreciation of parental discipline, willingness to follow parental instruction, and willingness to turn to parents for advice. Significant positive correlations were obtained between both indicators of *xiao*, which suggested that these distinct elements might be intertwined

with each other. That is, adolescents who reported a high level filial obligation for mother tended to report having a high level of filial piety for mother, filial obligation for father, as well as filial piety for father. Nevertheless, for researchers interested in the construct of *xiao*, it is important to differentiate its various indicators, because even though elements of *xiao* correlated with one another, they relate in a different manner to both predictor variables (*guan jiao*) and to adolescent outcomes.

The patterns of correlation generally supported arguments by Chinese scholars in reference to traditional family socialization in China (Ho, 1986; Wu, 1996). That is, *xiao* was associated with healthy developmental outcomes for Chinese children including lower levels of depression, higher levels of self-efficacy, and lower levels of school misconduct. Filial obligation for mother, which referred to children's obligation to feel emotionally connected to mother and was assessed by items such as "I love my mother", correlated negatively with depression. This association echoed findings in previous studies with Chinese samples (Kim & Ge, 2000) and western samples (Amato & Fowler, 2002). Filial piety for mother was associated negatively with school misconduct, meaning that children who followed mother's discipline and behaved according to mother's expectations were less likely to get involved in school misconduct. Filial obligation for father did not correlate with any of the outcome variables, which might suggest that filial obligation for father might not be relevant for the development of depression, self-efficacy, and misconduct of these participants. Filial piety for father correlated negatively with depression, suggesting that children who appreciated father's discipline and authority tended to report less depressive symptoms. Filial piety for father correlated positively with work-related self-efficacy, which indicated that children who respect father as a source of authority might believe

themselves as more competent at work or at school. Taken together, *xiao* has important implications for adolescent adjustment outcomes, but different dimensions of *xiao* might influence adolescent outcomes differently. Also, *xiao* for mother were associated with adolescent outcomes differently compared with *xiao* for father.

#### *The Relationship between Guan Jiao and Xiao*

Although conceptions of *guan jiao* and *xiao* are central to the popular view on child rearing in China, to date, no studies have attempted to operationalize these constructs and consider how they might be related with each other and with developmental outcomes. As such, while many Chinese parents believe that these elements of parent-adolescent relations are key to healthy human development, there is no research to support that view. A major implication of this study, consequently, is that it is the first to demonstrate the link between the two constructs with empirical data collected in an infrequently studied area in mainland China.

Regression analysis revealed that indicators of *guan jiao* were positive predictors of indicators of *xiao*. Adolescents who reported high levels of *guan jiao* experienced from parents also tended to report high levels of *xiao*. This finding confirmed Wu's (1996) description of *xiao* that *xiao* was the primary goal as well as an important criterion of the effectiveness of *guan jiao*. Most importantly, the significant association between *guan jiao* and *xiao* provided support for the application of social cognitive theory in understanding the relationship between parenting and its immediate outcome, which is children's cognitive processing of their experiences of parenting. Bandura (1986) suggested that individuals develop self-standards for social behavior by internalizing relevant environmental input. For Chinese children, *xiao* represents a set of self-standards in regard to dealing with the

parent-child relationship including respect for their parents, following their parents' discipline, and living up to parental expectations. According to social cognitive theory, the development of these self-standards in children comes from children's reception and acceptance of parents' instillation of relevant ideas. In other words, *guan jiao* predicted *xiao* in the sense that *guan jiao* is an environmental source for children's cognitive processing in regard to social expectations on the filial role, which results in *xiao*.

### *Implications*

Future research will benefit from incorporating *guan jiao* and *xiao* into theoretical models of Chinese parental socialization of adolescents. As is demonstrated in the current study, the two traditional terms are still important in promoting positive adolescent adjustment in China. Also, by examining the various dimensions of *guan jiao* and *xiao*, researchers will be able to gain more evidence in reference to which specific aspect of parenting (*guan jiao*), or which specific aspect of children's attitude towards parents (*xiao*), is related to specific aspects of adolescent outcomes.

The findings on the relationship between *guan jiao* and *xiao* are encouraging for people who worry that collectivistic values are eroding among youth in China who are believed to embrace materialistic, individualistic values brought about by economic reform and globalization (Chen, 2005). That is, *guan jiao*, which is traditionally considered to be optimal parenting in China, is positively associated with *xiao*, which is considered to be an important goal of *guan jiao* (Chao, 1994; Wu, 1996), among participants in the current study who reside in a "westernized" city in China. These findings might suggest that Confucian principles in reference to family

socialization are still well-established against the backdrop of sociocultural changes in today's China.

It is worth noting that parents' *guan jiao*, primarily indicated by items assessing parental monitoring and control, predicted filial obligation indicated by items such as "I love my mother/father". Compared with findings from studies conducted in the U.S. which emphasized the importance of parental warmth (indicated by items such as "my mother tells me she loves me") in promoting positive parent-child relationship and child outcomes (e.g., Amato & Fowler, 2002), findings in the current study seem to suggest that adolescents feel warmth and become connected to parents from parents' behavioral monitoring and training instead of parents' outward expression of warmth and love (Chao, 1994). As such, parental warmth is likely to be intertwined with *guan jiao*. In other words, Chinese adolescents might interpret parents' *guan jiao* as parental love and feel that they should love their parents as well.

#### *Mediation: Guan Jiao --- Xiao --- Adjustment Outcomes*

##### *Results of Mediation Tests*

The association between mother's *jiao* and adolescent depression was partially mediated by filial piety for mother, an indicator of *xiao*. Filial piety is a product of the cognitive processing of mother's *jiao* (i.e., encouragement of filial piety). As children themselves are active agents in shaping their development (Bandura, 1986), understanding the meaning of mother's *jiao* and using it to guide their own behavior makes them feel that they are good children and have a good mother-child relationship, so they are less likely to suffer from depression. Taken together, these results suggested that mother's *guan jiao* protects adolescents from suffering

depression both directly and indirectly through its positive association with *xiao*.

The influence of mother's *jiao* on school misconduct was completely mediated by filial piety for mother, which provided support for the hypothesis that *xiao* mediated the influence of *guan jiao* on adolescent misconduct. As Bandura (1986) suggested, cognitive processing links knowledge to action. Adolescents' behavioral outcomes are partly influenced by mother's expectations for filial piety, and partly influenced by adolescents' own decisions in regard to mother's expectations. Only when adolescents understand and internalize mother's *jiao*, which is manifest in the development of *filial piety*, will they actively choose not to get involved in school misconduct. That is to say, mother's encouragement of filial piety leads to the development of filial piety in adolescents, which might in turn protect adolescents from getting involved in misconduct.

The path from *guan jiao* to self-efficacy through *xiao* was not supported because indicators of *guan jiao* were not correlated with either work-related self-efficacy or general self-efficacy. Nevertheless, filial piety for father was a significant predictor for work-related self-efficacy, which suggested that actual development of adolescents' filial piety might be more important than father's encouragement for filial piety in influencing work-related self-efficacy. It may also signal that respect for fathers, but not mothers, as authority to turn to for advice is important for adolescents' confidence in their work-related capabilities. Therefore, adolescents' work-related self-efficacy may benefit more from adolescents' filial piety for father than from father's *jiao* or from filial piety for mother.

### *Implications*

Results of mediation tests suggest that parenting characterized by *jiao* is

associated with positive child outcomes by promoting the culturally valued *xiao* in adolescents. In other words, the development of respect for parental authority by Chinese children plays a critical role in influencing child outcomes. According to social cognitive theory, the environment-cognition-developmental outcome process cannot be fully understood without considering the sociocultural context where participants are located. Adolescents in the current sample are raised in a country where they experience social pressure to conform to conventions and to respect authority, which is supposedly internalized as *xiao* in regard to relationships within the family (Huang & Jia, 2000). In such a social environment, a high degree of *xiao* pulls adolescents closer to conventional expectations for a “good child”, who are then likely be applauded by seniors, welcomed by peers, and demonstrate desired adjustment outcomes. Consequently, findings of the current study suggest that promoting *xiao* in adolescents might be an important solution to adolescent misconduct and depression in today’s China, where developmental paths might deviate from traditional ideals as a result of globalization and modernization (Qiu, 2006). Since parents’ *guan jiao* is likely to be an important facilitator of the development of *xiao*, a take-home message for parents is that parenting is more likely to be effective in bringing about desired child outcomes by instilling *xiao* into children and adolescents with more emphasis on *jiao* (encouragement for filial piety) in daily interactions.

#### *Guan Jiao and Adolescent Outcomes: Moderated by Gender*

The association between mother’s *jiao* and filial obligation for mother was stronger for girls than for boys. This significant interaction suggested that mother’s *jiao* might be a more important influence in the development of filial piety for girls

compared with boys. Perhaps in a society where boys traditionally have more privilege and greater expectations to carry on the family name (Ho, 1989, cited in Xia et al., 2004), girls who receive similarly high expectations from mothers are more likely to try to live up to those expectations and be grateful for how they are treated. As a result, they feel more obliged to love and respect their mother, compared with boys who might take high expectations for granted.

There was also a significant interaction between gender and father's *guan* (behavioral monitoring), and between gender and father's *jiao* (encouragement for filial piety), in predicting adolescents' general self-efficacy. The association between father's *guan* and general self-efficacy was positive for boys, but negative for girls. Boys might perceive themselves as more self-reliant and perseverant (i.e., higher levels of general self-efficacy) with more monitoring from father, whereas girls might perceive themselves as more dependent (i.e., lower levels of general self-efficacy). It seems that boys might need father's concrete instructions and supervision to build their general self-efficacy, while girls might view such supervision as constraints on their own decision making (c.f., Chen et al., 2000). In contrast, the association between father's *jiao* and general self-efficacy was positive for girls, but negative for boys. It is possible that boys might view father's *jiao* as a source of pressure, which reminds them of their obligation of being sons in the family (Ho, 1989, cited in Xia et al., 2004). That is, boys belong to the family and are supposed to devote their achievement to the family, which means boys are not independent from the family. However, girls do not have the obligation to carry on the family name or to build a good reputation for the family and, as a result, father's high expectations are viewed as encouragement and trust, which motivate girls to achieve and become self-reliant.

### *Strengths and Limitations*

A significant contribution of the current study is that it provided support for utilizing *guan jiao* and *xiao* in studying Chinese family socialization, as Chinese parenting and child development cannot be truly understood without considering these two indigenous constructs (Wu, 1996). Results indicated that parents might employ distinct strategies to fulfill their responsibility of *guan jiao*, which was a positive predictor of *xiao*. Further, the development of *xiao* was critical in realizing desired adjustment outcomes in adolescents, including lower depression, higher self-efficacy, and less school misconduct.

Results of the current study should be interpreted with caution because of several important limitations. First, the sample size was small, which reduced statistical power for more sophisticated analysis. With lower statistical power, there is a higher risk of committing Type II errors. For example, given that detecting interaction effects requires more statistical power in survey research than in experimental research (McClelland & Judd, 1993), the small sample size of the current study might have made it even more difficult to detect significant gender moderation effects. For another example, the mediation path from father's expectation (*guan jiao*) to respect for paternal authority (*xiao*) to work-related self-efficacy might be established with a bigger sample size and more statistical power. Second, that the sample was a convenience sample recruited from a single school, as well as the small sample size, limited the generalizability of the results. It might not be appropriate to generalize the results to other parts of China which are less developed. Also, findings might not be applied to public policies without further replications. Third, data were collected with adolescent self-report, which might incur common method variance. It

is possible that parenting reported by parents might present different patterns of correlations with outcomes reported by adolescents, compared with the results obtained by correlating adolescent-report parenting behavior with adolescent-report outcomes. Fourth, measurements needed to be further refined to improve validity and reliability. Since the measurement scales in the current study were either adopted from literature or developed and used for the first time, most of the scales turned out to be multi-dimensional, which was not expected in the conceptualization stage. As a result, the theoretical model was tested only with specific indicators of the constructs based on the patterns of correlation. With refined measurements, there might be stronger support for the model.

#### *Conclusions and Future Directions*

Indigenous notions enlighten cultural research by offering a unique perspective in understanding the psychological processes of people of a particular cultural group. *Guan jiao* and *xiao* are two critical indigenous constructs in learning about parenting and child development in China. Even though meaningful correlations, mediations, and moderations were revealed in the current study, future studies with more resources could gain more insight on Chinese adolescent development. First, observations and interviews with Chinese people are necessary to learn more about the meaning and daily expressions of indigenous *guan jiao* and *xiao* in China since the country is undergoing tremendous social changes. Also, research questions and hypotheses that are innovative and relevant for contemporary Chinese people are more likely to emerge with such observations and interviews. Second, additional data from multiple sites are needed to refine measurements and establish meaningful associations between variables. That is, with a bigger sample size and

more statistical power, validity tests can be conducted with more sophisticated techniques. For example, confirmatory factor analysis can be used to assess the validity of scales developed based on results of observations and interviews. When these refined scales are used to conduct surveys with a broader base of participants, the results will be much more meaningful for the participants and the generalizability of results will be greatly extended. Third, theoretically based models that incorporate other contextual factors besides the family, such as school and neighborhood, will present a more complete picture of the process of adolescent development.

## REFERENCES

- About Guangzhou*. (n.d.). Retrieved December 28, 2006, from <http://zh.wikipedia.org/wiki/%E5%B9%BF%E5%B7%9E%E5%B8%82>
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- Amato, P. R., & Fowler, F. (2002). Parenting practices, child adjustment, and family diversity. *Journal of Marriage and the Family*, *64*, 703-716.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A., Pastorelli, C., Barbaranelli, C., & Caprara, G. V. (1999). Self-efficacy pathways to childhood depression. *Journal of Personality and Social Psychology*, *76*, 258-269.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173-1182.
- Bosc, M. (2000). Assessment of Social Functioning in Depression. *Comprehensive Psychiatry*, *41*, 63-69.
- Bush, K. R., Peterson, G. W., Cobas, J. A., & Supple, A. J. (2002). Adolescents' perceptions of parental behaviors as predictors of adolescent self-esteem in mainland China. *Sociological Inquiry*, *72*, 503-526.
- Chao, R. K. (1994). Beyond parental control and authoritarian parenting style: Understanding Chinese parenting through the cultural notion of training. *Child Development*, *65*, 1111-1119.

- Chen, C. (2005, April 13). New Relations: China's growth places strains on a family's ties; brothers with different goals split over business venture, as father feels ignored, calling the dog a 'grandson'. *Wall Street Journal*, p. A1.
- Chen, C., Greenberger, E., Lester, J., Dong, Q., & Guo, M. S. (1998). A cross-cultural study of family and peer correlates of adolescent misconduct. *Developmental Psychology*, *34*, 770-781.
- Chen, C., Lee, S., & Stevenson, H. W. (1996). Academic achievement and motivation of Chinese students: A cross-national perspective. In S. Lau (Ed.), *Growing up the Chinese way: Chinese child and adolescent development* (pp. 69-91). Hong Kong: Chinese University Press.
- Chen, X., Liu, M., & Li, D. (2000). Parental warmth, control, and indulgence and their relations to adjustment in Chinese children: A longitudinal study. *Journal of Family Psychology*, *14*, 401-419.
- Chen, X., Rubin, K. H., & Li, B. (1995). Depressed mood in Chinese children: Relations with school performance and family environment. *Journal of Consulting and Clinical Psychology*, *63*, 938-947.
- Feldman, S. S., Rosenthal, D. A., Mont-Reynaud, R., Leung, K., & Lau, S. (1991). Ain't misbehavin': Adolescent values and family environments as correlates of misconduct in Australia, Hong Kong, and the United States. *Journal of Research on Adolescence*, *1*, 109-134.
- Ho, D. Y. F. (1986). Chinese patterns of socialization: A critical review. In H. M. Bond (Ed.), *The psychology of Chinese people* (pp. 1-37). Hong Kong: Oxford University Press.
- Huang, S., & Jia, W. (2000). The cultural connotation and communicative functions of

- Chinese kinship terms. Retrieved May 2, 2007, from [http://acjournal.org/holdings/vol3/Iss3/spec1/huang\\_jia.html](http://acjournal.org/holdings/vol3/Iss3/spec1/huang_jia.html).
- Kim, S. Y., & Ge, X. (2000). Parenting practices and adolescent depressive symptoms in Chinese American families. *Journal of Family Psychology, 14*, 420-435.
- Lau, S., & Cheung, P. C. (1987). Relations between Chinese adolescents' perception of parental control and organization and their perception of parental warmth. *Developmental Psychology, 23*, 726-729.
- Lim, S., & Lim, B. K. (2003). Parenting style and child outcomes in Chinese and immigrant Chinese families--- Current findings and cross-cultural considerations in conceptualization and research. *Marriage & Family Review, 35*, 21-43.
- McClelland, G. H., & Judd, C. M. (1993). Statistical difficulties of detecting interactions and moderator effects. *Psychological Bulletin, 114*, 376-390.
- Pinquart, M., & Silbereisen, R. K. (2005). Understanding social change in conducting research on adolescence. *Journal of Research on Adolescence, 15*, 395-405.
- Preacher, K. J., & Leonardelli, G. J. (2006). Calculations for the Sobel test. Retrieved April 26, 2007, from <http://www.psych.ku.edu/preacher/sobel/sobel.htm>.
- Qiu, R. (2006). Bioethics: A search for moral diversity. *Eastern Mediterranean Health Journal, 12* (Supplement 1), 21-29.
- Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401.
- Shek, D. T. L. (2005). Perceived parental control and parent-child relational qualities in Chinese adolescents in Hong Kong. *Sex Roles, 53*, 635-646.
- Shek, D. T. L., & Chan, L. K. (1999). Hong Kong Chinese parents' perceptions of the ideal child. *The Journal of Psychology, 133*, 291-302.

- Sherer, M., Madox, J. E., Mercandante, B., Prentice-Dunn, S., Jacob, B., & Rogers, R. W. (1982). The self-efficacy scale: Construction and validation. *Psychological Reports, 51*, 663-671.
- Shucksmith, J., Hendry, L. B., & Glendinning, A. (1995). Models of parenting: implications for adolescent well-being within different types of family contexts. *Journal of Adolescence, 18*, 253-170.
- Stewart, S. M., Rao, N., Bond, M. H., McBride-Chang, C., Fielding, R., & Kennard, B. D. (1998). Chinese dimensions of parenting: Broadening western predictors and outcomes. *International Journal of Psychology, 33*, 345-358.
- Sun, R. C. F., Hui, E. K. P., & Watkins, D. (2006). Towards a model of suicidal ideation for Hong Kong Chinese adolescents. *Journal of Adolescence, 29*, 209-224.
- Tian, X. (2004, September 4). Survey: Generation gap widens in China. *China Daily*. Retrieved December 7, 2007, from [http://www.chinadaily.com.cn/english/doc/2004-09/04/content\\_371696.htm](http://www.chinadaily.com.cn/english/doc/2004-09/04/content_371696.htm).
- Tse, W. S., & Bond, A. J. (2004). Relationship between baseline cortisol, social functionin and depression: a mediation analysis. *Psychiatry Research, 126*, 197-201.
- Wu, D. Y. H. (1996). Parental control: Psychocultural interpretations of Chinese patterns of socialization. In S. Lau (Ed.), *Growing up the Chinese way: Chinese child and adolescent development* (pp. 1-28). Hong Kong: Chinese University Press.
- Xia, Y. R., Xie, X., Zhou, Z., DeFrain, J., Meredith, W. H., & Combs, R. (2004). Chinese adolescents' decision-making, parent-adolescent communication and

relationships. *Marriage & Family Review*, 36, 119-145.

Xinhua News Agency. (2007, March 20). Web opens world for young, but erodes respect. *China Daily*. Retrieved December 7, 2007, from [http://www.chinadaily.com.cn/china/2007-05/20/content\\_876318.htm](http://www.chinadaily.com.cn/china/2007-05/20/content_876318.htm).

Yao, W. (1983). The importance of being KEQI: A note on communication difficulties. In R. A. Kapp (Ed.), *Communicating with China* (pp. 71-75). Chicago: Intercultural Press.

Zhao, R. (2007, March 14). The 80s children show talent for trouble. Retrieved December 7, 2007, from [http://www.chinadaily.com.cn/2008/2007-03/14/content\\_827632.htm](http://www.chinadaily.com.cn/2008/2007-03/14/content_827632.htm).

## Appendix A. Measurement Items for *Guan Jiao*

Adolescents are asked to indicate how much each statement applies to their interaction with their parents in daily life. Response choices range from 1 to 4 (*strongly disagree, disagree, agree, strongly agree*). Item 7 is reverse coded. A higher total score indicates a higher level of *guan jiao* as perceived by adolescents.

### *Parental Monitoring*

1. My father/mother actively understands my situation in school.
2. My father/mother usually checks my homework.
3. My father/mother takes initiative to understand my academic progress.
4. My father/mother takes initiative to understand who my friends are.
5. My father/mother requires me to tell him/her what I do when I am with my friends. (omitted)
6. My father/mother actively understands what I do after school. (omitted)
7. My father/mother does not actively understand how I use my leisure time. (omitted)

### *Chinese Parental Control*

8. My father/mother expects me to be mature (“sheng xing”).
9. My father/mother expects me to be obedient (“guai” and “ting hua”).
10. My father/mother expects me to have good virtues and behavior.
11. My father/mother expects me to have good behavior so that he/she will not be criticized by others as having no family teaching (“wu jia jiao”). (omitted)
12. My father/mother expects me to respect him/her. (omitted)
13. My father/mother is very harsh in his/her discipline. (omitted)

14. My father/mother always teaches me about the ways of dealing with oneself and others. (omitted)
15. When I do something wrong, my father/mother requires me to have self-reflection. (omitted)
16. When I do something wrong, my father/mother teaches me a lesson (jiao xun). (omitted)
17. When I do not meet my father/mother's expectations, he/she urges (du cu) me to work hard. (omitted)
18. My father/mother expects me to interact with older people (zhang bei) with respect and courtesy. (omitted for father)

## Appendix B. Measurement Items for Self-Efficacy

Adolescents are asked to indicate how much each statement applies to them in daily life. Response choices range from 1 to 4 (*strongly disagree, disagree, agree, strongly agree*). Items 1, 3, 4, 5, 6, 9, 10, 11, 13, and 15 are reverse coded. The scores for each item are then averaged for a total general self-efficacy score, with a “1” indicating low self-efficacy and a “4” indicating high self-efficacy.

1. One of my problems is that I cannot get down to work when I should.
2. If I can't do a job the first time, I keep trying until I can. (omitted)
3. When I set important goals for myself, I rarely achieve them.
4. I give up on things before completing them.
5. I avoid facing difficulties. (omitted)
6. If something looks too complicated, I will not even bother to try it.
7. When I have something unpleasant to do, I stick to it until I finish it.  
(omitted)
8. When I decide to do something, I go right to work on it. (omitted)
9. When trying to learn something new, I soon give up if I am not initially successful. (omitted))
10. When unexpected problems occur, I don't handle them well.
11. I avoid trying to learn new things when they look too difficult.
12. Failure just makes me try harder. (omitted)
13. I feel insecure about my ability to do things.
14. I am a self-reliant person. (omitted)
15. I give up easily.

### Appendix C. Measurement Items for Depression

Adolescents are asked to indicate how much each statement applies to them during the past two weeks. Responses choices range from 0 (rarely) to 3 (most or all of the time). A higher score indicates more depressive symptoms recently.

1. I was bothered by things that usually don't bother me.
2. I did not feel like eating, my appetite was poor. (omitted)
3. I felt that I could not shake off the blues even with the help from my family and friends. (omitted)
4. I felt that I was not as good as other people. (omitted)
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt that everything I did was an effort. (omitted)
8. I felt hopeless about the future. (omitted)
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless. (omitted)
12. I was unhappy.
13. I talked less than usual. (omitted)
14. I felt lonely.
15. People were unfriendly.
16. I did not enjoy life. (omitted)
17. I had crying spells. (omitted)
18. I felt sad.
19. I felt that people disliked me. (omitted)

20. I could not get “going”

#### Appendix D. Measurement Items for *Xiao*

Adolescents are asked to indicate how much each statement applies to them in regard to their attitude towards their parents. Responses choices range from 1 (strongly disagree) to 4 (strongly agree). A higher composite score indicates a more respectful and loyal attitude towards parents.

1. I love my father/mother.
2. I trust my father/mother. (omitted)
3. I respect my father/mother.
4. I think my father/mother understands me.
5. I feel that my father/mother's discipline is reasonable.
6. I believe how my father/mother disciplines me is beneficial to me.
7. I turn to my father/mother for advice.
8. I should do something to repay my father/mother's efforts.
9. I should live up to my father/mother's expectations on me.
10. I want to be like my father/mother when I have my own children. (omitted)

### Appendix E. Measurement Items for School Misconduct

Adolescents are asked to indicate how often they are involved in the following behaviors. Responses choices range from 1 (never) to 5 (always). A higher composite score indicates higher frequency of getting involved in school misconduct.

1. fighting
2. bullying classmates
3. not attentive in class (omitted)
4. theft (omitted)
5. skipping school
6. failing to turn in homework
7. copying homework
8. cheating in exams
9. lying to parents or teachers
10. failing to complete group tasks such as cleaning the classroom

Table 1: Means, Standard Deviations and Scale Reliabilities for total sample, female adolescents and male adolescents from SPSS output (standard deviations are presented in parentheses).

	Total	Male	Female	Scale Reliability (alpha)
Depression	16.6 (7.6)	19.5 (8.7)	14.5 (6.0)	.92
School Misconduct	9.9 (2.8)	11.0 (3.7)	9.0 (1.2)	.81
Misconduct Count	1.6 (1.7)	2.4 (1.9)	.9 (1.1)	---
General Self-efficacy	20.5 (4.7)	10.5 (3.5)	12.2 (3.1)	.70
Work-related Self-efficacy	11.4 (2.7)	11.5 (2.8)	11.0 (2.7)	.58
Filial Obligation for Mother	18.0 (2.5)	17.9 (2.2)	18.1 (2.9)	.85
Filial Piety for Mother	15.2 (3.5)	14.8 (3.8)	15.6 (3.4)	.79
Filial Obligation for Father	18.1 (2.6)	18.0 (2.9)	18.1 (2.6)	.87
Filial Piety for Father	15.4 (3.5)	15.8 (3.7)	14.8 (3.4)	.81
Mother's <i>Guan</i>	10.4 (3.6)	10.1 (3.8)	10.6 (3.6)	.78
Mother's <i>Jiao</i>	17.9 (2.8)	17.3 (3.3)	18.3 (2.2)	.82
Father's <i>Guan</i>	10.1 (3.5)	9.9 (3.0)	10.3 (4.0)	.76
Father's <i>Jiao</i>	13.0 (2.1)	12.8 (2.2)	13.1 (2.1)	.87
N	63			

Note:

- a. Scale reliability is based on the total sample.
- b. General Self-efficacy and work-related self-efficacy are indicators of self-efficacy.
- c. Filial obligation for mother/father and filial piety for mother/father are indicators of *xiao*.
- d. Mother's/father's *guan* and *jiao* are indicators of *guan jiao*.

Table 2: Pearson's Correlation Coefficients between Study Variables based on SPSS output (N=63).

	1	2	3	4	5	6	7	8	9	10	11	12
1. Mother's <i>Guan</i>	-											
2. Mother's <i>Jiao</i>	.15	-										
3. Father's <i>Guan</i>	.39*	.15	-									
4. Father's <i>Jiao</i>	.16	.40*	-.15	-								
5. Misconduct Count	-.08	-.35*	-.00	-.13	-							
6. General Self-efficacy	.02	.19	.03	.09	-.08	-						
7. Work-related self-efficacy	.02	.03	.06	.23	-.12	.42*	-					
8. Depression	.01	-.60*	-.03	-.14	.64*	-.05	.10	-				
9. Filial Obligation for Mother	.32*	.54*	.09	.52*	-.05	.12	.12	-.27*	-			
10. Filial Obligation for Father	.12	.37*	.21	.47*	-.07	.11	.19	-.11	.78*	-		
11. Filial Piety for Mother	.31*	.57*	.24	.25	-.28*	.02	-.03	-.42	.50*	.28*	-	
12. Filial Piety for Father	.00	.45*	.38*	.26	-.14	.16	.31*	-.34*	.35*	.46*	.48*	-

a.  $p < .05$

Table 3: Multiple Regression Analysis for the Mediation Models Predicting Adolescent Depression, with Mother's *Jiao* as the Independent Variable, and Filial Obligation for Mother / Filial Piety for Mother as the Mediators

	Predictor-Criterion	$\beta$	Sig of T	R	R Square	Adj. R Square	F Value
Step 1	Mother's <i>jiao</i> - depression	-.60	.00	.60	.36	.35	29.2*
Step 2	Mother's <i>jiao</i> – filial obligation (piety) for mother	.54 (.57)	.00 (.00)	.54 (.57)	.29 (.32)	.28 (.31)	21.9* (25.8*)
Step 3	Filial obligation (piety) for mother - depression	-.27 (-.42)	.00 (.00)	.27 (.42)	.07 (.17)	.05 (.18)	4.0* (11.0*)
Step 4	IV (controlling for mediator) -DV	-.61 (-.52)	.00 (.00)	.60 (.62)	.36 (.38)	.33 (.36)	13.7* (15.4*)

N=63

Note.

- a. \* $p < .05$ .
- b.  $\beta$  = standardized coefficient, R = multiple correlation coefficient.
- c. Results of regression analysis with filial piety for mother as the mediator are presented in parentheses.
- d. Filial obligation and filial piety for mother are indicators of *xiao*.
- e. Mother's *jiao* is an indicator of *guan jiao*.

Table 4: Multiple Regression Analysis for the Mediation Models Predicting Adolescent Misconduct Count, with Mother's *Jiao* as the Independent Variable and Filial Piety for Mother as the Mediator

	Predictor-Criterion	$\beta$	Sig of T	R	R Square	Adj. R Square	F Value
Step 1	Mother's <i>jiao</i> – Misconduct count	-.35	.01	.35	.12	.10	7.6*
Step 2	Mother's <i>jiao</i> – filial piety for mother	.57	.00	.57	.32	.31	25.8*
Step 3	Filial piety for mother – misconduct count	-.23	.08	.28	.08	.06	5.0*
Step 4	IV (controlling for mediator) -DV	-.26	.09	.38	.15	.11	4.6*

N=63

Note.

- a. \* $p < .05$ .
- b.  $\beta$  = standardized coefficient, R=multiple correlation coefficient.
- c. Filial piety for mother is an indicator of *xiao*.
- d. Mother's *jiao* is an indicator of *guan jiao*.

Table 5: Multiple Regression Analysis for Effects of Interaction between Child Gender and Father's *Guan*, as well as between Child Gender and Father's *Jiao*, on General Self-efficacy

	Predictors entered	$\beta$	Sig of T
Block 1	Gender (boy=0, girl=1)	.21 (.24)	.10 (.07)
Block 2	Father's <i>guan</i> (father's <i>jiao</i> )	.52 (-.20)	.02 (.27)
Block 3	<i>Guan jiao</i> * gender	-.64 (.37)	.00 (.05)

Note.

- a. \* $p < .05$ .
- b.  $\beta$  = standardized coefficient.
- c. Analysis for model with father's expectations as independent variable is presented in parentheses.
- d. General self-efficacy is an indicator of self-efficacy.
- e. Father's *guan* and *jiao* are indicators of *guan jiao*.

Table 6: Multiple Regression Analysis for Effects of Interaction between Child Gender and Mother's *Jiao* on Filial Obligation for Mother

	Predictors entered	$\beta$	Sig of T
Block 1	Gender (boy=0, girl=1)	-.15	.17
Block 2	Mother's <i>jiao</i>	.30	.04
Block 3	<i>Guan jiao</i> * gender	.44	.00

Note.

- a. \* $p < .05$ .
- b.  $\beta$  = standardized coefficient.
- c. Filial obligation for mother is an indicator of *xiao*.
- d. Mother's *jiao* is an indicator of *guan jiao*.

Table 7: Post Hoc Analysis for Interaction Effects

	Predictor-Criterion	$\beta$	Sig of T	R	R Square	Adj. R Square	F Value
Interaction 1	Father's <i>guan</i> – general self-efficacy for boys	.43	.03	.43	.18	.15	5.1*
	Father's <i>guan</i> – general self-efficacy for girls	-.33	.08	.33	.11	.07	3.3
Interaction 2	Father's <i>jiao</i> – general self-efficacy for boys	-.20	.31	.20	.04	.00	1.1
	Father's <i>jiao</i> – general self-efficacy for boys	.34	.07	.34	.12	.09	3.7
Interaction 3	Mother's <i>jiao</i> – Filial obligation for mother for boys	.42	.04	.42	.18	.14	4.7*
	Mother's <i>jiao</i> – Filial obligation for mother for girls	.74	.00	.74	.54	.52	31.7*

N=63

- a. \*p<.05.
- b.  $\beta$  = standardized coefficient, R=multiple correlation coefficient.
- c. General self-efficacy is an indicator of self-efficacy.
- d. Filial obligation for mother/father and filial piety for mother/father are indicators of *xiao*.
- e. Mother's/father's *guan* and *jiao* are indicators of *guan jiao*.

Figure 1. Hypothesized paths describing the relationship between *guan jiao*, *xiao*, depression self-efficacy, and school misconduct.

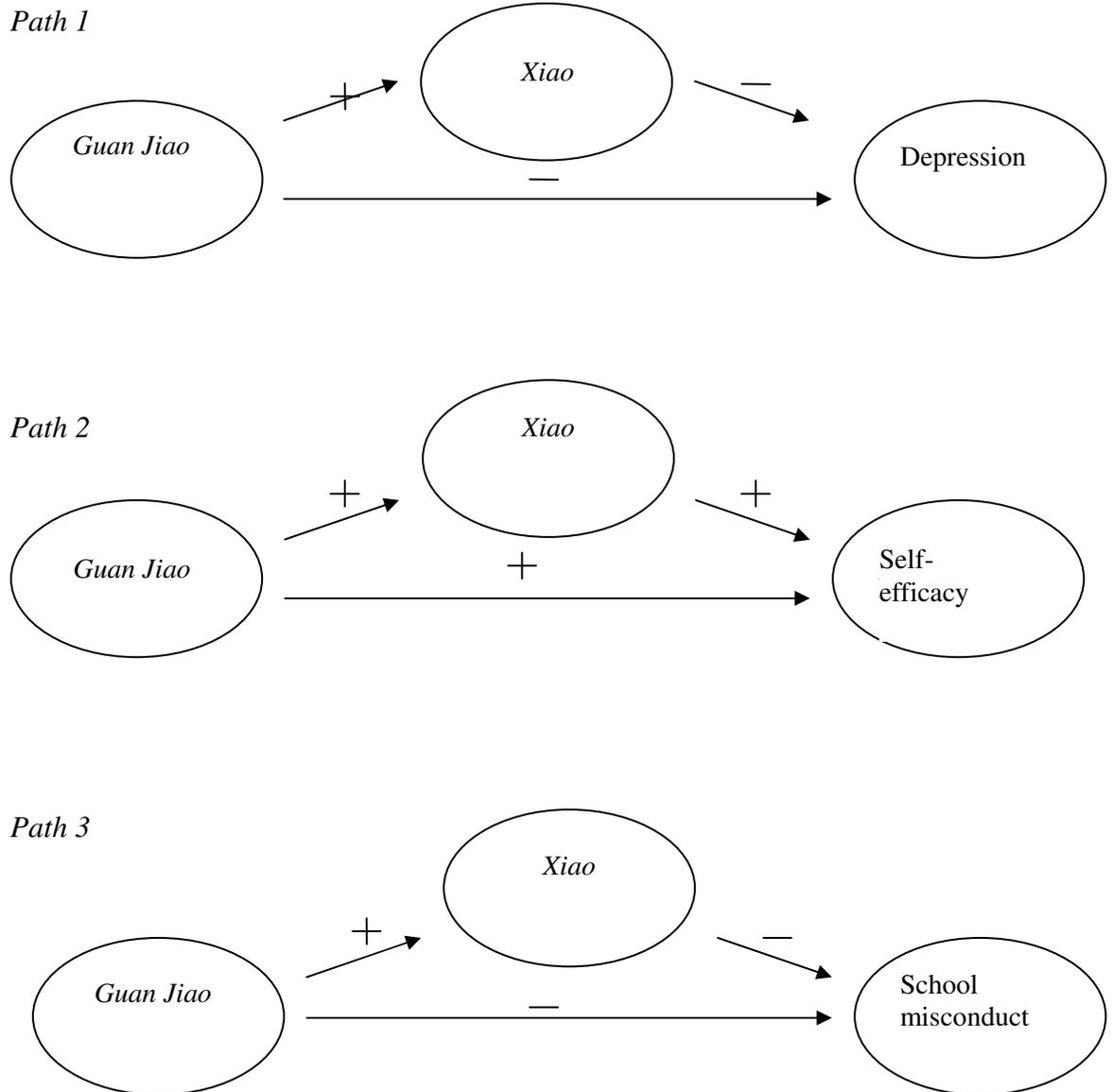


Figure 2. Mediation paths to be tested with specific indicators for *guan jiao*, *xiao*, self-efficacy, depression, and misconduct.

