

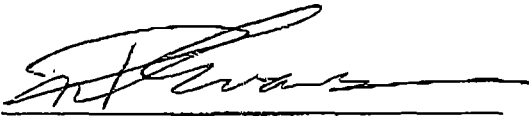
Anxiety in Middle Childhood

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A report submitted in partial requirement for the degree of Masters of
Psychology (Clinical) in the Department of Psychology,
University of Tasmania, 2001

Statement

I declare that this thesis is my own work and that, to the best of my knowledge and belief, it does not contain material from published sources without proper acknowledgement, nor does it contain material which has been accepted for the award of any other higher degree or graduate diploma in any university.

A handwritten signature in black ink, appearing to read 'Phoebe Suk Wah Yau-Evans', written over a horizontal line.

(Phoebe Suk Wah Yau-Evans)

Acknowledgements

I am indebted to Dr. Iain Montgomery and Dr. Rosanne Burton Smith for their tireless enthusiasm concerning this thesis. Their support has been relentless since its onset. I thank them for helping me shape the draft into an appealing format with coherent content. A bouquet of thanks also goes to the students who participated and staff who helped to make this project possible. My list would be incomplete if I failed to mention Adrian Evans, my dearest husband, who supplied invaluable assistance behind the scenes.

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Literature Review

Developmental Factors in Anxiety in Chinese Children and Adolescents

Abstract

The aim of this review is to explore the potential contribution of parents, peers and friends to children's development and to the mediation of children's anxiety in Western and Chinese cultures during middle childhood. This review includes gender differences in anxiety and in the differential impact of these relationships. Firstly, evidence for anxiety that children may experience is covered; followed by the impact of parent-child attachment, family interaction, peer relationships and friendships on anxiety. Gender and cultural differences are integrated into each section. In addition, directions for future research are discussed. Childhood anxiety is common and it may develop into a chronic problem if intervention is not available. The sources and severity of anxiety vary between Western and non-Western children and between the sexes. Due to some cultural factors such as academic achievement and parenting style, Chinese children suffer more anxiety than their Western counterparts. Research has found that girls are more likely to report anxiety than are boys. Indeed, the difference between boys' and girls' perspectives on admitting anxiety plays a role in this phenomenon. The quality of parental and social support networks appear to be a robust factor influencing children's development, psychological well being and adjustment. With close and supportive relationship with parents, particularly mother-child relationships, children may obtain the psychological strength to cope with many adverse situations and maladjustment. Parent-child relationships have been implicated in the establishment of certain forms of childhood maladjustment such as anxious

behaviours, depression and social withdrawal. However, the quality of father-child and mother-child relationships influences boys and girls differently. Besides, Chinese children may rely on their parents' emotional supports less to alleviate their anxiety owing to the cultural factors such as the expectation of social maturity and common usage of authoritarian parenting. Similar to parenting, positive family processes may prevent children from developing maladaptive symptoms in adverse situations whereas negative family processes may increase children's avoidance responses. In Chinese societies, both economic hardship and parenting style based on traditional values reinforces negative social interactions between parents and with their children. As well as parent-child relationships also important for both Western and Chinese children are peer relationships and friendships. Middle childhood is a critical period when children develop these social relationships. Positive peer relationships and /or friendships contribute to children's development and also buffer children from the negative impacts of unfavorable conditions. Being rejected by peers or without friends cause problems and maladaptive behaviours. Based on Western research, the importance of friendship has been shown, however, it seems research on the quality and the impact of friendship among Chinese children is limited. Boys and girls may regard these social relationships differently. Boys may rely more on peer groups while girls may rely more on mutual friendships to provide emotional support. Children usually form their first relationship with their parents or significant others within the family. However, with age, the closeness and function of children's relationships change. Developing relationships with others

outside the family is an essential process in child development. A considerable amount of research has been devoted to the impact of children's relationships with parents, peers and friends on their development. As children grow, they may place more reliance on other sources than parents to provide particular kinds of support.

Anxiety in Children

Children experience different kind of fears and anxiety; indeed, they are normal phenomena in developing children. Children have differing abilities to cope with fears and anxiety. If the child lacks the strength to manage them, it may cause the fears or anxiety to persist and intensify for a long period of time. Thus, clinical disorders such as anxiety disorders or specific phobias may result. Anxiety has been identified as "a reaction to a traumatic situation, or to danger, present or anticipated" (Schur, 1958, p.218-219). It is a combination of the reactions of motor, physiological and subjective responses to a perceived threat (Ollendick, King & Yule, 1994). Animals, monsters, separation and darkness are the main causes of children's anxiety in early childhood (Wicks-Nelson & Israel, 1997). However, in middle childhood, school issues, personal injury, natural events and social anxiety form the main sources of children's anxiety.

It is not uncommon for childhood anxiety disorders to continuously influence one's life for a long period of time (Keller et al., 1992). However, increasing evidence reveals that adults who have anxiety disorders acknowledge that their problems stemmed from their childhood (Rapee & Barlow, 1993). Children with anxiety disorders usually not only suffer mentally with low self-esteem, irrational thoughts of inadequacy in a social settings

and social avoidance but also physically, including headaches, stomachaches, and muscle tension (Dweck & Wortman, 1982; Klein & Last, 1989; Livingston, Taylor & Crawford, 1988; Strauss, Lease, Kazdin, Dulcan & Last, 1989). Over the last decade, anxiety difficulties and social withdrawal have been reported more frequently than other psychological problems by children and adolescents in the West (Bernstein & Borchardt, 1991; Costello et al., 1996 ; Mattison, 1992; Prior, Sanson, Smart & Oberklaid, 1999). Approximately, 9% of children in communities in the West fulfil criteria for an anxiety diagnosis (Costello, 1989) with an estimated average age of onset of 10 years (Keller et al., 1992).

Existing evidence suggests varied theories explaining the development of high levels of anxiety or anxiety disorders (e.g. Bernstein, Borchardt, & Perwien, 1996; Ollendick et al., 1994). In the psychoanalytic approach, anxiety has been explained as a result of the overwhelming the repression of unconscious mind (Dadds, Heard & Rapee, 1991).

According to Freud, the repression of the unconscious motives was the main problem of his emotionally disturbed patients (Shaffer, 1999). In other words, the external fear provoking stimuli shock the unconscious mind and cause the repression out to the conscious mind. Thus, anxiety arises because of the motives transition between unconscious mind and conscious mind. Biological theories of anxiety assume that genetic factors predispose certain people being more vulnerable at times of distress (Rutter, Macdonald, LeCounteur, Harrington, Bolton & Bailey, 1990). Those factors may lead certain people react to adverse situations vigorously because of their temperaments or personalities. The environment factors trigger the potential genetic influences and lead to the development of fears and anxiety. The social learning theory explains the

development of anxiety as a form of observational learning in which children's anxious behaviours being reinforced or punished (Dadds & Barrett, 1996; Shaffer, 1986; Thyer & Sowers-Hoag, 1988). Children are more likely to repeat anxious behaviours if favorable outcome follows; and children suppress them when unfavourable outcomes follow.

Further, many researchers found that children, who fail to establish secure attachment with their mothers, are more likely to develop adjustment and behavioural problems. It has been suggested that anxiety arises from a defective early attachment between child and mother or significant others (e.g. Harlow & Harlow, 1962; Sullivan, 1953). Other approaches presume that the combination of genetic and environment components may lead to a complex process which predisposes a child to anxiety (Craske, 1997; Ollendick et al., 1994). Although an absolute conclusion of the causes of anxiety is unattainable, each theory contributes to explain the development of anxiety in children to some extent.

Gender Differences in Anxiety

Existing Eastern and Western research (e.g., Briscoe, 1982; Shek, 1989) suggests that females show more psychiatric and somatic symptoms than do males. Cockerham (1981) maintains that females are more prone to anxiety and the likelihood that females are diagnosed with anxiety disorders is much higher than for males. An Australian study also showed that girls suffer significantly more with internalising disorders than do boys (Prior, Sanson, Smart & Oberklaid, 1999). Moreover, the proportion of girls suffering internalising disorders may increase with age (Offord et al., 1987). Sarason, Davidson, Lighthall, Waite and Ruebush (1958) also found that girls reported significantly higher levels of anxiety than did boys. However, the real distinction behind the results is the

difference between boys and girls' perspectives on admitting their anxiety. "The admission of anxiety by a girl tends not to be viewed by her as impairing or reflecting adversely on her femininity. In the case of a boy such an admission is experienced as a weakness in his masculine armor" (Sarason et al., 1958, p. 254). Thus, different gender beliefs to reporting anxiety probably play a role in sex differences in anxiety. Apart from the gender diversities, other factors such as various educational settings, may also contribute to the formation of children's anxiety.

Anxiety and Differences Between Western and Chinese Educational Settings

Cultural factors affect many aspects of the individual's development through social expectation, family organisation, parent-child relationships and interaction. Also, the institutions where children spend much of their day can contribute significantly to developmental outcomes, including anxiety. Discrepancies between the characteristics of Eastern and Western educational systems and their effects on children's development have been established through cross-cultural research.

The educational system found in Chinese societies is still extensively affected by collectivism and traditional Chinese values, despite inroads made by Western thought in modern Chinese society. The theory of Collectivism holds as important group aims, sharing and harmony (Bond, 1986). In other words, one's value is based on whether one is willing to sacrifice happiness for one's group. Other Chinese values are based on Confucianism, which includes self-cultivation, maintaining a harmonious relationship with the family, taking responsibility in community affairs, and serving the country. Conversely, individualism, a perspective which most Western societies hold, emphasises

self-orientation, self-sufficiency and control with value being given to individual accomplishments (Triandis, Bontempo, Villareal, Asai & Lucca, 1988). Therefore, the individual may live his own life for his own happiness and the individual's own goals come first.

Chinese society places a very strong emphasis on educational achievement (Stevenson et al., 1990). Traditionally, Chinese parents have a common belief that all Chinese children can achieve academic success as long as they try hard to maximize their potential (Chen, Rubin & Li, 1995). Besides, in Chinese societies, through success in school children not only upgrade their social standing and gain honour for themselves, but they also bring honour to their families. If they fail in school, they can bring shame on their family as the families feel that they are losing face. Children who fail are ostracised and considered strange and problematic by schools (Wu & Tseng, 1985). This pressure to achieve is a major source of stress in Chinese children and sometime it may lead to psychosomatic and neurotic disorders (Law, 1978; Yeh, 1985). Unlike Chinese parents and children, American parents and children view academic success as the reflection of uncontrollable factors such as children's inborn intelligence or teachers' quality (Chen & Stevenson, 1995). Thus, Western parents may tend not to force their children to strive constantly to improve their academic performance; and pressure for doing well at school is low. It appears that Eastern and Western children experience diverse achievement pressure, therefore, it is plausible to believe that Western children suffer less anxiety through striving for academic achievement.

The Western educational system is child-centred with various academic and non-academic activities. It aims to build both children's cognitive and social skills. By

contrast the Chinese system remains highly academic in orientation (Oppen, 1992). In most Chinese classrooms, students' emotional needs, self-esteem and confidence may be neglected due to the strong academic atmosphere. The single way to measure the individual students' success and value is through the marks they achieve in tests or examinations (Biggs, 1996). In fact, the curriculum of the Chinese educational system neglects children's development in non-cognitive areas. Children's social-emotional capacities are important elements in development according to Western theories (Oppen, 1992).

Therefore, how detrimental can this become, particularly in psychological effects, for the individual who fails academically and thus does not reach parental and school expectations? Inability to please one's parents through academic success may cause children to exhibit emotional and behavioural disturbances such as defiance, depression and withdrawal and in turn, may influence other aspects of development. In relation to these cultural circumstances, Chinese children may suffer more stress and anxiety than their Western counterparts in relation to parental and scholastic expectations. It has been found that compared to American adolescents, Hong Kong Chinese adolescents suffer much higher levels of anxiety (Chen, 1996). For example, in Hong Kong over the last two decades, increasing numbers of school-age children have committed suicide due to the pressure of school and family issues. It has been suggested that these children "lacked the mental resources to cope with problems and will turn to suicide" ("Youth Suicides", 2000, p.1). Nevertheless, given the evidence relating school achievement to children's anxiety in Hong Kong, it is surprising that few studies have been conducted to investigate Chinese children's anxiety and look into the role of external factors in mediating it.

In summary, experiencing anxiety is common among children. Varied theories attempt to explain the development of anxiety, however, no single theory can explain completely how it happens to children from different cultures. The sources and severity of anxiety vary between Western and non-Western children, and between the sexes. In order to protect their masculinity, boys seldom admit their anxious thoughts and girls seem to have advantages from their femininity to show their anxiety. As a result, a discrepancy between boys and girls in exhibiting anxiety may exist. Nonetheless, different factors among children should be considered in an attempt to understand the development of anxiety. The problem of anxiety is a complex one and it cannot be looked at with a narrow mindset. Therefore, other aspects, for example, attachment, gender and culture all may play important roles and should be considered.

Importance of Attachment in Child Development

The linkage between attachment with parents and children's psychosocial development has been illustrated extensively. Bowlby's (1980) attachment theory maintains that the specific affection bond between parent and child may have the greatest impact on human development and has been supported by many studies (e.g. Armsden & Greenberg, 1987; Grotevant & Cooper, 1986; Greenberg, Siegel, & Leitch, 1984; Hauser & Bowlds, 1990; Resnick, 1989). If children live in an environment where they can feel that their parents or significant others will be responsive to them, secure attachments develop. This sense of security helps children cope with various psychological stressors. In contrast, a sense of insecure attachment may induce children's avoiding behaviours. Affection bonds with

parents, especially mothers regulate the individual's psychological well being, regardless of time and separation (Bowlby, 1980, 1982). Besides, with good quality and consistency in close parent-child relationships, children's development can be facilitated in a positive way (Dadds & Barrett, 1996). When facing stressful life events, children and adolescents who are securely attached to their parents display more self-satisfaction, use more social support seeking strategies and have fewer symptomatic responses (Armsden & Greenberg, 1987; Sandler, Miller, Short & Wolchik, 1989). Children can distinguish different types of support available such as emotional, informational and instrumental support, as well as companionship; and they also realise the accessibility of the support (Reid, Landesman, Treder & Jaccard, 1989). In the study of Reid et al., children viewed parents as the greatest emotional support source. Interestingly, in line with Bowlby, perceived emotional support from mothers was first in rank and friends were ranked last. Thus, the importance of closeness of parent-child relationships cannot be ignored, especially between mother and child.

Gender Differences in Parent-Child Relationships

Development between boys and girls in the physical, cognitive and social domains varies (Shaffer, 1999). Therefore, it is not unreasonable to assume that social relationships between parents and their sons and daughters are dissimilar. Indeed, it has been found that parental attachment influences boys' behaviour problems and intimacy with friends, however, parental attachment only impacts on girls' school behaviours (Feiring & Lewis, 1987; Lewis, Feiring, McGuffog & Jaskir, 1984). Similarly, Cohn (1990) found that the quality of attachment with parents related to boys' peer

relationships. Boys who have secure attachment with their mothers tended to be accepted by peers and were perceived by peers as less aggressive and disruptive. In a study by Blyth and Foster-Clark (1987), results revealed that positive early attachment with mothers predicted boys' quality feelings and sharing with friends, whereas fathers' attachment was associated with girls' intimacy level with friends. These studies suggested that parental attachment impacts on different aspects of boys' and girls' social development and personal adjustment. Intimacy with mothers remains relatively high across different ages, even when children view their peers or friends as increasingly important (Blyth & Foster-Clark, 1987). However, intimacy with fathers decreases extensively for girls but not for boys. Maternal acceptance has been found to facilitate both boys' and girls' coping efforts (Kliewer, Fearnow & Miller, 1996), however, it appears that at times of distress only girls who have maternal assistance used problem-solving and discussion to cope with problems.

Despite both mothers and fathers being involved in parenting, increasingly studies have shown that the mother's role is more influential than that of the father. For example, school-age children reported having more satisfactory relationships and better companionship with their mothers than with their fathers (Furman & Buhrmester, 1985). It may be that compared to fathers, mothers usually spend more time with their children and are able to cultivate better relationships with their children in terms of quality. In a study of the relationship between parenting and children's coping strategies with a group of elementary school-age children, Shell and Roosa (1991) found that maternal acceptance significantly facilitated support-seeking coping, whereas maternal negativity promoted greater use of avoidance strategies. A consistent link between maternal

rejection and anxious behaviours in children has been found (Barling, MacEwen & Nolte, 1993).

Both parental acceptance and rejection contribute extensively to children's cognitive and social development. The quality of father-child and mother-child relationships has different effects on boys and girls. However, maternal attitude appears to influence development in children of both sexes considerably.

Parent-Child Relationships in Chinese Societies

Most of the theories of parent-child attachment are of Western origin and the majority of developmental and clinical studies with children have been conducted in Western societies. However, many scholars believe that positive parental components such as attachment and acceptance have the same effect universally (MacDonald, 1992; Rohner, 1986). The connotation of these components is the same in Western and Chinese societies (Berndt, Cheung, Lau, Hau & Lew, 1993; Ho, 1986; Lau, Lew, Hau, Cheung & Berndt, 1990). Moreover, limited Chinese research has displayed the impact of family factors such as family processes, parental behaviours and parenting on adaptive and maladaptive development in Chinese children and adolescents which is consistent with Western literature (e.g. Bond, 1991; Chen, Rubin & Li, 1997; Tseng & Wu, 1985). For instance, Chen et al. (1997) in their longitudinal study with second- and fourth-grade children, found maternal acceptance and rejection attitudes contributed to Chinese children's social functioning and school adjustment. When Chinese adolescents experience stress, family support executes a moderating influence (Chan, 1983). However, it has been found that the father has greater impact than the mother on such

occasions. Thus the findings for the role of fathers in the lives of Chinese adolescents are therefore inconsistent with some Western literature (e.g. Furman & Buhrmester, 1985; Shell & Roosa, 1991).

In Chinese society, one's level of social maturity is usually displayed through behaviours such as shyness, sensitivity and inhibition in childhood, which in the West would be indicative of anxiety (Chen et al., 1992; Ho, 1986; King & Bond, 1985). However, in Chinese society such behaviours are valued and encouraged. In addition, because of the strong authoritarian and collective values within Chinese families, parents tend to use restrictive forms of parenting to teach young children good manners. Thus, according to some research findings (e.g. Yang & Hwang, 1980; McIntyre & Dunsek, 1995), Chinese children may be less likely to depend on their parents' emotional support to moderate anxiety than are Western children.

The Impact of Parental Attachment on Children's Anxiety

Children's anxious behaviour is related to perceptions of and experience of the "availability and accessibility of the caretaker... in the role of comforter and protector" (Bowlby, 1973, p. 202-203). These perceptions and experiences together form internal working models of relationships with significant others through early interactions. Thus, the malformation of these internal working models may lead to the development of anxiety or other maladjustments. In other words, a secure or positive attachment bond can act as a buffer to prevent children from developing anxious behaviours.

Indeed, empirical support for this buffering hypothesis during times of anxiety and stress has been revealed through research (e.g. Armsden & Greenberg, 1987; Papini,

Roggman & Anderson, 1991). Papini et al. found that positive attachment with parents by early adolescents is linked to reduce feelings of depression and social anxiety. Evidence has also showed that parents of children with anxiety disorders displayed less accepting behaviours than parents of children without anxiety disorders (Siqueland, Kendall & Steinberg, 1996). Similarly, Offer, Ostrov and Howard (1981) found that adjustment difficulties were related to the shortage of emotional support from parents in the sample of 13 to 18 year-olds. Disturbed and delinquent groups were less close to their parents, less able to trust and depend on parents' assistance when compared with a normal group. In addition, Papini and Roggman (1992) used self-report measures of attachment with parents, emotional autonomy, perceived self-competence, depression and anxiety to examine 47 12-year-olds during the transition from primary school to junior high. Results indicated that positive attachment with parents was positively associated with self-perceived competence, and negatively with feelings of depression and anxiety or stress resulting from their transition experiences. Main (1996) found that children who were referred to a clinic for anxiety treatment showed relatively lower degrees of secure attachment than those who were not referred.

Being accepted by parents and receiving emotional support from parents are essential elements within the context of secure attachment with parents or significant others. Hence, secure attachments not only buffer children from developing maladaptive behaviours but also facilitate their psychological well being.

The Impact of Parenting Style on Children's Development and Anxiety

According to Baumrind (1971), three parenting styles, namely, authoritarian parenting, authoritative parenting and permissive parenting, may influence children's development in a differing ways. Authoritarian parenting is a very restrictive pattern. Children are expected to follow rules rigidly and parents are seldom responsive to children's perspectives. Although authoritative parenting is a strict form of parenting, parents display flexibility and responsiveness to children's points of view. In contrast, permissive parenting is an undemanding pattern of parenting. Children are not expected to follow rules and parents are highly child-centred, responsive and unconditionally accepting of children's opinions.

Authoritative parenting is seen to positively influence children's development. Research evidence has shown that if parents utilise authoritative parenting, children disclose more (Yang & Hwang, 1980) and adolescents employ support and problem-focused coping more (McIntyre & Dusek, 1995). However, literature on the association of the characteristics of authoritarian type parenting and internalizing disorders are equivocal. For instance, anxious rearing, parental rejection and control have been found to contribute to normal children's anxiety to some extent, but not in the case of parents who provided relatively low emotional warmth (Gruner, Muris & Merckelbach, 1999). In a study of family interaction patterns with children aged from 9 to 12 years old with and without anxiety disorders, Siqueland et al. (1996) revealed that anxious children were more likely to have less accepting parents and their parents are less likely to grant psychological autonomy. Similarly, Doyal and Friedman (1974) in their study concluded that the formation of children's anxiety often results from parents' rejection. However,

with a small clinical sample, Muris, Bogels, Meesters, Van der Kamp, and Van Oosten (1996) found no significant association between parental rearing practices and fearfulness. It may imply that only certain elements within parental rearing practices can affect children's anxiety.

Child-rearing Styles in Chinese Societies

Traditional Chinese values and collectivism not only continue to influence the Chinese education system, but also to affect contemporary child-rearing attitudes in Chinese societies (Ho & Kang, 1984; Tobin, Wu, & Davidson, 1989; Wu, 1996). Chiu (1987) and Lin and Fu (1990) found that Chinese parents regardless of living in Taiwan, mainland China or America were more likely to display more restrictive and authoritarian parenting than did their American counterparts. Although the positive parental elements may have affected children unambivalently, discrepancies between child rearing in Chinese and Western societies have been well documented (Chiu, 1987; Ekblad, 1986; Tobin, et al., 1989). The essence of parenting based on Confucianism is that Chinese parents have to teach and discipline their children at an early stage. "When the son reaches the age of *dongshi* (reason), the father must be serious and proper in his speech and way of living in order to teach his son" (Zhang, cited in Bond, 1996, p.145). For example, Confucius stated that 'boys from the age of five will no longer be permitted to act as they please' (Dardess, 1991, p.77). In fact, compatible with Western societies, in modern Chinese societies, mothers usually take a more dynamic, dominant and significant role in child discipline than fathers (Ho, 1984). This aspect may cause some variation in traditional child rearing.

In addition, “Confucian family rules lists no fewer than fifteen stipulations governing the child’s control of his facial expressions, his bodily postures, and his speech. This underscores an important aspect of socialisation in traditional Chinese culture: to train a person to be *bugou yanxiao*, to never reveal his or her thoughts and feelings” (Wu, 1996, p.145). In order to respect elders, Chinese children are neither expected to question or challenge their parents’ knowledge nor express their own perspectives (Ho, 1994). In view of these prescriptions, it is problematic that Chinese parents, especially fathers, cannot appropriately offer parental warmth and emotional support to their children. Moreover, it is equally difficult for Chinese children who cannot disclose their thoughts and feelings honestly to their parents. Children may have little desire to disclose their thoughts and in fact may fear discussing problems with their parents. Some degree of anxiety and dilemmas may arise due to the confusions Chinese children experience when expressing what they want to say and feel are disallowed.

The Contribution of Family Interactions to Children’s Anxiety

Family environment has a major role in the development of children and adolescents (Ben-Noun, 1989; Shek, 1989). The negative interaction between family members causes the development of several childhood disorders including anxiety disorders (e.g. Dadds, 1995; Dishion, 1990). Dadds and Barrett (1996) state “family factors – in particular, social learning processes within the context of the quality and consistency of intimate relationships – are important in the development of anxiety and depression” (p.237). As with effective parenting, family interaction may prevent children from developing maladaptive and depressive symptoms when they undergo adverse circumstances such as

peer rejection and academic failure (Cohen & Wills, 1985), whereas negative family processes induce anxious children's avoidance responses (Dadds, Barrett, Rapee, & Ryan, 1999).

Barrett, Rapee, Dadds, and Ryan (1993) state that when an anxious child is faced with a strange and maybe threatening social situation, the method that he or she adopted to manage the situation, depends greatly on how the child's family discusses difficult situations. Indeed, children may learn coping strategies through observational learning. In a study by Stark, Humphrey, Crook and Lewis (1990), children with anxiety or depressive disorders rated their families more conflictual, more enmeshed, less supportive, cohesive and less sociable as well as more controlling and less independent. These findings were upheld by Silverman, Cerny, and Nelles (1988), and by Sylvester, Hyde, and Reichler (1987). Therefore, children growing up in these adverse environments may be weaker in their anxiety management skills.

If parents express overt control and show no mutual affection, according to Western research, this can lead to anxiety-prone children. Minuchin, Rosman and Baker (1978) suggest in the families of children with anxiety or depressive disorders, "loyalty is valued over autonomy and approval is valued over competence" (p. 56). Children in these types of families tend not to follow the social norms and keep their feelings inside in order to maintain a peaceful atmosphere at home.

Since Chinese societies stress training obedience, proper conduct, impulse control and the acceptance of social obligations when children are young (Ho, 1989), there is a degree of resemblance between the dysfunctional family pattern that Minuchin described and traditional patterns of Chinese socialisation. "In an Eastern society, a strong sense of

authority inside a family may predispose an individual to becoming oversensitive in interpersonal relationships, which may in turn lead to anxiety disorder” (Shek, 1989, p.414).

In addition, economic hardship and long working hours mean that many Chinese parents can seldom spend time with their children in terms of both quantity and quality (“Youth Suicides”, 2000). This phenomenon probably reinforces negative social interactions between parents and their children. Chinese parents may ignore children’s daily life and developmental problems, at times of distress, their level of anxiety might therefore be exacerbated. Thus, the inhibition of the child’s feelings and opinions combined with confusion over discrepancies between personal and parental views and feelings probably play a vital part in developing and or maintaining anxiety symptoms.

In summary, parents especially mothers affect children’s development extensively. With close and supportive relationships with parents, children may obtain the psychological strength to cope with many adverse situations and maladjustments. However, boys and girls may benefit from their parents in different ways. Moreover, Chinese children may rely on their parents’ emotional support less to alleviate their anxiety owing to cultural factors such as the expectation of social maturity and common usage of authoritarian parenting.

Parental Contributions to Children’s Social Competence and Peer Relationships

Because children are developmentally in a socially dependent state, it is clear that social support is very important for them. This is because they are physically and emotionally reliant on others, but also need to discover themselves through others.

Copious research to date maintains that both attachments in childhood and children's relationships with others are important to development (e.g. Bretherton & Waters, 1985; Hartup, 1983; Rubin & Ross, 1982). The emergence of children's social competences with others outside the immediate family relies much on children's attachments with parents and family experiences (Cohn, Patterson, & Christopoulos, 1991; Ladd, 1992). For example, evidence shows that parent-child attachments before age of three years relates to children's peer relationships in the first years of school (Sroufe, 1986). Parents' guidance and modelling from a young age contributes extensively and consistently to children's interaction styles with peers throughout middle childhood (Coie, Dodge, Coppotelli & Heide, 1982). Studies in Western societies have shown that children who established positive relationships with peers are more likely to have parents who are more responsive, warm and engaging with their children (Attili, 1989; Baumrind, 1973). For those who experienced peer rejection are more likely to have parents who practice authoritarian parenting, that is, over-controlling, over-restricting and lack of acceptance (Barth & Parke, 1993; MacDonald & Rarke, 1984; Pettit, Dodge & Brown, 1988).

Consistent with Western research, the quality of relationships with parents impacts on Chinese children's peer acceptance level (Chen & Rubin, 1992). In addition, the negative affective qualities of father-child (Carson and Parke, 1996) and mother-child interactions (Dishion, 1990, 1992; Henggeler, Edwards, Cohen & Summerville 1991) have been found to predict children's poor peer relationships. However, no association has been found between attachments and the quantity of friends or best friends of 9 year-olds (Lewis & Feiring, 1989). The existing research suggests that parent-child relationships may impact

greatly on children's peer relationships, but the associations between parent-child relationships and the quality of friendships are not clear.

The Relative Importance of Families, Peers and Friendships to Social-Emotional Development during Childhood

Family members are the earliest childhood companions and are importance sources of intimate disclosure for children before they enter school (Ellis, Rogoff, & Cromer, 1981; Buhrmester & Furman, 1987; Kon & Losenkov, 1978). However, young children gradually learn and explore socially through interacting with others in their social world. As children grow older, they prefer same-age peers as their companions; and as the need for intimacy increases, preadolescents develop chumships, that is, a closer form of friendship with peers (Sullivan, 1953). By middle childhood, the quality of peer relationships becomes more prominent (Ellis, Rogoff, & Cromer, 1981). In a study of the change of support sources during childhood and adolescent periods, Hunter and Youniss (1982) found that intimacy with parents remained relatively stable across different ages, whereas intimacy becomes increasingly important with peers and friends. Moreover, Furman and Buhrmester (1985) reported that children rated friends as the most satisfactory source of companionship and emotional support. Children expand the variety of topics they discuss with friends significantly with age (Hunter, 1985). Preadolescents prefer to discuss academic, social and ethical issues with parents whereas peer problems are discussed with friends.

Peer Relationships and Children's Anxiety

The emergence of peer relationships and friendships accelerates in a child's world once they start school. Peers or friends may influence various aspects of child development as much as parents because children spend a large portion of time at school, where they can interact intensively and extensively with them. Peer relationships may facilitate children's development in a specific way that parent-child relationships fail to achieve (Asher & Parker, 1989; Furman & Robbins, 1985). For instance, most of the time, parents only listen to children's disclosures but not vice versa (Youniss, 1980). Thus, the reciprocal nature of the relationship makes peer relationships or friendships prominent and important in children's social networks. Peer relationships chiefly indicate one's group popularity; and children can explore themselves in their peer groups.

Considerable Western research evidence indicates that children's peer acceptance leads to positive developmental adjustment (e.g. Parker & Asher, 1987; Rubin & Daniels-Beirness, 1983). Dubow, Tisak, Causey, Hryshko, and Reid's (1991) study showed that elementary school children who had peer support showed better adjustment and academic achievement. It has also been documented that the peer relationships and the ability to keep and maintain friends in middle childhood profoundly affect preadolescents' psychosocial well-being (e.g. Coie, Dodgeand & Kupersmidt, 1990). Children, who are at risk of being rejected earlier, actually experience being rejected by others within the later elementary school years (Rubin, 1985). Therefore, middle childhood appears as a time when peer relationships have powerful and extensive influences over children. Frustration and maladjustment may result if children fail to achieve positive relationships.

Peer rejection has been documented as having long-term negative impacts on development with such outcomes as delinquency and school dropout (Chen, Rubin & Li, 1995; Chen et al., 1995; Coie, Belding & Underwood, 1990). The combination of aggressive, submissive behaviours and lack of prosocial behaviours often lead to peer rejection (Parkhurst & Asher, 1992). In addition, poor relationships with peers are one of the features often related to children referred to mental clinics (Achenbach & Edelbrock, 1981) and characterise preadolescents who are at risk for both concurrent and later emotional and behavioural disturbances (Parker & Asher, 1987; Puig-Antich et al., 1985).

Nevertheless, children who are disliked and rejected by peers have also been found to exhibit anxiety or withdrawal (Edelbrock, 1985; Puig-Antich et al., 1985; Strauss, Frame & Forehand, 1997). Many Western studies of anxiety in children indicate that anxiety, problematic peer relationships and general social competence may be interrelated (Edelbrock, 1985; Kashani & Orvaschel, 1980; Messer & Beidel, 1994; Strauss, Frame, & Forehand, 1987). In other words, peer rejection may be caused by withdrawal behaviours, which result from feeling anxious and insecure in social settings.

Conversely, being rejected by peers may lead to anxiety, and withdrawal behaviours.

Some studies have suggested that children's ability to manage emotions relates to their social competence with others (Denham, 1993; Eisenberg & Fabes, 1992; Parke, Burks, Carson & Cassidy, 1992). Usually anxious children are more likely to display behavioural inhibition and social withdrawal (Kagan, Reznick, & Snidman, 1988) and perceive ambivalent conditions more threatening than normal children (Barrett, Zahn & Cole, 1993). These children are more vulnerable to develop psychological problems because of the stunted growth of their social competences and peer relationships (Parker

& Asher, 1987). Apparently, peer relationships have a powerful effect on preadolescents' emotional and behavioural adjustment during middle childhood.

Peer Relationships in Chinese and Western Children

An academically stimulating environment is the primary focus for mainstream schools in Chinese societies, hence, acquiring networking and social skills are downplayed as an educational aim. Children in Chinese schools find themselves in highly formalised classrooms where interaction is discouraged. They mainly interact each other during short periods of recess at school. Therefore, the quantity and quality of interactions may vary from what Western children encounter, for example in open-plan classrooms where cooperation and peer interaction during school lessons are encouraged greatly. Yet, Chinese children still may spend considerable time with peers throughout childhood and adolescence because participating in various after-school and group activities is common.

Most studies investigating the quality of peer relationships have been conducted in Western countries, and differences between Chinese and Western societies have not been widely investigated. However, Chen and Rubin (1992) found that young Chinese children accepted one another less than their Canadian counterparts did. It is probable that some cultural factors may cause the structure or quality of peer relationships to vary between Western and Chinese children.

Although Chan (1983) found that Hong Kong Chinese adolescents' psychological well-being was related more to family support than to support from friends or peers, findings regarding the quality of peer relationships in Chinese children as a significant indicator of adjustment are in agreement with findings on Western children (e.g. Chen, Rubin & Sun,

1992; Chen et al., 1995; Coie et al., 1990). Because of the influence of Chinese traditional values, the needs and expectations of the group usually can be made obvious through Chinese children's social behaviours within the group (Schneider, Smith, Poisson & Kwan, 1997). Furthermore, the expectation of collaboration with others and upholding positive peer relationships are critical (Chao, 1994; Yang, 1981). Children who fail in peer relationships may be viewed as problematic and lacking in collectivistic ideology. Thus, being rejected by peers, children may be criticised as lacking proper attitudes towards others in terms of collectivistic ideology, which may in turn induce anxiety.

The context of Chinese children's peer relationships may differ from those of their Western counterparts in terms of quality and quantity. Besides, due to the cultural factors, Chinese children who are rejected by peers may be viewed by others as the cause of the problem and this may cause extra pressure on their fragile coping skills.

Friendship, Social Support and Anxiety

Friendships and peer relationships differ in that friends share a mutual feeling and trust rather than a more general relationship with peers. The only qualifying factor for a peer relationship is that the involved people are of similar age and interest, however, friendship is mutual and dyadic (Hartup, 1992; Lewis & Rosenblum, 1975). Friends are important element to foster self-esteem, self-worth and pride throughout the life span (Berndt & Perry, 1986; Cohen, Mermelstein, Karmarck & Hoberman, 1985; Sullivan, 1953). Friendships certainly change in nature with age as do peer relationships. Moreover, friends can act as an essential source of advice on problems and emotional support (Sullivan, 1953). Diverse characteristics have been used to describe friends from

first through eighth grade (Bigelow, 1977; Bigelow & LaGaipa, 1975), including common activities, helpmate, acceptance, loyalty, intimacy and common interest. Through friendships, children are able to obtain affection, intimacy and reliable allies (Hartup, 1986; Sullivan, 1953). Mutual attachments that involve intimacy, self-disclosure and emotional support becomes more obvious as children mature (Berndt & Ladd, 1989; Youniss, 1980). From these experiences, feelings of interpersonal trust, acceptance, and emotional security can be fostered. Furman and Buhrmester (1985) found that children during middle childhood rated friends as the best source of companionship and emotional support, followed by mothers and fathers. From middle childhood, children start to focus on high reciprocity relationships, where being a good friend depends on how they can help others, including keeping the other company when needed and contributing to conversations and discussing problems. Friends are able to communicate with one another more efficiently and effectively than non-friends (Ladd & Emerson, 1984). Common topics that friends share include anxieties and embarrassment with a focus on the negative emotions (Hirsh & Dubois, 1989).

Existing data suggest that children who have friends are more sociable, cooperative, altruistic, self-confident and less lonely (Hartup, 1993; Bagwell, Newcomb, & Bukowski, 1998). The effectiveness of friendships to buffer children from negative adverse situations has been found. For example, during school changes children experienced less psychosocial disturbances when they were with the company of good friends than without (Simmons, Burgeson, & Reff, 1988). "Normative transitions and the stress carried with them seem to be better negotiated when children have friends than when they don't, especially when children are at risk" (Hartup, 1996, p.10). Children can deal with life

stress easier, such as coping with a divorce and having a rejecting parent (Bagwell et al., 1998) easier because of the emotional support provided by friends.

Berndt and Perry (1990) found that the linkage between the quality of friendship and adjustment becomes stronger between the period of middle childhood and early adolescence, and a shortage of friends is the common element in many clinic-referred children (Rutter & Garnezy, 1983). Goodyer, Wright and Altham (1989) found that the poor friendship quality that school-age children had one year before the onset of emotional disorders had been found to predict their disorders. Children's friendships cannot be neglected because they facilitate children's development and foster the development of psychopathology.

From Western research, the importance of friendships has been amply demonstrated. However, it seems research on the quality and the impact of friendships among Chinese children are limited. It may imply that academic aspects are uppermost in Chinese societies. Indeed, both peer status and friendships are essential components for children's development processes (Parker & Asher, 1993) and they execute unique functions that may operate and facilitate children's development (Furman & Robins, 1985).

Gender Differences in Peer Relationships and Friendships

The quality of children's friendships and peer relationship may display some divergences between boys and girls. This may be due in part to different rates of development in boys and girls. For example, it has been known that, girls' verbal skills develop faster than boys', therefore it is not unreasonable to find that young girls are more able to express their feelings and disclose themselves with friends than are boys

(Buhrmester & Furman, 1987). Being able to express oneself is the key to fostering social development. Moreover, girls are more likely to have one or two play partners but boys are more involved with peers within larger groups (Maccoby, 1990). Within a peer group, identity or position is more important than intimacy for boys. As a result, girls in middle childhood often view their same-sex friends as a provider of intimacy (Buhrmester and Furman, 1987; Foot, Chapman, & Smith, 1977) and rate intimacy higher in their friendships than do boys (Berndt, 1981; Furman & Buhrmester, 1985). Thus, intimacy is the defining characteristic of girls' friendships but not for boys (Berndt & Perry, 1990). It seems that characteristic preferences for peer relationships and friendships among boys and girls are not the same and that social developmental trends may vary. Furthermore, it is not clear that whether Chinese children in middle childhood's gender-based preferences, for different types of peer relationships are similar to their Western counterparts due to the shortage of studies in such groups.

In summary, middle childhood seems to be the time that both general peer relationships (status within the group) and friendships begin to powerfully influence children's social development. Being rejected by peers or being without friends is clearly linked to developmental difficulties and maladaptive behaviours. Moreover, boys and girls may view these social relationships differently. Boys may rely more on peer groups while girls may rely more on mutual friendships to provide emotional support.

Conclusions and Directions for Future Research

Much research in the West has demonstrated the importance of attachments to parents in infancy, early childhood, late adolescence and adulthood. There have been relatively

little effort to investigate the role of these connections during the preadolescent period. Apparently, parents, peer groups and friends; all to some extent have a buffer function when children are in adverse situations. However, the question of whether children in middle childhood find fathers, mothers, peers or friends more important or more helpful to alleviate their anxiety levels at times of stress is not clear.

Existing literature on children's anxiety concerning the cultural groundwork is limited. In particular, there is little information concerning a Chinese cultural perspective in attachment with parents, peer relationships and friendships. Distinctive social philosophies in the East and West may affect the quality of relationships in children's social networks and their effectiveness in facilitating children's development. The absence of the cross-cultural evaluations of the moderating role and effectiveness of parents and peer during middle childhood limits our understanding about anxiety in children. Research on these aspects should be carried out in non-Western societies. Moreover, gender should be taken into account in future studies because the different development trends of boys and girls may cause variations in their admission of anxiety and reliance on their social network to alleviate anxiety.

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Journal Article

**The Influence of Family, Peer, Friendship and Gender Factors
on Anxiety in Hong Kong Chinese Children**

Abstract

Experiencing anxiety difficulties is not uncommon during childhood. Parents, peers and friends are becoming more important socializing agents as children grow. In the West, these agents are claimed to have positive effects on children's development and especially in times of crisis. However, research on Chinese children's social networks and their relationship to anxiety is limited. It is not clear whether positive effects from parents, peers and friends are experienced universally. The aim of this study was to investigate the relative contributions of parent-child attachment, peer status and friendships to the prediction of anxiety in Hong Kong Chinese children during middle childhood. Based on Western literature, it was hypothesised that positive attachment with parents, positive peer status and friendships would be associated negatively with children's reported anxiety levels. According to Western theories which emphasise the burgeoning importance of peers in the social development during middle childhood, it was expected that peer relationships including peer status and friendships would have a stronger predictive relationship with anxiety in middle childhood than attachment with parents. It was also posited that parental and peer factors in predicting anxiety might be different for girls as compared to boys. Four hundred and forty-two Hong Kong Chinese children participated in this study. Participants completed the Revised Children's Manifest Anxiety Scale (RCMAS), Inventory of Parent and Peer Attachment (IPPA), How I Feel Toward Others (HIFTO) and a sociometric nomination task, all within a single administration session. The first hypothesis was upheld, indicating that children's involvement in social networks

is significantly associated with their anxiety levels. However, in regard to the second hypothesis, peer acceptance was involved significantly in predicting boys' anxiety during middle childhood but attachment with parents, especially mothers was more predictive of girls' anxiety during middle childhood.

Over the last decade, Western children and adolescents have suffered more from anxiety difficulties and internalising disorders than any other psychological problems (Bernstein & Borchardt, 1991; Mattison, 1992; Prior, Sanson, Smart & Oberklaid, 1999). About nine percent of children fulfill the criteria for anxiety disorders (Costello, 1989). The average age of onset is 10 years (Keller et al., 1992). Girls appear to be more vulnerable to anxiety, but this finding may be due to the greater feminine tendency to admit anxiety (Cockerham, 1981; Prior et al., 1999). Anxiety has been identified as "a reaction to a traumatic situation, or to danger, present or anticipated" (Schur, 1958, p.218-219).

Indeed, a combination of physiological, motor and cognitive responses forms an anxiety reaction (Ollendick, King & Yule, 1994). Psychoanalytic, biological, social learning and interaction theories all contribute to explain the risk factors for the development of anxiety to some extent (Dadds, Heard & Rapee, 1991; Rutter, Macdonald, LeCounteur, Harrington, Bolton & Bailey, 1990; Thyer & Sowers-Hoag, 1988). However, no single theory can offer a complete picture of the development or aetiology of children's anxiety.

As a function of societal and cultural factors, Chinese children are subject to enormous pressure to perform well at school (Law, 1978; Yeh, 1985; "Young Suicide" 2000). A combination of inhibition of the child's feelings, opinions and high levels of parental

control and expectations (Chen, Rubin & Sun, 1992; Ho, 1986) probably has a major role in the development of anxiety in Chinese children. In Chinese societies, it has been found that Chinese girls as with their Western counterparts, display more psychiatric and somatic symptoms than do boys (Briscoe, 1982; Shek, 1989).

Social supports and relationships with others are important from early childhood. They often act as facilitators in children's development and an emotional buffer in adverse situations. Social support has been defined as "the extent to which an individual is accepted, loved, and involved in relationships with open communication" (Sarason, Shearin, Pierce & Sarason, 1987, p.830). For children, support is chiefly channeled through parents and peers or friends. Children may rely on these different individuals to provide different kinds of support in various ways. In fact, children are able to differentiate and sensitive to the accessibility and the types of support which are available in their social worlds (Reid, Landesman, Treder & Jaccard, 1989).

The impact of relationships with parents, peers and friends in contributing to children's development and adjustment are well documented (Dadds & Barrett, 1996; Sullivan, 1953; Furman & Robins, 1985). Positive parent-child relationships and support from family appear to benefit the emotional well-being, adjustment and lowers the risk of depression and social anxiety (Armsden & Greenberg, 1987; Grotevant & Cooper, 1986; Greenberg, Siegel, & Leitch, 1984; Hauser & Bowlbs, 1990; Resnick, 1989; Papini, Roggman & Anderson, 1991). Further, developmental maladjustment and anxious behaviours often arise when children lack attachment and emotional support from their parents (Dishion, 1990; Offer, Ostrov & Howard, 1981).

Many studies revealed that the mother's role executes the greatest impact on children's development and forms a specific type of buffer in many adverse situations (Reid et al., 1989). Maternal acceptance facilitates children's support seeking (McIntyre & Dusek, 1995; Shell & Roosa, 1991) and self-disclosure (Yang & Hwang, 1980). Children's anxious behaviours are related to the child's internal working model of the "availability and accessibility of the caretaker... in the role of comforter and protector" (Bowlby, 1973, pp. 202-203). Bowlby (1982) maintains that the affection bonding between children and significant others, especially mothers, operate to facilitate children's effective coping behaviour.

Although much research has suggested that children's anxiety may result from parents' rejection and their failure to grant psychological autonomy to children (Doyal & Friedman, 1974; Siqueland, Kendall & Steinberg, 1996), within a small clinical sample, Muris, Bogels, Meesters, van der Kamp, and Van Oosten (1996) found no association between parental rearing practices and fearfulness. Furthermore, only boys' but not girls' maladaptive behaviours and attachments with mothers have been found to be correlated (Cohn, 1990).

Consistent with Western studies, Chinese research has demonstrated the impact of family factors such as family processes, parental behaviours and parenting on adaptive and maladaptive development in Chinese children and adolescents (e.g. Bond, 1991; Chen, Rubin & Li, 1997; Tseng & Wu, 1985). It has been found that Chinese adolescents depend upon family support, especially support from fathers, to alleviate their anxiety (Chan, 1983). In a longitudinal study of second- and fourth-grade children, Chen et al. (1997) found that maternal acceptance and rejection attitudes contributed to Chinese

children's social functioning and school adjustment. Nevertheless, differences in child rearing between Chinese and Western societies have been documented (Chiu, 1987; Ekblad, 1986; Tobin, Wu, & Davidson, 1989). For instance, Chinese parents regardless of living in Taiwan, Mainland China or in America, are more likely to display restrictive and authoritarian parenting when compared with their Caucasian American counterparts (Chiu, 1987; Lin & Fu, 1990). These aspects of socialisation in Chinese culture are different from what Western children experience and presumably may make Chinese children more anxiety-prone. Apart from the common usage of high parental control, many Chinese parents also suffer from greater economic hardship and longer working hours, which may cause elevated distress levels compared to their Western counterparts. This trend might lead to Chinese parents neglecting their children's developmental problems and concerns; and therefore, children's anxiety might be exacerbated.

Intimacy with parents appears to remain relatively high during a whole life span; however, intimacy becomes increasingly important with peers and friends as children grow older (Hunter & Youniss, 1982). Peer relationships provide opportunities for children to explore themselves and gain a sense of belongingness (Sullivan, 1953). Friendship offers children a source of emotional support, mutuality and dyadic experience on an equal footing, compared to the vertical relationships found in families (Hartup, 1992; Lewis & Rosenblum, 1975). These social relationships are crucial, especially during middle childhood; and they affect children's psychosocial well being extensively (Coie, Dodge, & Kupersmidt, 1990; Parker & Asher, 1987).

The impact of being accepted or rejected by peers appears to influence both Chinese and Western children similarly. Children who are accepted by peers can benefit through

peer interaction from the resources for assistance and support that peers provide.

Conversely, children who are rejected by peers tend to develop maladaptive problems such as antisocial behaviour, delinquency and school dropout (Chen, Rubin & Li, 1995; Coie, Belding & Underwood, 1990). Peer rejection also has been found to correlate with anxiety and social withdrawal (Edelbrock, 1985; Puig-Antich et al., 1985; Strauss, Frame & Forehead, 1987). In fact, poor peer relationships in middle childhood is one of the factors that contribute to the development of children's concurrent and later emotional and behavioural disturbances (Achenbach & Edelbrock, 1981; Parker & Asher, 1987). Children in the age range of 6 to 12 years with either anxiety or major depressive disorders display relatively more impaired peer relationships than do non-clinic children (Puig-Antich et al., 1985).

In addition, it seems that the quality of boys' peer relationships deviate from girls'. Most of the time, boys tend to play in large loosely-formed groups rather than playing with one or two friends (Maccoby, 1986). Unlike boys, girls prefer to play with one or two peers (Maccoby, 1986) and view friends more as sources of intimacy and support (Buhmester & Furman, 1987; Foot, Chapman & Smith, 1977). With their comparatively more advanced development in verbal skills, girls are more capable in expressing their thoughts and feelings as well as discussing problems with friends (Buhmester & Furman, 1987). Indeed, intimacy is the remarkable feature of girls' friendships. Friendships may offer girls more support in times of anxiety. These studies suggest that there may be sex differences in the development of social relationships.

Despite these gender differences, it has been pointed out that friends throughout the life span serve as a catalyst to facilitate self-esteem, self-worth, and problem solving skills for

both sexes (Berndt & Perry, 1986; Cohen, Mermelstein, Karmarck & Hoberman, 1985; Sullivan, 1953). Existing data suggest that children who have friends are more sociable, cooperative, altruistic, self-confident and less lonely (Hartup, 1993; Newcomb & Bagwell, 1999). By contrast, most clinic-referred children do not have friends (Rutter & Garnezy, 1983; Goodyer, Wright & Altham, 1989). Mutual attachment such as intimacy, affection, and emotional support emerge in children's friendships during childhood (Berndt & Ladd, 1989; Sullivan, 1953; Youniss, 1980). Friends have been rated as the most satisfactory source of companionship and emotional support (Furman & Buhrmester, 1985). Friendship quality and adjustment correlated strongly between the period of middle childhood and early adolescence (Berndt & Perry, 1990).

The research finding regarding the quality of peer relationships as a significant indicator of adjustment is in agreement in for both Chinese and Western children (Chen et al., 1992; Chen et al., 1995; Coie et al., 1990). However, research related to the quality of peer relationships and friendships among Chinese children is limited; and it is not clear whether the impact of these relationships on Chinese children is as strong as that seen in Caucasian children and adolescents. Do Chinese children during middle childhood rely more on peers or friends than their parents to provide emotional support when anxiety-provoking situations arise?

Children's social networks often play an important role in mediating the earliest identifiable precursor of maladjustment in children and the effects of anxiety on children's development. A number of variables are associated with children's reactions and perceptions of aversive situations, including parental behaviours, parent-child attachment, peer relationships, friendships and children's gender. However, these

connections may vary across cultures, given that children in different societies and cultures may have different life experiences. For instance, children in non-Western cultures may experience more stress arising from school and parental expectations than do their Western counterparts. In addition, given specific cultural practices, non-Western parents and children may interact differently from those in Western societies.

Accordingly, the patterns of association between different parent-child attachments, peer relationships, friendships and anxiety may vary among Western and non-Western children. Thus, utilising non-Western samples may reveal valuable information as to whether culture-specific influences are involved in the formation of childhood anxiety.

Hong Kong is an extraordinary enclave that mingles both Eastern and Western traditions and values. Nonetheless, its educational and child-rearing philosophies are distinctly different from those of Western countries such as Britain, the USA or Australia. Because of its distinctive Confucian social philosophy, Hong Kong provides a particularly interesting setting for studying the association between social networks and childhood anxiety. Understanding of the social relationships that moderate Hong Kong children's anxiety in middle childhood remains limited and no study has examined the relationships between anxiety, parental influences and peer influences of Chinese children during middle childhood.

The present study attempts to fill a relative void in research on parent-child attachment, peer status and friendships and its relationship to anxiety. It is essential to examine the relative contribution of these relationships as predictors of anxiety in non-Western children during middle childhood. By analysing results from such a sample, not only the question of whether the emotional buffer hypothesis for parents and peers is universal

could be answered, but also light may be thrown on the viability of some of the existing theoretical explanations that have originated through Western research. In addition, a study of the relative connections between different types of supportive relationships may sharpen knowledge of the differential impacts major providers of support have on anxiety in children. In terms of children's anxiety level, does parental influence continue to affect children in middle childhood or are other relationships more influential? Moreover, different predictive effects of parental and peer influences in the level of boys and girls' anxiety were examined. Self-report questionnaires were used because children's perspectives to help gauge their anxiety, and their attachment with parents their preference of whom they like or dislike and who are their best friends are subjective phenomena.

Based on Western studies and limited evidence from Chinese research literature, it was hypothesised that positive attachment with parents, higher peer status and friendships would be negatively associated with children's anxiety. In line with findings in Western studies the theoretical stance of the greater importance of peers than parents in children's social development and adjustment during the stages of middle childhood was explored. If this is a universal model, it was expected that peer status and friendships would be more strongly and predictively associated with anxiety in middle childhood than attachment with parents. Moreover, it was posited that parental and peer influences on anxiety might be dissimilar in boys and girls.

Method

Participants

Four hundred and forty-two Hong Kong Chinese children participated in the study. They were recruited from a local primary school, which was located in a middle-class neighbourhood in a suburb of Hong Kong. The 13 participating primary classrooms contained fourth, fifth and sixth grade children which are equivalent to fourth, fifth and sixth grades in Australia. Parental consent forms along with explanatory letters were distributed to the parents of children from 9 to 12 years of age.

The criteria for the selection of participants were as follows: (a) children were born and educated in Hong Kong; (b) children spoke Cantonese (the main dialect spoken in Hong Kong) as their first language; (c) children were aged between 9 and 12 years. Ten children were excluded from analyses because they were born in China, Canada, Malaysia and Macau respectively. Three children who only partially completed the questionnaires were also excluded. Consequently, 429 children ranged in age from 9 years 1 month to 12 years 5 months, including 212 boys ($M = 10$ years 6 months; $SD = 11$ months) and 217 girls ($M = 10$ years 6 months; $SD = 11$ months) were included in the present study. There is no significant difference in the age of boys and girls in the sample. Among the participants, 153 were in fourth grade (76 boys and 77 girls), 138 were in fifth grade (66 boys and 72 girls) and 145 were in sixth grade (73 boys and 72 girls).

Materials

All materials used in the present study were Western based measures due to a lack of suitable and reliable Chinese instruments. They were translated and back translated to ensure compatibility with the original English language versions. All measures were presented in Chinese and were group administered in Cantonese in class by the same investigator.

The Revised Children's Manifest Anxiety Scale (RCMAS). The RCMAS (Reynolds & Richmond, 1985 – Appendix A) is a 37-item measure rated on a yes-no basis that assesses anxiety manifested via physical expression, internalization, rumination, and problems with attention and others. The RCMAS is comprised of four subscales labeled Physiological Anxiety (PA), Worry / Oversensitivity (W/O), Social Concerns / Concentration (S/C) and a Lie Scale. The RCMAS has adequate internal consistency, test-retest reliability (Reynolds & Paget, 1983; Wisniewski, Mulick, Genshaft, & Coury, 1987), and construct validity (Mattison, Bagnatto, & Brubaker, 1988).

Three-choice Sociometric Nomination. Children were asked to name three peers whom they considered to be their best friends in their school. Using the responses from the sociometric nominations, each child obtained three separate scores indicating whether the peer chosen by the child as his or her first, second and third best friend had in turn chosen the child as his or her first, second or third best friend. Those scores were used to calculate a Friendship Index.

Inventory of Parent and Peer Attachment (IPPA). The IPPA (Armsden & Greenberg, 1987 – Appendix B) is a three-factor, 25-item measure that assesses perceived quality of attachment to mother, father and peer, yielding three attachment scores respectively. A 5-point Likert-scale appears next to each statement and children were instructed to circle one number that tells how true the statement was for them at that stage. In the present study, only the father and mother sections were administered. The IPPA has been found to possess strong test-retest reliability, convergent validity (Armsden & Greenberg, 1987) and internal consistency across times of measurement (Papini & Roggman, 1992).

How I Feel Toward Others (HIFTO). The HIFTO (Pierce, 1978 – Appendix C) is a sociometric device that requires each student in a class to rate all other classmates on the dimension of social attraction. It is a sociometric roster instrument that consists of four face icons next to the name of each classmate. Children were instructed to circle one face for each classmate indicating their degree of preference for that peer. The faces on the scale were as follows: ? = do not know him or her well, ☺ = like him or her as a friend, ☹ = do not particularly like that peer but do not dislike him or her either, ⊗ = do not like him or her as a friend. Children's responses on the HIFTO were used to calculate a score for every child indicating their level of popularity in the classroom and a further measure, a Friendship Index, based on HIFTO reciprocations.

Procedure

Permission was obtained from the school principal and teachers to carry out the study. Then, the explanatory letter about this study plus the consent form (Appendix D & E) was distributed to the parents or primary caretakers of the children in fourth to sixth grade in

the school. All children were asked to return a consent form indicating whether their parents agreed or did not agree for them to participate.

The data were collected within a single session, which lasted approximately 45 minutes for each class. At the beginning of the session, the importance and responsibility of maintaining confidentiality on the part of the participants and the investigators was discussed. After the instructions were given, enough time was provided for students to complete each measure at their own pace. Participants were first instructed on how to complete the RCMAS. When every participant in the class finished, a three-choice sociometric nomination was administered. After this, instructions on how to complete the parental portions of the IPPA were provided. For the final task, participants were instructed to fill out the HIFTO. Participants were specifically reminded not to discuss their responses while completing the HIFTO.

Results

Gender Differences in Anxiety and Predictor Measures

Three anxiety variables, PA, W/O and S/C, taken from RCMAS, were analysed separately because they represented different aspects of anxiety. The Father Attachment Score (FAS) and the Mother Attachment Score (MAS) both obtained from the IPPA which accesses how much their father and mother provide the child with a sense of psychological security, were also used for analysis.

The HIFTO Friendship Index (HIFTOFI) was developed as a variable, which measures the closeness and extensiveness of friendship. It was calculated using smile responses on the HIFTO. The number of reciprocations (i.e. if the child that the target child gave a smile to, also gave the target child a smile) was multiplied by the total number of smiles the target child received. The figure was then divided by the number of valid cases (i.e. the number of children in the class completing HIFTO excluding the target child).

A friendship index using best friend nominations (NFI) was also calculated. This index indicated whether the child had a reciprocated best friend (i.e. whether the child that the target child nominated also nominated the target child). It was calculated by adding values accorded to first, second and third nominations according to whether they were reciprocated or not. For example, if the target child's first nomination also selected the target child as a first nomination, the second nomination was not reciprocated and the third nomination selected the target child as a second nomination, then the target child obtained scores 12, 0 and 6 respectively. These values were then divided by the number

of possible valid selections (i.e. the number of participating children minus the target child).

A Peer Acceptance Index (PAI) based on HIFTO smiles received measured the individual's sociometric status and was standardized by dividing the number of smiles the child received from the HIFTO by the number of nominators in the class, excluding the target child. The Peer Rejection Index (PRI) was standardized by dividing the number of frowns the child received from the HIFTO by the number of nominators in the class, excluding the target child.

In order to detect possible anxiety and predictor measure differences among boys and girls, a series of independent samples, *t* tests were performed. The descriptive statistics for these dependent variables pertaining to boys and girls are presented in Table 1.

Table 1

Means and Standard Deviations for Anxiety and Predictor Measures for Boys (n= 212) and Girls (n=217)

Variable	Boys		Girls	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
PA*	3.53	1.79	3.15	1.93
W/O	4.27	2.72	4.24	2.82
S/C	2.24	1.73	2.02	1.76
FAS*	81.04	17.36	85.23	17.68
MAS*	84.86	17.71	88.96	18.46
HIFTOFI	1.65	1.87	1.78	1.83
NFI*	2.96	2.93	3.65	3.21
PAI*	.27	.13	.31	.15
PRI*	.21	.16	.17	.12

Note. PA = Physiological anxiety; W/O = Worry / Oversensitivity; S/C = Social Concerns / Concentration; FAS = Father Attachment Score; MAS = Mother Attachment Score; HIFTOFI= HIFTO Friendship Index; NFI = Nomination Friendship Index; PAI = Peer Acceptance Index; PRI = Peer Rejection Index.

* = differences significant at the .05 level

Significant gender differences were found for PA, $t(434) = 2.13, p < .05$; FAS, $t(427) = -2.47, p < .01$, MAS, $t(432) = -2.36, p < .02$; NFI, $t(434) = -2.33, p < .05$; PAI, $t(434) = -2.91, p < .005$; PRI, $t(434) = 3.18, p < .002$, but no differences emerged with regard to the HIFTOFI, W/O and S/C. Results revealed that boys experienced more physiological anxiety symptoms and peer rejection than did girls, whereas girls exhibited more attachment with their parents and had higher levels of reciprocated friendships as well as experiencing greater peer acceptance than boys. There were no significant gender differences for the severity of internalising anxiety and concern about the expectations of other significant individuals as well as friendship, which was measured by HIFTO.

Relationships Between Predictor and Outcome Variables

Gender differences in the PA, FAS, MAS, NFI, PAI and PRI were shown in the previous independent samples *t* tests, therefore separate correlations were performed to examine the association between parental attachment, friendship, peer acceptance, peer rejection and different aspects of anxiety for boys and girls. Correlations between predictor variables (parental attachment, friendships and peer relationships) and outcome variables (three subscales measured by RCMAS) for boys and girls are shown in Tables 2 and 3 respectively.

Table 2
Simple Correlations between Potential Predictor Variables and RCMAS Subscales Scores for Boys

	PA	W/O	S/C
FAS	-.09	-.09	-.12
MAS	-.16*	-.06	-.25*
HIFTOFI	-.18*	-.13	-.10
NFI	.03	.03	.01
PAI	-.20*	-.15*	-.27*
PRI	-.11	.08	.24*

Note. PA = Physiological anxiety; W/O = Worry / Oversensitivity; S/C = Social Concerns / Concentration; FAS = Father Attachment Score; MAS = Mother Attachment Score; HIFTOFI= HIFTO Friendship Index; NFI = Nomination Friendship Index; PAI = Peer Acceptance Index; PRI = Peer Rejection Index.

* = $p < .05$.

For boys, significant Pearson's r coefficients indicated that mother attachment was negatively correlated with physiological anxiety symptoms and social anxiety, whereas friendship measured by HIFTO was negatively correlated with physiological anxiety symptoms. Moreover, peer acceptance was negatively correlated with all anxiety variables, but peer rejection was only correlated positively with social anxiety.

Table 3
Simple Correlations between Potential Predictor Variables and RCMAS Subscales Scores for Girls

	PA	W/O	S/C
FAS	-.25*	-.25*	-.37*
MAS	-.27*	-.21*	-.49*
HIFTOFI	-.14*	-.05	-.18*
NFI	-.07	.02	-.13
PAI	-.06	-.02	-.16*
PRI	.07	.12	.22*

Note. PA = Physiological anxiety; W/O = Worry / Oversensitivity; S/C = Social Concerns / Concentration; FAS = Father Attachment Score; MAS = Mother Attachment Score; HIFTOFI= HIFTO Friendship Index; NFI = Nomination Friendship Index; PAI = Peer Acceptance Index; PRI = Peer Rejection Index.

$p < .05$.

In contrast to the boys' results, for girls, both father and mother attachment were more strongly and consistently correlated with all anxiety variables. Similar to boys' results friendship measured by HIFTO was correlated negatively with physiological anxiety symptoms, but unlike boys, significantly with social anxiety. Peer acceptance for girls was negatively correlated with social anxiety alone whereas for boys it was correlated with all anxiety manifestations. For peer rejection boys and girls showed similar results with positive correlations with social anxiety.

Parental Attachment, Friendship, Peer Acceptance and Peer Rejection as Predictors of Childhood Anxiety

Stepwise multiple regression analyses were used to investigate how strongly parental attachment, friendship, peer acceptance and peer rejection, predicted different aspects of anxiety. Regressions examined the incremental contributions of various domains of

variables in predicting anxiety that children experienced. However, the simple correlations between NFI and three anxiety subscales measured by RCMAS for boys and girls were not significant, therefore, NFI was omitted from multiple regression analyses. All other measures were used. Because gender differences were found in the previous analysis and because sex differences in psychopathology are commonly found (Achenbach & Edelbrock, 1991), separate forward stepwise regression analyses were conducted for boys and girls using PA, W/O and S/C respectively as dependent variables.

The stepwise regression analyse using PA as the dependent variable for boys and girls are shown in Tables 4 and 5 respectively.

Table 4

Summary of Stepwise Regression Analysis for Variables Predicting Physiological Anxiety Subscale Score for Boys (n=212)

Variable	B	SE B	β
Step 1			
PAI	-2.73	.91	-.20**
Step 2			
PAI	-2.45	.91	-.18*
MAS	-.01	.01	-.13 <i>ns</i>
Step 3			
PAI	-1.90	1.02	-.14*
MAS	-.01	.01	-.12 <i>ns</i>
HIFTOFI	-.09	.07	-.09 <i>ns</i>

Note: $R^2 = .04$ for Step 1 ($p < .005$); $\Delta R^2 = .02$ for Step 2 ($p > .05$); $\Delta R^2 = .01$ for Step 3 ($p > .05$).

PAI = Peer Acceptance Index; MAS = Mother Attachment Score; HIFTOFI = HIFTO Friendship Index.

* $p < .01$; ** $p < .005$

Table 5

Summary of Stepwise Regression Analysis for Variables Predicting Physiological Anxiety Subscale Score for Girls (n=217)

Variable	<i>B</i>	<i>SE B</i>	β
Step 1			
MAS	-.03	.01	-.27**
Step 2			
MAS	-.02	.01	-.19*
FAS	-.02	.01	-.14 <i>ns</i>
Step 3			
MAS	-.02	.01	-.18*
FAS	-.01	.01	-.13 <i>ns</i>
HIFTOFI	-.10	.07	-.09 <i>ns</i>

Note. $R^2 = .08$ for Step 1 ($p < .0001$); $\Delta R^2 = .01$ for Step 2 ($p > .05$); $\Delta R^2 = .01$ for Step 3 ($p > .05$). MAS = Mother Attachment Score; FAS = Father Attachment Score; HIFTOFI = HIFTO Friendship Index.

* $p < .05$; ** $p < .0001$

Peer acceptance was a significant predictor of PA for boys and accounted for 4% of the variance at Step 1. Step 2 and 3 displayed that entering MAS and HIFTOFI did not increase the level of the explained variance to a significant degree ($p > .05$). Mother attachment and friendship explained only additional 2 % and 1 % of the variance in PA respectively for boys. Mother attachment was a significant predictor of PA for girls and accounted for 8% of the variance at Step 1. Step 2 and 3 showed that entering FAS and HIFTOFI did not increase the level of the explained variance to a significant degree ($p > .05$). Both father attachment and friendship only explained additional 1 % of the variance respectively in PA for girls. Results indicated higher peer acceptance for boys and stronger mother attachment for girls were associated with lower levels of physiological anxiety symptoms.

The stepwise regression analysis using W/O as the dependent variable for boys and girls are shown in Tables 6 and 7 respectively.

Table 6

Summary of Stepwise Regression Analysis for Variables Predicting Worry / Oversensitivity Subscale Score for Boys (n=212)

Variable	B	SE B	β
Step 1			
PAI	-3.08	1.37	-.15*
Step 2			
PAI	-3.04	1.37	-.15*
FAS	-.01	.01	-.08 <i>ns</i>

Note. $R^2 = .02$ for Step 1 ($p < .05$); $\Delta R^2 = .01$ for Step 2 ($p > .05$). PAI = Peer Acceptance Index; FAS = Father Attachment Score.

* $p < .05$

Table 7

Summary of Stepwise Regression Analysis for Variables Predicting Worry / Oversensitivity Subscale Score for Girls (n=217)

Variable	B	SE B	β
Step 1			
FAS	-.04	.01	-.25*
Step 2			
FAS	-.04	.01	-.25*
PRI	2.69	1.57	-.11 <i>ns</i>
Step 3			
FAS	-.04	.01	-.26*
PRI	4.01	1.93	.17 <i>ns</i>
PAI	1.76	1.50	.10 <i>ns</i>

Note. $R^2 = .06$ for Step 1 ($p < .0005$); $\Delta R^2 = .01$ for Step 2 ($p > .05$); $\Delta R^2 = .01$ for Step 3 ($p > .05$). FAS = Father Attachment Score; PRI = Peer Rejection Index; Peer Acceptance Index.

* $p < .0005$

Peer acceptance significantly predicted W/O for boys and accounted for 2 % of the variance. Step 2 showed that entering FAS to the equation did not increase the level of the explained variance to a significant degree ($p > .05$). Only an additional 1 % of the variance in W/O was explained by father attachment for boys. Moreover, father

attachment significantly predicted girls' W/O and accounted for 6 % of the variance. Step 2 and 3 showed that entering PRI and PAI to the equation did not increase the level of the explained variance to a significant degree ($p > .05$). Peer acceptance and rejection respectively explained additional 1 % of the variance in W/O for girls. Results indicated that high peer acceptance for boys and strong father attachment for girls was associated with low levels of internalised anxiety experiences.

The stepwise regression analyses using the S/C as the dependent variable were conducted separately for boys and girls are shown in Tables 8 and 9.

Table 8
Summary of Stepwise Regression Analysis for Variables Predicting Social Concerns / Concentration Subscale Score for Boys (n=212)

Variable	B	SE B	β
Step 1			
PAI	-3.50	.85	-.27***
Step 2			
PAI	-3.04	.85	-.24***
MAS	-.02	.07	-.21**
Step 3			
PAI	-2.24	1.14	-.17*
MAS	-.02	.01	-.20**
PRI	1.01	.95	.09 <i>ns</i>

Note. $R^2 = .07$ for Step 1 ($p < .0001$); $\Delta R^2 = .04$ for Step 2 ($p < .01$); $\Delta R^2 = .004$ for Step 3 ($p > .05$); PAI = Peer Acceptance Index; MAS = Mother Attachment Score; PRI = Peer Rejection Index.

* $p = .05$; ** $p < .005$; *** $p < .0005$

Table 9

Summary of Stepwise Regression Analysis for Variables Predicting Social Concerns / Concentration Subscale Score for Girls (n=217)

Variable	<i>B</i>	<i>SE B</i>	β
Step 1			
MAS	-.05	.01	-.49***
Step 2			
MAS	-.04	.01	-.47***
PRI	2.23	.88	.15**
Step 3			
MAS	-.04	.01	-.38***
PRI	2.38	.88	.16**
FAS	-.01	.01	-.14*
Step 4			
MAS	-.04	.01	-.38***
PRI	2.07	.92	.14*
FAS	-.01	.01	-.14*
HIFTOFI	-.07	.06	-.07 <i>ns</i>

Note. $R^2 = .24$ for Step 1 ($p < .001$); $\Delta R^2 = .02$ for Step 2 ($p < .05$); $\Delta R^2 = .01$ for Step 3 ($p > .05$); $\Delta R^2 = .00$ for Step 4 ($p > .05$). MAS = Mother Attachment Score; PRI = Peer Rejection Index; FAS = Father Attachment Score; HIFTOFI = HIFTO Friendship Index.

* $p \leq .05$; ** $p \leq .01$; *** $p < .0001$

Peer acceptance significantly predicted S/C for boys and accounted for 7 % of the variance at Step 1 and MAS added a significant further 4 % to the explanation of these scores at Step 2. However, at Step 3 entering PRI to the equation did not increase the level of the explained variance to a significant degree ($p > .05$). Moreover, MAS significantly predicted S/C for girls and accounted for 24 % of the variance at Step 1. PRI added a significant 2 % to the explanation of these scores at Step 2, and FAS added a significant further 1 % to the explanation of S/C at Step 3. The entry of the HIFTOFI at Step 4 failed to increase the explanatory value of the other factors ($p > .05$). These results indicated that high peer acceptance and strong mother attachment for boys; and low peer rejection, strong father and mother attachment for girls was associated with lower levels of social anxiety.

Discussion

The present study investigated the association between Hong Kong Chinese children's anxiety, and their attachment with parents and peers during middle childhood. The aim was to examine whether fathers, mothers, peers or friends of Hong Kong Chinese children played a more important role in the prediction of their anxiety during middle childhood. It was hypothesised that poor relationships with parents, peers and friends would be correlated with higher levels of anxiety. Furthermore, the universality of current theories citing peer influences as being greater than parental influences in developmental outcomes during late childhood were tested. It was hypothesized that peer relationship would predict children's anxiety during middle childhood more strongly than would parental relationships factors. It was also hypothesised that parental and peer factors would show dissimilar strengths of association with anxiety in boys and girls.

Sex Differences in Predictor and Outcome Variables

It was found that the variables under study revealed significant sex differences. Research has often indicated that girls are more prone to anxiety than are boys (Cockerham, 1981; Sarason et al., 1958; Shek, 1989). However, in the present study, no gender difference was found in Hong Kong Chinese children's reported anxiety, except in the physiological aspect of anxiety. Boys reported significantly higher levels of physiological anxiety manifestations than did girls. These findings may suggest that gender-based patterns of anxiety in Hong Kong children differ significantly from those of Western children. Boys, according to Western research normally suppress their expressions of anxiety to a greater extent than do girls (e.g. Prior et al., 1999). In the case

of Hong Kong Chinese boys, however, they express anxiety equal to or greater than that of girls, and particularly through what might be a culturally appropriate physiological channel.

Girls in the present study had a higher father and mother attachment index than did boys. These findings may imply that father-daughter and mother-daughter relationships generally are closer than father-son and mother-son relationships in Hong Kong. Because sons, especially elder sons, have the inheritance role in the families, Chinese parents may discipline and push their sons harder than daughters in terms of achievement. This may lead to distance the relationships between parents and sons. Boys may also view close attachment with parents during middle childhood as meaning that they are socially incompetent. Peers or friends may not accept these type of behaviours. A perceived need for independence might be more salient to boys than to girls during middle childhood. Alternately, the result of greater parental attachment in girls might reflect the importance that girls place on intimacy in relationships. Repeated findings have been documented supporting this in much Western research (Maccoby, 1986; Buhrmester & Furman, 1987).

Moreover, results indicated that girls in the present samples had developed more friendships and tend to experienced peer acceptance more than the boys did, whereas boys displayed higher levels of rejection by peers. These findings are consistent with findings from studies of Western children (e.g., Buhrmester & Furman, 1987). Buhrmester and Furman (1987) maintain that girls communicate feelings and disclose themselves with others better than boys. Having these advantages in social skills, girls seem to be able to generally manage social relationships more appropriately than do boys, which might account for the observed sex differences in peer acceptance and friendships. Having

inadequate social skills may make it more difficult for boys to form and maintain friendships and peer relationships. Therefore, being rejected by peers probably happens more frequently among boys. The low rate of friendships are contributed in part by boys' development inclination for joining in peers groups during middle childhood.

Prediction of Anxiety

The data in this study displayed that children's attachment with parents and peers plays a part in their experiences of anxiety. Children with lower peer group acceptance were more anxious than children with higher peer group acceptance even though both groups showed positive mother attachment. Girls who had positive father attachment were less anxious than girls who had negative father attachment.

The present data also suggests that the distinctions between parental attachment and peer group acceptance are valid because gender differences exist between these variables. The analyses involving children's reports of anxiety indicated that children's parental attachment and peer group status had different influences on boys' and girls' anxiety and was above and beyond the influence of children's personal friendships, which did not account for a significant proportion of variance in any of the anxiety measures.

Further regression analyses indicated that peer acceptance contributed separately and about equally to the prediction of boys' oversensitivity, physiological and social anxiety. Mother attachment contributed to the prediction of girls' physiological and social anxiety whereas father attachment contributed to the prediction of girls' oversensitivity and social anxiety. Mother attachment and peer rejection contributed to the prediction of boys' and girls' social anxiety, but the relationship between mother attachment and social anxiety

was much stronger in the case of girls than in boys, accounting for nearly 24% of the variance in anxiety measures.

Boys prefer to play in large hierarchically-organised groups (Maccoby, 1986) hence, it is presumable that accepted by peers would increase boys' confidence in many aspects and indeed, reduce anxiety concurrently. For instance, boys in middle childhood may strengthen their identification with the masculine role through peer interaction. By being accepted within their same-sex peer group, boys become clearly more gender typed than before. As a matter of fact, middle childhood is a significant stage for boys in gender typed behaviours and gender stereotyped development (Shaffer, 1999). This might explain the predominance of peer social acceptance as a predictor of anxiety in boys from Hong Kong.

In Western societies, positive parent-child relationships have been found to correlate with children's social anxiety (Papini et al., 1991); and children view mothers as the greatest emotional support providers (Reid et al., 1989). In the present study, results also revealed that boys' attachment with mothers also significantly predicted social anxiety, but to a lesser extent than did peer acceptance. It may suggest that the security bonds that exist between boys and mothers probably foster their social competence and in turn, cause boys to have more confidence in their social interactions with others and less social anxiety (Bowlby, 1980).

Furthermore, we found that peer rejections and attachment with fathers also plays a part in predicting girls' social anxiety. Although girls' peer relationships and groupings are different from those of boys' during middle childhood and acceptance in large groups might not be as important to them, being rejected by peers is linked significantly but not

strongly to their experience of social anxiety. The interrelated association between social anxiety and peer rejection has been found in previous Western research (Edelbrock, 1985; Messer & Beidel, 1994). Having a positive affectional bond with mothers facilitates girls' development positively, the secure feelings from the bond between fathers and daughters may also provide confidence for girls to develop social competence, but this may be to a lesser extent than with their role-model mothers who spend more quality time with their children.

Many studies display that the mother's role has the greatest impact on children's development (e.g. Bowlby, 1980; Reid et al., 1989). Evidence from Chinese literature shows that support from the family plays a significant role in mediating anxiety when children experience stress. However, unlike in the West, it is suggested by Chinese researchers that the impact of the father on children is the greatest (Chan, 1983). Consistent with Western research (e.g. Bowlby, 1980; Reid et al., 1989) but inconsistent with previous Chinese studies (Chan, 1983), results in the present study revealed that positive attachment with mothers, but not fathers, significantly predicted girls' physiological and social anxieties. It suggested that attachment with mothers plays an important role in mediating girls' anxiety. Hong Kong Chinese mothers may provide reassurance and physical comforts for their daughters readily in times of distress. The secure feelings from the positive bonds may lead girls to realise the accessibility and reliability of comforts they can receive when they need it. Because of this formation of this more secure attachment, girls establish their social relationships confidently and thus experience less social anxiety.

However, consistent with Chan's (1983) study, we found that positive attachment with fathers predicted the level of girls' worry /oversensitivity, indicating that fathers may play a part in influencing girls' anxiety but not with their sons as might be expected from previous Chinese research. It may be because of the economic hardships and lifestyles in Hong Kong that fathers often are the breadwinners, and spend less time with their children. Therefore, mothers have to take on both maternal and fraternal roles.

Traditionally, Chinese fathers often play the role of disciplinarian, however, owing to the changing society, mothers may have to discipline their children more, whereas fathers tend to focus on interaction quality. This may lead girls to feel more at ease in discussing problems with their fathers in times of distress. In addition, research indicates that females are more prone to anxiety (Briscoe, 1982; Cockerham, 1981; Shek, 1989) and for this reason; it may be that mothers themselves, have limited abilities in alleviating their own anxiety which leads to incompetence in assisting their daughters. It is also possible that fathers may use their "male logic thinking" to alleviate their daughters' worry or oversensitivity effectively through a short communication period. The different views that girls have on parental roles may influence their perception of the accessibility and reliability of their parents support and may make them more likely to seek support from one or the other.

Being accepted by peers seems to be more important for boys in moderating anxiety – the higher the level of peer acceptance, the less anxiety is exhibited. Positive attachment with the mother seems more important for girls in predicting anxiety – the higher the level of mother attachment the lower the anxiety. Overall only modest amounts of variance in anxiety are predicted by attachment and peer status (less than 10 %), except in

the case of girls' social anxiety, which indicates a much stronger relationships with mother attachment .

Contrary to the hypothesis, friendship is not significantly related to anxiety in this study. Peer acceptance and / or rejection in terms of the peer groups, compared to the quality and number of one to one relationships, seems to have a significant role to play in terms of predicting anxiety. No evidence shows that the quality of friendships varies between Chinese and Western children, but according to the differences of school environment, it is not unreasonable to assume that there is a discrepancy in the social development of Chinese and Western children. In Hong Kong, the mainstream schools chiefly emphasise academic achievement and neglect children's social development. The educational system pushes children intently and therefore, most of their time is spent on learning academic materials such as completing assignments or studying for tests and exams both at schools and at home ("Young Suicides", 2000). Hong Kong Chinese children, indeed, lack of time to develop their relationships with other peers. This may obstruct them in developing friendships with peers and therefore, being able to benefit from the functions of friendships.

Boys' results in this study showed that peer involvement is important in predicting anxiety. As in Western society, unlike girls, boys at this stage prefer to be involved with in larger groups (Maccoby, 1986). Perhaps within the peer group context, boys are offered confidence, support and encouragement to cope with their anxiety. Boys' friendships during middle childhood seem not to be able to provide as much intimacy and emotional support as girls', thus, in times of anxiety, it is reasonable to assume that boys seldom rely on their friends but rather on their peers. Moreover, an admission of anxiety

may represent a weakness in a boys' masculinity (Sarason et al., 1958) and in Chinese societies, it may mean 'losing face'. Traditionally, Chinese children have been trained to restrain their emotions and feelings. The expectations of suppressing and saving face probably stop boys depending on parents' emotional support and suppress them from expressing themselves. Perhaps revealing anxiety to parents only will provoke Hong Kong Chinese boys' anxiety more.

However, girls' results showed that mothers influences are more involved in predicting anxiety, especially social anxiety. It may be that Hong Kong Chinese girls are more home-oriented and spend large portions of their time with mothers at home, therefore they are more likely to develop close relationships with their mothers. Also, close attachment with mothers is more culturally acceptable among girls than boys. Because of the accessibility and reliability, it is not surprising that Hong Kong Chinese girls are more likely to turn to their mothers at time of anxiety. The present results indicate that being involved in friendship did not significantly predict Hong Kong Chinese girls' anxiety. Girls tend to have a few intimate friends rather than be involved in a large peer group (Maccoby, 1986). Friendships might not be nurtured by the Hong Kong school system. Although Berndt and Perry (1990) maintain that intimacy and emotional support are the features of girls' friendships during middle childhood, Hong Kong Chinese girls' friendships may not develop as intimately as their Western counterparts. Thus, obtaining support from friends when experience anxiety may be difficult for Hong Kong Chinese girls. Therefore, during middle childhood Chinese girls may tend to seek help from their parents in order to reduce anxiety, rather than from friends and peers.

In conclusion, the present study suggests that support from children's social networks moderates children's anxiety. Chinese boys and girls depend on different sources to provide support to alleviate their anxiety. During middle childhood, peer acceptance is involved in influencing boys' anxiety whereas attachment with parents, especially mothers is involved in influencing girls' anxiety.

Several limitations of the present study should be noted. Although the sample was drawn from the general population and was relatively large, it was still limited to children from one township in Hong Kong. Further studies are needed to ascertain whether the results could be extended to all Hong Kong Chinese children in general. Also, the present study was correlational in nature and evidence for any kind of causal association cannot be assumed. The reliance on self-report in measuring outcomes is limited. Particular mention must be made of the fact that the RCMAS, which is only a screening instrument, was used as the sole criterion for determining children's anxiety despite its sufficient reliability and validity. It would have been useful to incorporate observational data and to use at least one other measure of children anxiety such as a diagnostic interview in future studies. Finally, while examining children's friendships, the nominations were restrained in the school, instead of using the usual procedure to limit the nominations within the class. This might have caused some variation in the results, and it would have been more accurate to follow the usual procedure. In addition, assessment of the quality of friendships rather than their extensiveness and degree of reciprocity may be essential, in terms of their importance in predicting children's anxiety. In terms of future directions, it is necessary to replicate this study with a larger and more representative sample so that we may have confidence in the results. Few predictors were associated with boys' and

girls' anxiety but many of these effects were small. Thus, this probably implies that some other factors that were not examined in this study are important as mediators for children's anxiety. For example, future research should investigate whether children's anxiety is the result of academic achievement or nonspecific factors (such as parental anxiety, parental empowerment). Other members from children's networks should also be taken into account such as siblings, grandparents and teachers and their contributions in mediating children's anxiety. Improvement in the definition and measurement of peer relationships, friendships as dependent variables will promote a more thorough understanding of the precursors and correlates in children's anxiety.

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Appendices

Appendix A

The Revised Children's Manifest Anxiety Scale & Three-choice Sociometric
Nomination

Appendix B

Inventory of Parent And Peer Attachment (Father & Mother sections)

Appendix C

How I Feel Toward Others Form

Appendix D

Participant Information

Appendix E

Consent Form

Appendix A The Revised Children's Manifest Anxiety Scale & Three-choice Sociometric Nomination

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Revised Children's Manifest Anxiety Scale

1. I have trouble making up my mind.
2. I get nervous when things do not go the right way for me.
3. Others seem to do things easier than I can.
4. I like everyone I know.
5. Often I have trouble getting my breath.
6. I worry a lot of the time.
7. I am afraid of a lot of things.
8. I am always kind.
9. I get mad easily.
10. I worry about what my parents will say to me.
11. I feel that others do not like the way I do things.
12. I always have good manners.
13. It is hard for me to get to sleep at night.
14. I worry about what other people think of me.
15. I feel alone even when there are people with me.
16. I am always good.
17. Often I feel sick in my stomach.
18. My feelings get hurt easily.
19. My hands feel sweaty.
20. I am always nice to everyone.
21. I am tired a lot.
22. I worry about what is going to happen.
23. Other children are happier than I.
24. I tell the truth every single time.
25. I have bad dreams.
26. My feelings get hurt easily when I am fussed at.
27. I feel someone will tell me I do things the wrong way.
28. I never get angry.
29. I wake up scared some of the time.
30. I worry when I go to bed at night.
31. It is hard for me to keep my mind on my school work.
32. I never say things I shouldn't.
33. I wiggle in my seat a lot.
34. I am nervous.
35. A lot of people are against me.
36. I never lie.
37. I often worry about bad happening to me.

Name three peers whom you consider to be your best friends.
.....

- ① _____
- ② _____
- ③ _____

Appendix B
Inventory of Parent And Peer Attachment (Father & Mother sections)

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INVENTORY OF PARENT AND PEER ATTACHMENT (IPPA)

Part I

Some of the following statements asks about your feelings about your mother or the person who has acted as your mother. If you have more than one person acting as your mother (e.g. a natural mother and a step-mother) answer the questions for the one you feel has most influenced you.

Please read each statement and circle the ONE number that tells how true the statement is for you now.

	Almost Never or Never True	Not Very Often True	Some- times True	Often True	Almost Always or Always True
1. My mother respects my feeling.	1	2	3	4	5
2. I feel my mother does a good job as my mother.	1	2	3	4	5
3. I wish I had a different mother.	1	2	3	4	5
4. My mother accepts me as I am.	1	2	3	4	5
5. I like to get my mother's point of view on things I'm concerned about.	1	2	3	4	5
6. I feel it's no use letting my feelings show around my mother.	1	2	3	4	5
7. My mother can tell when I'm upset about something	1	2	3	4	5
8. Talking over my problems with my mother makes me feel ashamed or foolish.	1	2	3	4	5
9. My mother expects too much from me.	1	2	3	4	5
10. I get upset easily around my mother.	1	2	3	4	5
11. I get upset a lot more than my mother knows about.	1	2	3	4	5
12. When we discuss things, my mother cares about my point of view.	1	2	3	4	5
13. My mother trusts my judgment.	1	2	3	4	5
14. My mother has her own problems, so I don't bother her with mine	1	2	3	4	5
15. My mother helps me to understand myself better.	1	2	3	4	5
16. I tell my mother about my problems and troubles	1	2	3	4	5
17. I feel angry with my mother.	1	2	3	4	5
18. I don't get much attention from my mother.	1	2	3	4	5
19. My mother helps me to talk about my difficulties	1	2	3	4	5

20. My mother understands me	1	2	3	4	5
21. When I am angry about something, my mother tries to be understanding	1	2	3	4	5
22. I trust my mother	1	2	3	4	5
23. My mother doesn't understand what I'm going through these days.	1	2	3	4	5
24. I can count on my mother when I need to get something off my chest.	1	2	3	4	5
25. If my mother knows something is bothering me, she asks me about it.	1	2	3	4	5

Part II

This part asks about your feelings about your father, or the man who has acted as your father. If you have more than one person acting as your father (e.g. natural and step-father) answer the question for the one you feel has most influenced you.

	Almost Never or Never True	Not Very Often True	Some- times True	Often True	Almost Always or Always True
1. My father respects my feelings.	1	2	3	4	5
2. I feel my father does a good job as my father.	1	2	3	4	5
3. I wish I had a different father	1	2	3	4	5
4. My father accepts me as I am.	1	2	3	4	5
5. I like to get my father's point of view on things I'm concerned about.	1	2	3	4	5
6. I feel it's no use letting my feelings show around my father.	1	2	3	4	5
7. My father can tell when I'm upset about something.	1	2	3	4	5
8. Talking over my problems with my father makes me feel ashamed or foolish.	1	2	3	4	5
9. My father expects too much from me.	1	2	3	4	5
10. I get upset easily around my father.	1	2	3	4	5
11. I get upset a lot more than my father knows about.	1	2	3	4	5
12. When we discuss things, my father cares about my point of view	1	2	3	4	5
13. My father trusts my judgment	1	2	3	4	5
14. My father has his own problems, so I don't bother him with mine	1	2	3	4	5
15. My father helps me to understand myself better.	1	2	3	4	5

16. I tell my father about my problems and troubles	1	2	3	4	5
17. I feel angry with my father	1	2	3	4	5
18. I don't get much attention from my father.	1	2	3	4	5
19. My father helps me to talk about my difficulties.	1	2	3	4	5
20. My father understands me.	1	2	3	4	5
21. When I am angry about something, my father tries to be understanding.	1	2	3	4	5
22. I trust my father.	1	2	3	4	5
23. My father doesn't understand what I'm going through these days.	1	2	3	4	5
24. I can count on my father when I need to get something off my chest.	1	2	3	4	5
25. If my father knows something is bothering me, he asks me about it.	1	2	3	4	5

Appendix C
How I Feel Toward Others Form

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Please circle the face which is most like how you feel about each of your classmates.

- ?

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You do not know.
- ☺

..

You like him or her and she or he is your friend.
- ☹

.....

You know him or her well but you do not especially care about.
- ☹

...

You do not like him or her.

1.		?	☺	☹	☹
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9.		?	☺	☹	☹
10.		?	☺	☹	☹
11.		?	☺	☹	☹
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17.		?	☺	☹	☹
18.		?	☺	☹	☹
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20.		?	☺	☹	☹
21.		?	☺	☹	☹
22.		?	☺	☹	☹
23.		?	☺	☹	☹
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27.		?	☺	☹	☹
28.		?	☺	☹	☹
29.		?	☺	☹	☹
30.		?	☺	☹	☹

Appendix D

Participant Information

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.....Dr. Iain Montgomery.....Dr. Rosanne
Burton Smith

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Dr.Iain Montgomery (:::61 3 6226 2386;:::Iain.Montgomery@utas.edu.au),
Dr.Rosanne Button Smith (:::61 3 6226 2241;:::R.Rawlinson@utas.edu.au) .
... (:::2609 2152[.]);:::phoebeyau@yahoo.com).

.....:The University of Tasmania,Department of Psychology,Tas
2001,Australia,.....Dr.Margaret Otlowski.....:61 3 6226 7569 .
Ms Chris Hooper(.....:61 3 6226 2763.

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Dear parent/Guardian,

My name is Phoebe Suk-Wah Yau. I am a student researcher and I am supervised by Dr Iain Montgomery (Senior Lecturer) and Dr Roseanne Burton Smith (Lecturer) at the University of Tasmania enrolled for a Master of Psychology (Clinical) in the Department of Psychology. I am conducting research, which looks at how families and children's friends may assist when children are anxious. The project is part of my Master's degree in Psychology and has been approved by the University of Tasmania Ethics Committee, the Tasmanian Education Department, and the Principal and staff of your child's school.

Your child is eligible to take part in this project if he/she was born and educated in Hong Kong, and Cantonese is his/her first language. Children will participate in this project as part of their class group. They will need to fill out four questionnaires which will take about an hour to complete. First, children will indicate their preferences for classmates. Second, a questionnaire on anxiousness asks questions like "I worry a lot of the time". Third, the Inventory of Parent Attachment will measure how they see family support. Last, children will be asked to write down the names of their three best friends. We will also ask children to record their name, date of birth and their sex. A code number will be used to identify students when their scores are entered on a computer program. The questionnaires will then be destroyed by shredding. Only myself and my two supervisors will have access to these questionnaires, and they will be kept under lock and key after they are collected.

Children will be seated in the class so they cannot see what other classmates are writing. We will explain carefully what each child needs to do, and we will also let children know that they need not participate if they feel uncomfortable at any time during the session. In our research, we are only interested in group results, for example the differences between girls and boys. The identity of your son or daughter will not be revealed.

If you would like _____ to participate, please fill in the attached consent form and send it back to school as soon as possible. Also, you can withdraw your child at any time if you wish.

If you have any queries or wish to know more about the project, please contact Dr Iain Montgomery (phone: (03) 6226 2386; email: Iain.Montgomery@utas.edu.au), Dr Rosanna Burton Smith (phone: (03) 6226 2241; email: R.Rawlinson@utas.edu.au) or Phoebe Suk Wah Yau (phone: (03) 6223 3883; email: phoebeyau@yahoo.com). You can also write to us at the University of Tasmania, Depart of Psychology, TAS 2001, Australia.

For any queries regarding ethical concerns or complaint about the matter in which the project is conducted, please contact the Chair or Executive Officer of the University Ethics Committee, Dr Margaret Otlowski (phone (03) 6226 7569) and the Executive Officer is Ms Chris Hooper (phoe: (03) 6226 2763).

Thank you very much for your time and help in making this project possible.

Yours sincerely,

(Phoebe Suk-Wah Yau)

Appendix E
Consent Form

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UNIVERSITY OF TASMANIA
CONSENT TO PARTICIPATE IN RESEARCH

Title of Project: Peer and Family Factor in the Mediation of Anxiety in Hong Kong Chinese Children.

I have read and understood the "Information Sheet" for this project. I understand the procedures that are involved in this project. I have had an opportunity to ask questions and have had them answered to my satisfaction. My child's participation in this study is voluntary and I understand that I may withdraw my consent at any time during the study without having to give reasons for it.

I agree that _____ (Name of Child)
Who is under my guardianship, may take part in this project.

Signature of Parents or Guardian: _____

Name of Parents or Guardian: _____
(please print clearly)

Date: _____