Child-Rearing Attitudes and Behavioral Inhibition in Chinese and Canadian Toddlers: A Cross-Cultural Study

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Behavioral inhibition data were collected from samples of 2-year-olds from the People's Republic of China and Canada. Information on child-rearing attitudes and beliefs was obtained from mothers of the children. Chinese toddlers were significantly more inhibited than their Canadian counterparts. Inhibition was associated positively with mothers' punishment orientation and negatively with mothers' acceptance and encouragement of achievement in the Canadian sample. However, the directions of the relations were opposite in the Chinese sample; child inhibition was associated positively with mothers' warm and accepting attitudes and negatively with rejection and punishment orientation. The results indicated different adaptive meanings of behavioral inhibition across cultures.

Developmental researchers have reported dramatic individual differences in behavioral reactions to novel social and nonsocial situations during infancy and toddlerhood (e.g., Kagan, Reznick, Clarke, Snidman, & Garcia-Coll, 1984; Rubin, Hastings, Stewart, Henderson, & Chen, 1997). For example, some infants and toddlers are relaxed and spontaneous and display minimal distress in unfamiliar situations. In contrast, children who are identified as behaviorally inhibited and vigilant tend to show high anxiety in novel social situations; they often refuse to engage in play behavior with unfamiliar peers and adults, and they stay in close proximity to their mothers (Fox & Calkins, 1993; Kagan, Reznick, Snidman, Gibbons, & Johnson, 1988; Rubin et al., 1997). It has been found that behavioral inhibition is associated with indexes of social wariness during the preschool years (Kochanska & Radke-Yarrow, 1992; Rubin, Coplan, Fox, & Calkins, 1995). Further, researchers have argued that inhibition and social wariness may serve as dispositional bases for the display of shy and socially reticent behaviors in the child and adolescent peer group (Kagan, 1989; Rubin & Asendorpf, 1993). As such, it may be safe to conclude that behavioral inhibition may play a critical role in social and emotional development.

Behavioral patterns that reflect the construct of inhibition and wariness in novel situations have been found in many cultures, such as England, Germany, Japan, and Sweden (e.g., Asendorpf, 1991; Broberg, Lamb, & Hwang, 1990; Hayashi, Toyama, & Quay, 1976; Stevenson-Hinde & Shouldice, 1993). However, the extent to which inhibited behavior is displayed appears to vary across culture. For example, it has been reported that Chinese, Indonesian, Thai, and Korean children produce more anxious, sensitive, passive, reticent, and socially restrained behaviors in novel situations than do their North American counterparts (Chan & Eysenck, 1981; Farver & Howes, 1988; Kagan, Kearsley & Zelazo, 1978; Tieszen, 1979; Weisz, Suwanlert, Chaiyasit, & Walter, 1987). Given these differences, it seems important to examine whether behavioral inhibition carries with it psychological 'meanings' that vary across culture and how culture is involved in the development of behavioral inhibition.

Initial support for cross-cultural variability in the 'meanings' of wary, inhibited behavior derives from recent research on caregiver-infant attachment relationships. In these studies,
a high frequency of socially wary behavior in the Strange Situation has been considered adaptive in some cultures yet maladaptive in others (e.g., Grossman & Grossman, 1981; Mizuta, Zahn-Waxler, Cole, & Hiruma, 1996). Acknowledgement of differences in the adaptational meanings of inhibited behavior is consistent with the perspective that cultural norms and conventions may affect the perceptions and evaluations of social behaviors (e.g., Benedict, 1934; Gresham, 1986).

The cross-cultural literature has suggested that child rearing beliefs and practices are important factors that may mediate cultural influences on child development (e.g., Super & Harkness, 1986; Whiting & Edwards, 1988). Parental behaviors and beliefs are guided by general cultural norms and value systems. At the same time, parents interpret and respond to child behavior in accordance with culturally prescribed expectations and socialization goals. Parental attitudes and responses constitute important social conditions that, in turn, maintain and modify the processes, pathways, and outcomes of behavioral development. Thus, the primary purpose of the present study was to examine, from a cross-cultural perspective, the relations between parental attitudes and practices in child-rearing and children’s behavioral inhibition.

In Western individualistic cultures, children are encouraged to be assertive and independent in challenging situations. Acquiring self-reliance, autonomy, and assertive social skills are important socialization goals. In contrast, behavioral inhibition, which reflects anxiety, an inability to express one’s self, and a lack of confidence, is generally regarded as socially immature, incompetent, and psychologically maladaptive (Rubin & Asendorpf, 1993). Social perceptions and evaluations of children’s behaviors may depend, in part, on context (e.g., inhibition may serve as a protective factor that buffers misbehavior under certain circumstances) and personal characteristics, such as age or developmental stage (e.g., inhibited behavior may be regarded as less maladaptive in the early years than in later childhood). However, during development, children are generally expected and socialized to be increasingly assertive and self-reliant rather than reserved and inhibited. Consistently, Western researchers have found that the early production of behavioral inhibition is predictive of shy, withdrawn behavior in childhood (Asendorpf, 1991; Broberg et al., 1990; Fox & Calkins, 1993; Kochanska & Radke-Yarrow, 1992; Reznick et al., 1986; Schwartz, 1997); in turn, shyness and social withdrawal are associated with peer rejection and isolation (e.g., Rubin, Chen, McDougall, Bowker, & McKinnon, 1995). Further, researchers have found that as children begin to acknowledge their difficulties in social interactions and peer relationships, they develop negative perceptions of their social competencies and general self-worth as well as other problems of an internalizing nature (Boivin, Hymel, & Bukowski, 1995; Rubin, Chen, & Hymel, 1993; Rubin, Chen, et al., 1995).

Achieving and maintaining social order and interpersonal harmony are the primary concerns in both traditional and contemporary collectivistic Chinese societies. Individuals are encouraged to restrain personal desires for the benefits and interests of the collective. For example, in both Confucian and Taoist philosophies, behavioral inhibition and self-restraint are considered indexes of social maturity, accomplishment, and mastery (Feng, 1962; King & Bond, 1985). The expression of individuals’ needs or striving for autonomous behaviors is considered selfish and socially unacceptable (Ho, 1986). Consistently, it has been found that whereas assertive and independent behaviors are valued in Western individualistic cultures, shy and inhibited behaviors are valued and encouraged in Chinese culture (e.g., Chen, in press; Chen, Rubin, & Sun, 1992; Ho, 1986). Children who are sensitive, wary, cautious, and behaviorally restrained are called “Guai Hai Zi” in Mandarin, which may be translated as meaning “good” or “well-behaved.” Unlike their Western counterparts, shy-anxious children in China are regarded as socially competent and understanding; they are accepted by peers and adjust well to their social environments (e.g., Chen et al., 1992; Chen, Rubin, & B. Li, 1995).

The social behaviors valued by a culture may be reflected by parental goals, beliefs, expectations, and behaviors. For example, compared with Western parents, Chinese parents are more controlling and protective in child rearing (Kriger & Kroes, 1972; Lin & Fu, 1990). Chinese parents emphasize behavioral control and obedience. Parents often encourage their young children to stay close to and to be dependent on them (Ho, 1986). Indeed, most Chinese infants and toddlers sleep in the same bed or in the same room as their parents.

Given the aforementioned cultural differences, it is not unreasonable to expect that the patterns of relations between children’s expressions of behavioral inhibition and parental attitudes and practices would vary in Chinese and North American cultures. For example, in North America, researchers have reported that preschoolers’ wary and inhibited behavior is associated with such parental emotional reactions as concern, disappointment, guilt, and embarrassment (Mills & Rubin, 1990). Moreover, it has been found that mothers of inhibited and withdrawn children are inclined to blame this behavior on traits in their child (Rubin & Mills, 1990). Such dispositional attributions for undesirable behavior have been linked to punitive and ineffective parenting practices (Crockenberg, 1986; Miller, 1995; Peters-Martin & Wachs, 1984). Although researchers have found that mothers of inhibited children may sometimes display highly warm and affectionate behavior, these mothers are generally unresponsive to their children’s cues and needs (Rubin et al., 1997). Parental unresponsiveness and insensitivity, which may partially result from children’s inhibited behavior, may facilitate the continuation and development of the behavior. Consistent with these findings are data derived from attachment research that have indicated that insecure, resistant babies (“C” babies) who typically display anxious, fearful, and inhibited behavior in the Strange Situation, as well as at home, tend to have parents who are unresponsive, unreliable, and inconsistent in parenting (e.g., Ainsworth, Blehar, Waters, & Wall, 1978; Pederson & Moran, 1995). Unlike mothers of avoidant babies (“A” babies), mothers of anxious, resistant babies may not be hostile or rejecting of their children (Ainsworth et al., 1978).

Inhibited children may experience a different social and emotional family environment in China. Because inhibited behavior is positively valued and considered adaptive, behaviorally inhibited children may not be recipients of negative parental emotions and behaviors. Indeed, in the present study, we expected that inhibited children would be accepted and supported by their parents. Further, parental acceptance, endorsement, and encouragement of inhibited behavior may reinforce the display of re-
strained and inhibited behavior. Thus, first, we hypothesized that behavioral inhibition would be associated positively with maternal acceptance and negatively with maternal rejection and punishment in Chinese children. In contrast, we predicted that inhibition would be associated negatively with maternal acceptance among Canadian children. Given that mothers of anxious, inhibited children are generally not hostile toward or rejecting of the child, inhibited behavior was not predicted to be associated with maternal rejection in Canadian toddlers.

In both Chinese and North American cultures, parents emphasize and encourage achievement in child rearing. However, the goals and specific tasks that children are encouraged to achieve may be defined and prescribed by what is valued in the culture. In other words, parental encouragement of achievement may indicate cultural values. To further examine cultural meanings of behavioral inhibition, we sought to investigate how inhibition was associated with maternal encouragement of achievement. Given that behavioral inhibition is regarded as maladaptive in North American cultures, we posited that inhibition would be negatively associated with maternal encouragement of achievement. However, because inhibition is consistent with socialization goals and thus positively evaluated in China, we expected that inhibited behavior would be positively associated with maternal encouragement of achievement.

Researchers have reported that Chinese parents are more protective and controlling and less encouraging of independence and exploration than are North American parents (e.g., Ekblad, 1986; Lin & Fu, 1990). It has also been noted that children of highly protective, oversolicitous Western parents tend to display more wary and reserved behavior in unfamiliar situations (e.g., Eisenberg, 1958; Kagan & Moss, 1962; Parker, 1983; Rubin et al., 1997; Rubin & Mills, 1990). Indeed, highly protective and directive parents tend to be “overly” involved and dominant in parent–child interactions; they are less likely to encourage their children to explore independently in novel environments (Parker, 1983). It may be true that highly protective and directive behavior represents a good “fit” with the authoritarian culture of China but is viewed as maladaptive in Western cultures (Chao, 1994). Nevertheless, given the restrictive nature of this parenting behavior, we expected that it would be positively associated with child behavioral inhibition in both Chinese and Canadian children. Consistently, we hypothesized that regardless of the culture, maternal encouragement of independence and autonomy would be negatively related to behavioral inhibition in children.

Finally, according to the “suppression-facilitation” model (Weisz et al., 1987), cultural environments may affect the occurrence and prevalence of social behaviors in a direct fashion. Given that the Chinese cultural milieu is conducive for the development of behavioral inhibition and that inhibition is discouraged in the West, we predicted that consistent with Kagan et al.’s (1978) findings, Chinese toddlers would display more inhibited and wary behavior in novel social situations than Canadian toddlers.

Method

Participants

One hundred and fifty Chinese children in two cities of the People’s Republic of China and 108 Canadian children in a regional municipality of approximately 250,000 people in southwestern Ontario participated in this study. The mean age was 24.64 months (SD = 1.99) for the Chinese and 24.99 months (SD = 1.08) for the Canadian children. Mothers were, on average, 30 years 11 months old (SD = 4 years 3 months; range = 24–39) and fathers were 32 years old (SD = 3 years 2 months; range = 26–48) in the Chinese sample. The mean age was 31 years 1 month (SD = 4 years 1 month; range = 23–41) for mothers and 32 years 6 months (SD = 3 years 11 months; range = 24–43) for fathers in the Canadian sample. The participants were randomly selected by newspaper birth announcements and recruited through telephone solicitation in Canada and local birth registration offices in China. Ninety-seven percent of the Canadian toddlers were Caucasian, and all participants in China were Chinese.

In the Chinese sample, 44% of the children were from families in which parents were workers or peasants whose educational levels were high school or below high school; 56% of the children were from families in which one or both of the parents were teachers, doctors, or officials whose educational levels ranged mainly from college to university graduate. Canadian children were mainly from middle-class families. Eighty-one percent of the Canadian toddlers had one or more siblings. However, because of the “one-child-per-family” policy that was implemented in the late 1970s, 96% of the Chinese toddlers were only children; the “only” child phenomenon has been an integral part of the family and sociocultural background for child development in contemporary China. The 81% of the Chinese children and 24% of the Canadian children had out-of-home day-care experience. Nonsignificant differences were found between children with different day-care experiences in each sample on behavioral inhibition and parental child-rearing attitudes. The two samples were representative of the urban population of toddlers in each country. Complete child-rearing data were obtained from mothers of 118 Chinese (64 boys and 54 girls) and 82 Canadian (43 boys and 39 girls) toddlers. The mothers of other children filled the child-rearing measure either incompletely or incorrectly.

Procedure

Mothers and toddlers were invited to visit the university laboratory within 3 months of each toddler’s 2nd birthday. During the visit, each toddler—mother dyad experienced an adapted version of the Behavioral Inhibition Paradigm (e.g., Garcia-Coll, Kagan, & Reznick, 1984; Kochanska, 1991). First, each dyad entered an unfamiliar room comprising one large and one small chair and a low table. The child was allowed to play with an assortment of attractive toys for 10 min while the mother sat in the large chair and filled out a questionnaire (free play). The experimenter, whom the child had already met, entered with a basket, asked the child to tidy up the toys, and left (cleanup); afterward, the experimenter removed the toys. Next, an unfamiliar woman entered the room with a toy dump truck and some blocks. She sat quietly for 1 min, played with the truck for 1 min, then (if the toddler had not yet approached), encouraged the child to join her in play. After the 3rd min, she left, returning with a toy robot that moved and made noises. The adult did not say anything for 30 s, then invited the child to play with the robot for 1 min. The toy truck and robot were identical in all laboratories. These toys were all made in China and were purchased in a Canadian store. The children in both cultures were familiar with toy trucks. However, according to product description, the black, noisy, and “smoking” toy robot was recommended for children aged 4 years and up; thus, it was unlikely to be familiar to the toddlers in the two samples. Therefore, the procedure was viewed as equally novel–familiar to the Chinese and Canadian children. Toddlers in each sample continued to experience other sessions, including crawling through an inflatable tunnel, interacting with a clown (or a person wearing a tiger mask in China), and a second free-play session. Because there were slight variations between the samples with regard to these latter laboratory sessions, data were not examined comparatively for the present article.
The administration of the laboratory sessions was conducted by Xinyin Chen et al. as well as by graduate and senior undergraduate students in China and Canada. The researchers in China were trained by Xinyin Chen. All laboratory sessions were videotaped through a one-way mirror and were coded in Canada. Written consent was obtained from parents of all participants in Canada and in China.

Inhibition Coding

Following procedures that were described in Garcia-Coll et al. (1984) and Rubin et al. (1997), behavioral inhibition was coded on the basis of the amount of time the toddler spent in physical contact with his or her mother during the free-play, truck and robot episodes, and the child’s latency to approach the stranger and to touch the toys. Four data points were obtained for the truck episode; during the 1st and 2nd min, the duration of contact with the mother and the latency to spontaneously approach the unfamiliar adult were recorded. During the 3rd min, the duration of contact with the mother and the latency to approach the unfamiliar adult were recorded after an invitation to approach was given (for children who approached the stranger spontaneously in the 1st and 2nd min, latency was scored as zero). Two data points were obtained for the subsequent robot episode: duration of contact with the mother and latency to touch the robot. Four inhibition scores were computed: (a) duration of contact with the mother in free play, (b) duration of contact with the mother in truck and robot episodes, (c) latency to approach the stranger, and (d) latency to touch robot. Following the procedures described by Rubin et al. (1997), the inhibition scores were standardized and aggregated and were used in all statistical analyses.

The data for Chinese toddlers were coded by two Chinese students in the Psychology Department of a Canadian university who were fluent in both English and Chinese languages. The data for the Canadian sample were coded by two English-speaking students. All coders were trained following the same procedures. Reliability, using percentage of agreement, was computed for 10% of each sample. As suggested by other researchers (e.g., Garcia-Coll et al., 1984), intercoder agreement for duration of contact with the mother and latency to approach the unfamiliar adult or toys were calculated through dividing the amount of time of agreement by the total amount of time of agreement and disagreement in seconds. The intercoder reliability for the inhibition behaviors was 96%, ranging from 93% (contact with mother in the robot episode) to 100% (contact with mother in free play) in the Chinese sample, and 90%, ranging from 80% (contact with mother in free play) to 97% (contact with mother in the truck episode) in the Canadian sample.

Child-Rearing Attitudes

Each mother completed the Child-Rearing Practices Report Q-Sort (CRPR; Block, 1981). The CRPR includes 91 items describing child-rearing attitudes, values, beliefs, and behaviors, written on individual cards. Mothers sorted the cards into seven piles (13 cards each), from “least descriptive” to “most descriptive.” Consequently, item scores ranged from 1 (least descriptive) to 7 (most descriptive). The Chinese version of the CRPR was translated and back-translated by the research team. The procedure has established reliability and validity in Western and in some other cultures (e.g., Zahn-Waxler, Friedman, Cole, Mize, & Hiruma, 1996). The CRPR has been used and has been proven reliable, valid, and appropriate in Chinese samples (Chen, Dong, & Zhou, 1997; Lin & Fu, 1990). In the present study, indexes of acceptance and in some other cultures (e.g., Zahn-Waxler, Friedman, Cole, Mize, & Hiruma, 1996). The CRPR has been used and has been proven reliable, valid, and appropriate in Chinese samples (Chen, Dong, & Zhou, 1997; Lin & Fu, 1990). In the present study, indexes of acceptance and 50% (contact with mother in free play) in the Chinese sample, and 34.36% and 23.20% (SDs = 62.43 and 54.02) in the Canadian sample; (c) latency to approach stranger: 29.64 and 28.62 (SDs = 16.87 and 15.47) in the Chinese sample; and (d) latency to touch robot: 29.25 and 30.06 (SD = 16.41 and 15.61) in the Chinese sample and 17.14 and 17.68 (SD = 11.74 and 11.56) in the Canadian sample, respectively.

Results

Toddler Inhibition

The means and standard deviations of inhibition scores for each sample are presented in Table 1. The results indicated that Chinese toddlers spent significantly more time than the Canadian toddlers in direct physical contact with their mothers during the free-play episode. Moreover, Chinese toddlers had significantly higher scores on latency to approach the stranger and to touch the robot. In addition, the percentage of toddlers who made contact with their mothers in the free-play and truck and robot episodes in the Chinese sample was significantly greater than that in the Canadian sample. There were significantly more children in the Chinese sample than in the Canadian sample who did not approach the stranger or touch the robot. Percentages of children in each sample who contacted the mother, did not approach the stranger, or touch the robot are presented in Table 2.

There were nonsignificant sex differences in inhibition scores in both samples. The mean scores for boys and girls were as follows: (a) contact with mother in free play: 20.99 and 19.63 (SDs = 45.46 and 35.74) in the Chinese sample and 10.00 and 7.74 (SDs = 31.25 and 24.55) in the Canadian sample; (b) contact with mother in truck–robot: 36.62 and 40.59 (SDs = 58.68 and 61.55) in the Chinese sample and 34.35 and 23.20 (SDs = 62.43 and 54.02) in the Canadian sample; (c) latency to approach stranger: 29.64 and 28.62 (SDs = 18.92 and 16.95) in the Chinese sample and 19.97 and 21.40 (SDs = 16.87 and 15.47) in the Chinese sample; and (d) latency to touch robot: 29.25 and 30.06 (SD = 16.41 and 15.61) in the Chinese sample and 17.14 and 17.68 (SD = 11.74 and 11.56) in the Canadian sample, respectively.

Child-Rearing Attitudes

The means and standard deviations for the child-rearing variables are presented in Table 3. A multivariate analysis of variance (MANOVA) revealed significant overall effects for culture groups (between factor), $F(1, 196) = 51.06$, $p < .001$, child-rearing attitudes (within factor), $F(5, 192) = 85.05$, $p < .001$, and the Culture Group × Child-Rearing (within-factor) interaction, $F(5, 192) = 41.91$, $p < .001$. The results of follow-up $t$-tests indicated that Chinese mothers had significantly lower scores on Acceptance than the Canadian mothers. Chinese mothers had significantly higher scores on Rejection, Encouragement of Achievement, Punishment Orientation, and Protection and Concern than Canadian mothers. Post hoc analyses of the within-
factor effect in each sample, using the Tukey honestly significant difference (HSD) approach, revealed that scores of Encouragement of Achievement and Encouragement of Independence were significantly higher than those of Acceptance and Protection, which, in turn, were higher than those of Rejection and Punishment Orientation in the Chinese sample. In the Canadian sample, scores of Acceptance and Encouragement of Independence were significantly higher than those of Encouragement of Achievement and Protection. These scores were significantly higher than those of Punishment and Rejection.

Relations Between Toddler Inhibition and Child-Rearing Attitudes

A series of regression analyses were first conducted to examine the effects of sex on the relations between toddler inhibition and child-rearing variables. Nonsignificant sex effects were found. Thus, the data were combined across sex for all analyses. Correlations between toddler inhibition and child-rearing variables were computed for each sample and compared with the Fisher transformation. The results are presented in Table 4. Toddler inhibition was significantly and positively correlated with maternal acceptance and encouragement of achievement in the Chinese sample but significantly and negatively correlated with these same child-rearing variables in the Canadian sample. The differences between the corresponding correlations in the two samples were significant. Inhibition was significantly and negatively correlated with punishment orientation in the Chinese sample but significantly and positively correlated with punishment orientation in the Canadian sample. The two correlations were significantly different. Inhibition was significantly and negatively correlated with maternal rejection in the Chinese sample; this correlation was nonsignificant in the Canadian sample.

### Table 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>China</th>
<th>Canada</th>
<th>( t )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact with mother in free play</td>
<td>20.20</td>
<td>8.90</td>
<td>2.67**</td>
</tr>
<tr>
<td>Contact with mother in truck/robot</td>
<td>38.76</td>
<td>28.78</td>
<td>1.31</td>
</tr>
<tr>
<td>Latency to touch stranger</td>
<td>29.09</td>
<td>20.68</td>
<td>1.31</td>
</tr>
<tr>
<td>Latency to touch robot</td>
<td>29.68</td>
<td>17.41</td>
<td>3.07***</td>
</tr>
</tbody>
</table>

**p < .01. ***p < .001.

The difference between the two correlations was significant. Inhibition was significantly and positively correlated with encouragement of independence in the Chinese sample; this correlation was nonsignificant in the Canadian sample. Finally, child inhibition was significantly and positively correlated with mother's protection and concern in the Canadian sample; this correlation was nonsignificant in the Chinese sample.

### Discussion

Behavioral inhibition, as one of the fundamental dimensions of human social functioning, may have pervasive and prolonged effects on adaptive and maladaptive development (e.g., Caspi, Elder, & Bem, 1988; Kagan, 1989; Kerr, Lambert, & Bem, 1996). Individual differences in behavioral inhibition have been observed in many cultures (e.g., Asendorpf, 1994; Broberg et al., 1990; Kagan et al., 1978), thereby suggesting that it may be a universal phenomenon. Nevertheless, human inhibitory behavioral systems operate within social and cultural contexts (Buck, 1993; Rickman & Davidson, 1994). Culture imparts meanings to the behavior; determines how individuals, including parents and peers, perceive, evaluate, and react to the behavior; and eventually regulates and directs the developmental processes of the behavior. It was our intention, in the present study, to explore the possibility of differences in the expression of behavioral inhibition among Chinese and Canadian toddlers and to examine the relations between inhibition and mother's child-rearing philosophies and practices. The results of the study indicated that (a) Chinese toddlers were more inhibited than their Canadian age-mates; (b) Chinese and Canadian mothers differed in their socialization values and parenting practices; and (c) child inhibition was associated with mothers' positive attitudes toward the child, including acceptance, lack of punitive- ness, and encouragement of achievement among Chinese participants and with punishment and overprotectiveness among Canadian participants.

It has long been argued that parents in different cultures may have different beliefs about and use different practices in child rearing (Super & Harkness, 1986; Whiting & Edwards, 1988). Consistent with this notion, we found that Chinese mothers were.

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1 We identified, in each sample, groups of highly inhibited (top 15%), highly uninhibited (bottom 15%), and average (middle 70%) children and compared them on mothers' child-rearing practices. The results were consistent with those in the correlational analyses.
(a) more likely to encourage children to achieve, (b) more protective of and concerned about their children, (c) more rejecting of and less accepting of their children, and (d) more punishment oriented than Canadian mothers. These results were largely consistent with previous reports (Chao, 1994; Kriger & Kroes, 1972; Lin & Fu, 1990; Steinberg, Dornbusch, & Brown, 1992; Stevenson et al., 1990).

According to the Confucian doctrine of filial piety, children must pledge absolute obedience and reverence to parents. In turn, parents are responsible for "governing" (i.e., teaching and disciplining) their children and are held accountable for their children's failure. The principle of filial piety stipulates (a) parental authority in using coercive parenting strategies, including power-assertion and physical punishment, and, at the same time, (b) parental responsibility to protect the child and to encourage the child to achieve. In China, child achievement is not just an issue for the individual; rather, it is viewed as a reflection of family reputation. It has been reported that Chinese children are pressured heavily by parents to perform optimally in preschool, kindergarten, and school (Stevenson et al., 1990); children who fail to achieve the adults' standards are often regarded as problematic and receive severe punishment (Wu & Tseng, 1985). The results of our study suggest that Chinese parents might be concerned about achievement when their children are very young. Relatively high levels of puniniveness and protectiveness in Chinese mothers might reflect a desire for maintaining their authority while simultaneously wishing to ensure a safe and appropriate milieu for their children.

In contrast, it appeared that Canadian mothers were somewhat less concerned with encouraging their toddlers to achieve. The lower levels of punishment and protectiveness among Canadian mothers might reflect a Western perspective that early behaviors may not have an enduring impact on later development (Rubin & Mills, 1992). These results might also indicate the general disapproval of intrusive and power-assertive strategies in North American cultures.

Consistent with the result concerning punishment orientation, Chinese mothers were found to be less accepting and more rejecting of their children. The differences in mothers' attitudes toward the child might reflect different cultural values on affective involvement in child rearing, as acceptance included warmth and rejection captured elements of coldness and anger. Because of the high emphasis on parental control and directiveness in Chinese culture, Chinese parents may be less likely than Western parents to perceive the importance of positive affect for child social and cognitive development. As a result, children and adults engage in few overt emotional and affective interchanges in China and in other Asian countries (Lin & Fu, 1990; Mizuta et al., 1996). Indeed, Asian cultures strongly value the need for behavioral and emotional control and the restriction of emotional expression during interpersonal interactions; highly expressive individuals are often regarded as poorly regulated and socially immature (Ho, 1986). The control of emotional and affective reactions in parent-child interactions and relationships may also be due to the requirement of maintaining parental authority. The Chinese family is often hierarchical in structure and authoritarian in organization; as authority figures, parents may find it difficult to engage in intimate communication and to express affection explicitly to their children. Parental power assertion with little affective involvement may lead to a low level of parental warmth and eventually be manifested as parental rejection (Rohner, 1986). Recent research has indicated that, in spite of differences on the average level of parental power assertion and warmth, these parenting attitudes and practices have similar meanings in child development in Chinese and Western cultures (Chen, Dong, & Zhou, 1997; Chen, Rubin, & Li, 1997; Rohner, 1986). Obviously, it is important to investigate this issue further.

Given the cultural emphasis on independence in Western individualistic cultures, it would be reasonable to expect that Canadian mothers have higher scores than Chinese mothers on encouragement of independence. However, a nonsignificant difference was found between the two samples on this variable. Similar results were reported in a previous study (e.g., Lin &
According to Lin and Fu, encouragement of independence is believed by many Chinese parents to be important for the development of social competence and achievement. Further, it has been argued that, like Western mothers, Chinese mothers may realize that to adjust to the changing demands of contemporary society, one needs to be independent and adaptable (Lin & Fu, 1990). This may be the case particularly in urban China today, as the recent “economic reforms” in the country may lead to increasing westernization of parental child-rearing attitudes (Liu et al., 1996).

It should be noted that although there were cross-cultural differences on the average level of specific child-rearing dimensions, the general patterns of the ranking order of these dimensions were highly similar in the two samples. Both Chinese and Canadian mothers scored highest on encouragement of independence, encouragement of achievement, and acceptance and scored lowest on punishment and rejection. The cross-cultural similarities in child-rearing beliefs and behaviors may indicate important common experiences of socialization in human beings (Chen & Kaspar, in press; LeVine, 1988). Of course, the cross-cultural differences and similarities were based mainly on the child-rearing dimensions included in this study. Conclusions concerning cross-cultural socialization patterns beyond these dimensions should be drawn with caution.

In summary, although Chinese and Canadian mothers differed in specific parenting styles, there were cross-cultural similarities in the general patterns of the organization and the integration of child-rearing beliefs and practices. Such group-level cultural differences and similarities provided valuable information concerning the cultural environments in which children live, behave, and develop. Nevertheless, it is also important to examine the relations between parenting styles and child behavior at the intracultural level. Within-culture analyses in the present study revealed that the patterns of the associations between maternal child-rearing attitudes and practices and toddler inhibition were significantly different in the Chinese and Canadian samples. In the Canadian sample, it was found that inhibition was associated positively with mothers’ punishment orientation and negatively with mothers’ acceptance and encouragement of achievement. However, the directions of the relations were opposite in the Chinese sample; child inhibition was associated positively with encouragement of independence and negatively with rejection and punishment orientation. The correlations were weak in magnitude within each sample. However, the differences in the nature and the directions of the relations were rather remarkable.

As indicated in the Western literature (e.g., Jones & Carpenter, 1986; Rubin & Asendorpf, 1993), inhibited children in North America are regarded as incompetent and immature and appear to require direction and protection. Mothers may not approve of their toddler’s inhibited behavior, and they may express their dissatisfaction and disappointment through the demonstration of low acceptance and high punishment. These reactions were evident in the findings of this study; mothers of inhibited toddlers in the Canadian sample were generally less accepting of their children and more likely to endorse the use of punishment in child rearing than mothers of less inhibited toddlers.

Unlike their Canadian counterparts, inhibited children in China tended to be accepted by their mothers. These results were consistent with the earlier findings concerning the relations between shy-inhibited behavior and peer acceptance in Chinese and Canadian children and adolescents (Chen et al., 1992; Chen, Rubin, & B. Li, 1995; Chen, Rubin, & Z. Li, 1995). Earlier studies reported, for example, that whereas shyness and inhibition were associated with peer rejection and social adjustment difficulties in North America, shyness and inhibition, as expressed frequently in China, were correlated with peer and teacher acceptance as well as with markers of psychological adjustment during childhood and adolescence (e.g., Chen, Rubin, & B. Li, 1995; Chen, Rubin, & Z. Li, 1995). Together, cumulative evidence indicates that behavioral inhibition is a culturally bound construct and thus may have different adaptations across cultures.

As has been noted in other studies (Eisenberg, 1958, Kagan & Moss, 1962; Parker, 1983), Western mothers who are highly protective tend to have inhibited children. Researchers have argued that these mothers are extremely concerned for their children’s well-being and, to meet their goals of child protection, they restrict their children’s activities to the point at which the children do not enjoy adequate opportunities to develop comfort, confidence and skills in novel situations (Rubin & Mills, 1992; Rubin et al., 1997). Protective mothers may see their children as particularly vulnerable and thus tend to shield their children from perceived dangers. Thus, children’s high levels of inhibition may be either a cause or a consequence, or both, of mothers’ heightened protectiveness. Because inhibited behavior is acceptable and encouraged in China, it may be understandable that it did not correlate with maternal concern and protection, despite our initial expectations.

We hypothesized that maternal encouragement of independence would be negatively associated with toddler inhibition in both samples. This hypothesis was not supported in the study. The results indicated that maternal encouragement of independence was nonsignificantly correlated with inhibition in Canadian children and positively correlated with inhibition in Chinese children. It has been found that Chinese parents believe encouragement of independence is important for child development (Lin & Fu, 1990; Liu et al., 1996). If independence is indeed considered an index of adaptation in China today, as argued by Lin and Fu, it is conceivable that children whose mothers emphasized independence would display the behavior that is encouraged by Chinese mothers. Further investigation is clearly needed on this issue.

It was found that there was a higher overlap among the CRPR dimensions in the Chinese sample than in the Canadian sample. This suggested that the measure might have relatively lower discriminant validity in the Chinese sample. Similar findings have been reported in previous studies (e.g., Zahn-Waxler et al., 1996). Thus, it may be appropriate to understand our results in terms of the general patterns: that is, the associations of inhibited behavior with maternal positive parenting attitudes in China and maternal concern and power assertion in Canada.

The results of the present study indicated that Chinese toddlers were more inhibited than Canadian toddlers. Although dispositional factors may account for part of the cross-cultural variability in early inhibition (Kagan et al., 1978), our study reveals the importance of recognizing the role of culturally mediated socialization beliefs and practices in the development of
inhibition. The interactions between parental beliefs and attitudes and children’s inhibited behavior may indicate goodness-of-fit processes at the cultural level.

Behavioral inhibition to novelty is considered a dispositional characteristic that may be biologically rooted (Kagan, 1989). It is unclear at this time how the cross-cultural differences in inhibition are reflected at the biological or physiological level. Some initial evidence has indicated that Chinese and European American children differ in autonomic nervous system, such as heart rate variability in novel situations (Kagan et al., 1978). However, it is unknown whether there are differences in regulatory processes, such as frontal brain activities (Fox et al., 1995), which may be particularly relevant to socialization experiences.

In both Chinese and Western cultures, girls have been found to be more shy and inhibited than boys in middle and late childhood and adolescence (e.g., Chen, Rubin, & B. Li, 1995). It is interesting that nonsignificant sex differences were found on behavioral inhibition in both the Chinese and the Canadian toddlers in the present study. Nonsignificant sex differences in inhibition during toddlerhood and early childhood have also been found in previous studies (Broberg et al., 1990; Kochanska, 1991). These findings suggest that socialization may play an important role in the emergence of sex differences in shyness in later childhood. Thus, future research would do well to examine how socialization factors differently influence the display of shy behavior in girls and boys within and across cultures.

Like many other countries in the world, China is undergoing dramatic changes. Western values and ideologies have been introduced to the country along with advanced technology. In addition, Chinese family structure and organization have changed (Chen, in press). Thus, in the future years, it will be important to investigate how societal and family changes may influence socialization patterns and children’s behaviors.

Finally, it should be noted that an interactional model concerning parenting and child inhibition was applied as a conceptual framework for this study. Nevertheless, the data presented herein were correlational, thereby precluding any statements about causality. To better understand how child-rearing beliefs, attitudes, and practices and child inhibition may interact in a cultural context, longitudinal data are necessary. Further, it remains important to investigate intra- and cross-culturally, how early inhibition and socialization contribute independently and interactively to developmental outcomes.

References


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