

PARENTING PRACTICES: PARENTING PRACTICES ACROSS CHILDREN'S  
TEMPERAMENT AND CULTURES

By

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To the Faculty of Washington State University:

The members of the Committee appointed to examine the thesis of SUZ-CHIEH SUNG find it satisfactory and recommend that it be accepted.

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Chair

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Abstract

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This study explored child and cultural influences on parenting. This study examined parent's perceptions of children's temperament, along with cultural background as influences on parenting practices. The hypotheses were: 1) that authoritarian parenting is positively related to parent's negative perceptions of their children as reported through measures of temperament, and 2) that Taiwanese parents show more authoritarian parenting practices and less authoritative parenting practices comparing to those parents in United States as a result of differential cultural values shaping perceptions of children's behavior and parenting. Eighty-eight parents from Taiwan (n=54) and Pullman, WA (n=34) who had 4-6 year-old children participated. Results indicated culture, rather than perceived temperament characteristics, had the primary impact on parenting practices. Taiwanese parents were more likely to adopt authoritarian parenting practices while American parents were more likely to report parenting practices associated with authoritative parenting. Although children's temperament and parenting practices were not found to be associated, the present study showed that Taiwanese and American parents perceive children's temperament differently. Potential influences of culture on parents' perceptions of their children and expected parenting practices are discussed.

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## **CHAPTER ONE**

### **INTRODUCTION**

The parenting practices adopted by parents are meant to socialize children's behaviors to fit into the society (He, 2004). Socialization "fundamentally involves the transmission of values, attitudes, roles, and other cultural products from the older generation to the younger generation and parents play a direct and primary role in this process" (Kuczynski, Marshall, & Schell, 1997, p. 23). Parenting behaviors, such as discipline and direct instruction, teach children expected ways to behave. As such, parenting practices are a primary influence on shaping children's behavioral adjustment.

Research on parenting shows that parenting practices contribute to different outcomes across children (Giles-Simes, Straus, & Sugarman, 1995; Hastings, & Rubin, 1999; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Volling, & Belsky, 1992). For example, Hastings and Rubin (1999) found that mothers who used more harsh and controlling practices (authoritarian) were more likely to have children who displayed aggression in later childhood. Giles-Sims et al. (1995) proposed that harsh discipline was related to both physical aggression and to delinquency, and increased the probabilities of being depressed, abusing a spouse and having lower occupational achievement in adulthood. In addition, a longitudinal study conducted by Volling and Belsky (1992) found that mothers' intrusive and overcontrolling behaviors were associated with high levels of sibling conflict and aggression which were assessed with an interval time of 3 years. On the other hand, fathers' early facilitative and affectionate behaviors were related to children's prosocial interactions among peers in the later years (Volling & Belsky, 1992).

With the growing knowledge about how parenting practices affect child outcomes, there has been an increase in interest for understanding the mechanisms shaping parenting behaviors. The

socialization process is constructed not only through the characteristics and beliefs of the parents in interactions with their children, but also through the bi-directional interpersonal relationships between the child and the parents within the context of broader environmental influences (Bronfenbrenner, 1977; Kuczynski et al., 1997).

The present study examines the factors which affect parenting with a bi-directional perspective (i.e. parents' perceptions of children's temperament relating to reports of practices), and with broad ecological perspectives (i.e. cultures). Specifically, the present study examines potential child influences on parent practices by assessing parent's perceptions of children's temperament which may relate to different parenting practices. In addition, broader cultural influences are examined in order to better understand what factors influence parent's reports of socialization practices. In the next section, I will review research relating to different influences that shape parenting practices.

## CHAPTER TWO

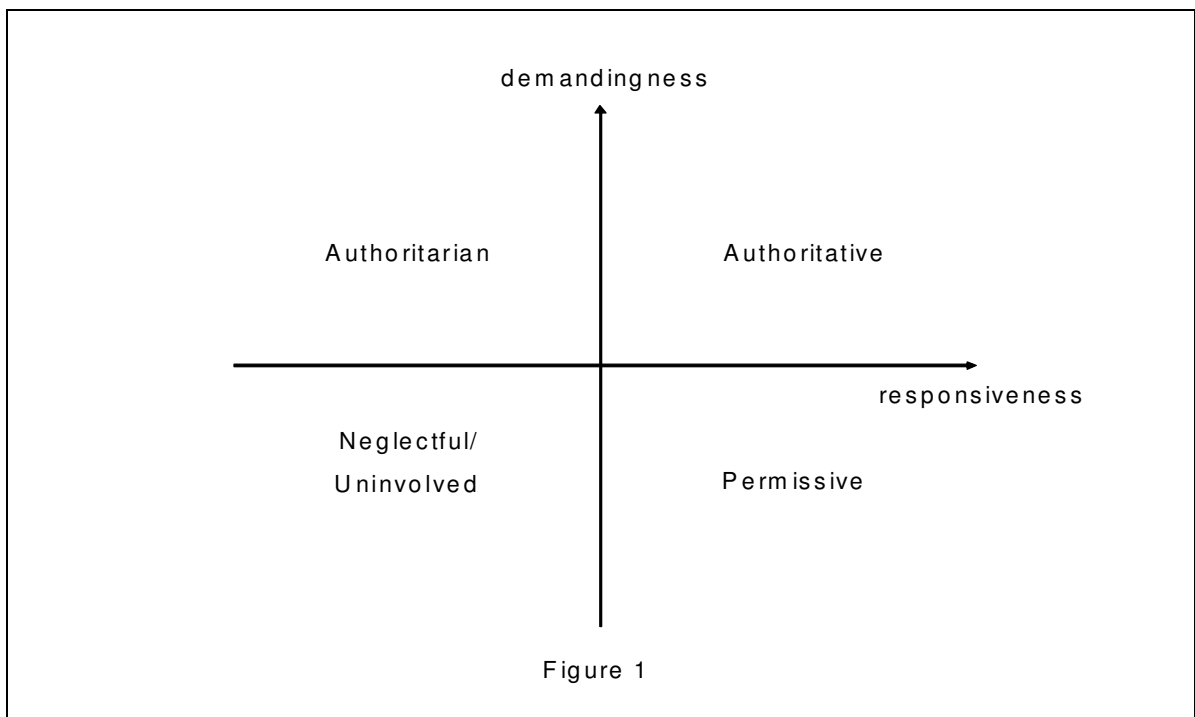
### REVIEW OF LITERATURE

#### *Parenting Styles*

The present study focuses on how parenting practices are associated with contextual factors, such as children's temperament and culture. Parenting research over the last four decades has frequently used the concept of "parenting style" (Baumrind, 1967) as an organizing framework. Parenting styles reflect broadly-based patterns of parent-child interactions relating to child-rearing beliefs, values, and orientations (Brown, Mounts, Lamborn, & Steinberg, 1993). Because parenting practices may reflect parenting beliefs (Brown et al., 1993), parenting *style* may be assessed through studying parent's reports of parenting *practices* (Robinson, Mandlco, Olsen, & Hart, 1995).

Baumrind (1967) originally conceptualized parenting styles as falling into three categories: authoritative, authoritarian and permissive. These categories were based on three dimensions: parental control and maturity demands, parental warmth and nurturance, and clarity of parental communication. A fourth parenting style was created by Maccoby and Martin (1983) as neglectful/uninvolved based on Baumrind's dimensions (see Figure 1). Using these parenting dimensions, researchers have explored child outcomes relating to parenting. One of the most influential studies examining the relation between parenting styles and children's outcome was conducted by Lamborn and his colleagues (1991). These researchers recruited 4081 14-18-year-old children from Wisconsin and California in their study. They used two questionnaires to assess parenting styles and children's outcomes through self-reports. Based on the results of a parenting style questionnaire, they classified the participants into four categories: authoritative, authoritarian, indulgent and neglectful on the basis of children's ratings of their

parents on two dimensions: acceptance/involvement and strictness. Additionally, there were four sets of outcome variables assessed: psychosocial development, academic competence, internalized distress, and problem behaviors. They then identified relations between parenting styles and children's outcomes by analyzing their data. Children in authoritative families were more likely to report higher academic competence and lower levels of problem behaviors than those children in authoritarian, indulgent, or neglectful families.



*Authoritarian parenting.* Authoritarian parents exert high control and demand a lot from their children, but they do not provide much warmth and nurturance. They usually ask their children to obey what they say and to achieve what they expect (Schickedanz, Schickedanz, Forsyth, & Forsyth, 2000). Moreover, they do not encourage their children to communicate or negotiate, rather they might say: “No excuses, just do what I told you to do.” While children of authoritarian parents show better school adjustment than children raised by parents who are

characterized as more indulgent, research suggests that children of authoritarian parents are more likely to display psychological adjustment problems (i.e. anxiety and depression) (Lamborn et al., 1991).

*Authoritative parenting.* Authoritative parents not only use a high level of control and demand maturity, but also are nurturant and warm (Schickedanz et al., 2000). It is viewed as the most effective and beneficial parenting styles in many studies (Lamborn et al., 1991; Schickedanz et al., 2000). In Lamborn et al.'s (1991) study, they found that children from authoritative families scored higher in positive outcomes such as higher academic competence and psychosocial development and scored lower in negative outcomes such as problem behavior and internalizing symptoms.

The primary difference between authoritarian and authoritative parents is the attitudes and ways they deal with the conflicts between those parents and their children (Schickedanz et al., 2000). For example, in a study of parenting style and conflict resolution, researchers found that the strategies authoritative families used to resolve the confrontations were listening, communicating and negotiating (Schickedanz et al., 2000). On the other hand, authoritarian parents were more likely to be assertive (Schickedanz et al., 2000). Regarding children's outcomes, Lamborn, and his colleagues (1991) found that children with authoritative parents were better adjusted, more competent, and more confident about their abilities and were less likely to get into trouble than children of authoritarian, indulgent, or neglectful parents. Children of parents who use more authoritative parenting practices likely show more positive outcomes because authoritative parents tend to use strategies such as negotiation and listening when confronting conflicts with their children which may promote positive development (Lamborn et al., 1991).

Both authoritarian and authoritative parents exert high levels of control and make a lot of maturity demands, but each of them execute these demands in different ways (Baumrind, 1996; Schickedanz et al., 2000). Authoritative parents give reasons for requests and prohibitions. They use inductive strategies, such as prohibiting the inappropriate behavior by describing the consequences of it (Schickedanz et al., 2000). In other words, authoritative parents value the context of warmth and engage in favorable parent-child relationship when they ask their children to comply with their requests (Baumrind, 1996). However, the parenting strategy that authoritarian parents use tends to be more power assertive (Schickedanz et al., 2000). For example, they value children's compliance firmly without any responsiveness (Baumrind, 1996).

*Permissive/neglectful parenting.* Permissive parents are very different from parents categorized as the other parenting styles. They seldom make demands of their children; conversely, they always provide lots of nurturance and parental warmth (Schickedanz et al., 2000). Neglectful/uninvolved parents seem to reduce the interactions with their children to the minimum, and they act like they disengage and aren't involved in the relationship of parents and children (Schickedanz et al., 2000). Knutson, DeGarmo, & Reid (2004) research studied the relation between deficient parenting and children's antisocial behaviors with 671 7-12-year-old children from the National Institute of Mental Health Center for the Prevention of Conduct Disorder by interviews and surveys. Regarding the results, they found that children with neglectful parents were more likely to develop antisocial behaviors at baseline and changes in antisocial behaviors five years later (Knutson et al., 2004), to be disengaged from school, and to engage in deviant behaviors (Lamborn et al., 1991).

### *Socialization Mechanisms*

According to social learning theory (Bandura, 1969), children learn and develop behaviors

through a series of identificatory events. An identificatory event is defined as “the occurrence of similarity between the behavior of a model and another person under conditions where the model’s behavior has served as the determinative cue for the matching responses” (Bandura, 1969, p.217). There are four different kinds of learning mechanisms proposed by Bandura (1969), which are observational learning, attentional processes, retention processes, and motoric reproduction processes. Since parents are usually the primary caregivers of their children, they also are the targeted models for their children to identify with in the socialization process. Children see and observe their parents’ behaviors during the period of the first process of observational learning (Bandura, 1969), and then their parents try to catch their attention to the preferable behaviors they do throughout different parenting practices in the next process – attentional processes. Therefore, children would retain the memories of the connection between parents’ feedbacks and their behaviors. This is the third stage of social learning processes – retention processes (Bandura, 1969). These processes are reinforced either by parental rewarding (i.e. warmth and responses) or by parental punishment (i.e. firm discipline), so children would tend to behave in similar ways in response to parents’ reactions. Applying social learning theory to parenting research, either parenting styles or parenting practices have a huge impact both on children’s socialization and on children’s outcomes.

### *Ecological System Approach*

While social learning theory describes the processes by which children have been socialized by their parents, it does not identify influences on the parenting practices selected by parents in socializing their children. Ecological theory proposed that all the potential factors which could affect human development should be viewed as a set of interrelating systems (Bronfenbrenner, 1977). By looking at the systems, individual’s behaviors are influenced by different contextual

influences. The present study primarily looks at the microsystem (i.e. different children), and the macrosystem (i.e. culture) levels of influence. A process model, proposed by Belsky (1984), showed the determinants of parenting include child characteristics and social networks. Additionally, researchers have found that parenting practices are influenced by many factors of different dimensions (i.e., culture; Chao, 1994; Wu et al., 2002; i.e. parents' perceptions of temperament; Hastings & Rubin, 1999; Rubin, Burgess, & Hastings, 2002; i.e.; birth order; Jefferson, Herbst, & McCrae, 1998). Moreover, by understanding influences on parenting practices, we can identify ways to educate parents and parenting educators to adopt parenting practices to best meet the needs of children and reduce some of the stress associated with parenting.

#### *Parenting under Different Contexts*

*Parenting related to perception of temperament.* Parenting practices could affect children's development both directly and indirectly. For example, one study showed that children who received more maternal hostility were more likely to display physical aggression and less likely to be prosocial (Romano, Tremblay, Boulerice, & Swisher, 2005). However, the parenting practices should be interpersonal. As such the relations between children's temperament and parenting practices are bidirectional (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000). Some researchers have shown a relation between parenting practices and children's temperament style. Hastings and Rubin (1999), in a study of 65 toddlers looking at how maternal attitudes moderated child effects, found that authoritarian mothers of aggressive toddlers were most likely to report high control and anger, to blame their children for being aggressive, and to focus on obtaining compliance rather than teaching skills to their children. On the other hand, protective mothers reported that they would use warmth and involvement to comfort withdrawn



children, especially their daughters. Regarding parenting practices, in Hastings and Rubin's (1999) study, mothers also used more power assertion and structuring to deal with aggression; on the other hand, when dealing with withdrawal they reported more supportive and externally directed behaviors. Rubin, Burgess, and Hastings (2002) proposed that inhibition in children was significantly associated with maternal derisiveness. Moreover, authoritarian parents were more likely to restrict children's independence and competence (Lamborn et al., 1991). Presumably, parents face more stress when rearing difficult children; however, the stress facilitates parents' using harsh discipline. In other words, when rearing children with difficult temperament, parents are more likely to adopt authoritarian parenting strategies. Therefore, the first hypothesis of the present study is that authoritarian parenting is positively related to parents' perceptions of negative affectivity of their children in relation to reports of temperament characteristics.

*Cultural impact.* In addition to children's temperament, cultural aspects of the macrosystem may play an important role in shaping parenting practices as well (Bronfenbrenner, 1977). Parenting practices which are used to socialize children's behaviors are affected by cultural values (Olsen et al., 2001). Regarding the cultural values, traditional Confucian value which represented the cornerstones of Chinese morality has been emphasized by Chinese culture for thousands of years; on the other hand, western culture emphasizes individualism – independence and autonomy (Lee, & Kuo, 2000; Leung, Lau, & Lam, 1998). Past research indicated that Chinese parenting styles which consist of many demands and control are considered as negative parenting styles in Western culture (Olsen et al., 2001).

In a study of 116 families, Keller, Yovsi, Borke, Kartner, Jensen, and Papaligoura (2004) assessed the relations of parenting practices at 3 months and children's self-recognition and self-regulation at 18-20 months. They found that cultural difference had an impact on parenting

styles as well as on children's developmental outcomes. They found that the timing of developing children's self-regulation was positively related to experiencing a close parenting style; however, the timing of developing Greek children's self-regulations was positively associated with distal parenting style which refers to more face-to-face contexts within parent-child relationships (Keller et al., 2004). Since cultural differences have an impact on parenting practices among western cultures, it's obvious and easy to find different parenting values affected by cultures between western and eastern countries. Chao (1994) proposed that Chinese parents are more likely to "train" their children. This "training" concept has an important characteristic beyond the authoritarian parenting style. Wu et al. (2002) also studied the similarities and differences in mothers' parenting of pre-school children in United States and China by asking 521 mothers (284 from China and 273 from United States) to complete a self-report parenting questionnaire. What they found was that Chinese parents scored higher than American parents on physical coercion and scored lower on warmth/involvement and democratic participation (Wu et al., 2002). Moreover, Jose, Huntsinger, Huntsinger, and Liaw (2000) conducted a study of cultural differences on parenting by recruiting 120 children from United States and Taiwan. They assessed parental values and goals with Chinese Child-Rearing Ideologies Questionnaire (CCIQ) and the Importance of Collectivist and Individualist Traits in Children Scale (ICITCS), parenting styles, parenting practices and child outcomes with the Social Behaviors Checklist (SBC). They reported that Taiwanese parents exerted more parental control than did American parents, because of being tied to Chinese tradition (Jose et al., 2000). Besides, they also found that Taiwanese parents showed more parental directiveness than did American parents, but the parental warmth between these two groups was almost equal (Jose et al., 2000). Accordingly, the second hypothesis of the present study is that Taiwanese parents

show more authoritarian parenting practice and show less authoritative parenting practices than American parents.

In addition, parents' perceptions of children's temperament are also influenced by culture (Hsu, Soong, Stigler, Hong, & Liang, 1981); that different perceptions within different cultures contribute to different outcomes across children (Chen, Hastings, Rubin, Chen, Cen, & Stewart, 1998). A cross-cultural study conducted in Taiwan and the United States with 349 children showed that temperament was perceived differently from Taiwanese parents and from American parents; moreover, the results showed that Taiwanese children were reported to be more intense, less active, more negative in mood and to have a lower threshold of responsiveness on the basis of the parents' reports on Carey's Revised Infant Temperament Questionnaire (Hsu et al., 1981). Another cross-culture study was implemented in China and Canada with 163 families to assess the relation between parent's child-rearing attitudes and children's temperament, in particular to behavioral inhibition (Chen et al, 1998). They found that children's inhibition was positively related to maternal acceptance but negatively associated with parental punishment in Chinese sample (Chen et al., 1998). Therefore, the present study tests the moderation of cultural impact on parents' perception of children's temperament in relation to parenting styles.

### *The Present Study*

The present study explores the factors influencing parenting; in other words, the present study examines the links between parenting styles, children's temperament, and culture. My research questions were, first, is parenting influenced by parents' perceptions of children's temperament? For example, is there one specific parenting style to rear difficult children across Taiwanese and American cultures? If so, what would that parenting style be? In most previous studies, children's temperament was usually assessed by the perceptions of parents (Hastings &

Rubin, 1999; Honjo et al., 1998). In explaining the reason why parents might be more authoritarian when rearing children with difficulties, some researchers found that the relationship between difficult temperament and authoritarian parenting was mediated by parents' stress (Honjo, Mizuno, Ajiki, Suzuki, Nagata, Goto, & Nishide, 1998; Rogan, Shmied, Barclay, Everitt, & Wyllie, 1997). Therefore, the first hypothesis is that authoritarian parenting is positively related to parents' perceptions of negative affectivity of their children.

Second, cultural values influence parenting styles (Bronfenbrenner, 1977; Olsen et al., 2001), and researchers propose that there are different cultural values between western and eastern areas (Lee & Kuo, 2000; Leung et al., 1998). Western culture emphasizes individualism; however, Chinese culture emphasizes traditional Confucian values which results in Chinese parenting consisting of more parental control and demands and expected children to be more compliance (Lee & Kuo, 2000; Leung et al., 1998; Olsen et al., 2001). In addition, Chao (1994) proposed that Chinese parents have different ideas of the concept of "training," which is seen as a more ideal child-rearing strategy in Asian cultures, but overlaps with some aspects of authoritarian parenting in Western cultures. This may be why previous researchers have found that Chinese parents are more likely to be categorized as having an authoritarian parenting style (Jose et al., 2000; Wu et al., 2002). Therefore, the second hypothesis is that Taiwanese parents report more authoritarian parenting practices and less authoritative parenting practices compared to parents in United States.

Finally, since culture is an important environmental influence on parenting, the present study poses an additional related question: do Taiwanese parents report using more authoritarian practices because they have different perceptions of children's temperament? Does culture moderate the relation between parents' perception of their children's temperament and parenting

styles? The present study examines the possible interaction of cultural effects and perceptions of child temperament in predicting parent reports of parenting behaviors.

## CHAPTER THREE

### METHOD

#### *Participants*

Participants for the present study were recruited from Taiwan and the United States, and majority of respondents were mothers. Participants from Taiwan were recruited from three kindergartens located in suburban areas and were parents with pre-school-age children. The total number of participants from Taiwan was 54 parents participating in the present study (48.1% boys and 51.9% girls). The Taiwanese participation rate was 69.23% with 78 possible respondents. Regarding the recruiting procedure in United States, United States sample was part of larger study examining social behaviors with 180 in the initial sample. Because of the larger goals of the study, possible participants were limited to the children from the sample with 4-5 year olds, 133 families were invited to participate in completing the questionnaires with 65 families agreeing to participate (48.87%). Among those consenting families, 34 families mailed the surveys back after completing them in time to be included in this study (44.1% boys and 55.9% girls).

In general, both mothers and fathers reported high education attainment, used the same scale for each ethnic group, 6 = doctoral degree to 1 = 6<sup>th</sup> grade. Regarding the participants from Taiwan, the mean level of the highest education attainment of mothers was a Bachelor's Degree. Sixty-two percent of mothers completed more than a Bachelor's Degree (including Bachelor's Degree), and 38% completed less than a Bachelor's Degree (all mothers completed high school); on the other hand, the mean level of education completed by father was a Bachelor's degree, fifty-six percent of fathers completed more than a Bachelor's Degree and 44% completed less than a Bachelor's Degree (9.6% only completed junior high school). As for those parents from

United States, the mean level of education completed by mothers was a Bachelor's Degree with sixty-two percent of mothers completing more than a Bachelor's Degree and 38% only completing high school education; on the other hand, the mean level of education completed by fathers was a Master Degree (45.5% of American fathers completed more than a Master Degree versus 17.3% of Taiwanese fathers) with seventy percent of American fathers completed more than a Bachelor's Degree and 30% only completed high school. Both Taiwanese and American mothers reported on average that they had similar education attainment (see Table 1); however, the present study found that American fathers were more highly educated than Taiwanese fathers ( $F[1, 83] = 5.325, p \leq .05$ ; see Table 1). The explanation might be that Pullman, where the present study was conducted, is a university town, with most of the residents being faculty, staff, or students at Washington State University.

The ethnicity of all Taiwanese participants was Asian; on the other hand, family ethnicity in the Pullman sample was fairly homogenous with 88.2% Caucasians, 5.9% Asians, 2.9% African American and 2.9% reporting other ethnicities.

Table 1

*ANOVA (Comparing means from Taiwanese and United States samples)*

Variables	M (Taiwan)	M (U.S)	df	F	Sig.
# in the family	2.00	2.24	87	2.252	.137
Father's education <sup>a</sup>	3.75	4.33	84	5.325	.024*
Mother's education <sup>a</sup>	3.74	3.94	86	1.422	.236
Authoritative	20.30	23.44	87	25.58	.000***
Authoritarian	11.76	6.71	87	120.92	.000***
Extraversion/Surgency	4.82	5.25	87	6.906	.010**
Negative Affectivity	4.45	4.53	86	0.189	.665

*Note.* comparing Taiwanese and American samples.

<sup>a</sup>: 1 = 6<sup>th</sup> grade to 6 = doctoral degree

\*\*\*  $p \leq .005$ , \*\*  $p \leq .01$ , \*  $p \leq .05$



### *Procedure*

The present study recruited parents from Taiwan and the U.S. Fliers and consent forms were sent to three targeted kindergartens in Taiwan to inform the parents of this present study. Then questionnaires were distributed to a total of 78 possible parents in the three kindergarten classrooms and 54 parents agreed to participate and completed the questionnaire packets. Regarding the recruiting procedure in United States, United States sample was part of a larger study examining social behaviors from 5 child centers with 13 classes. Consent forms were sent to 133 possible families and 65 parents agreed to complete the surveys. Thirty-four families returned the surveys in time to be included in this study.

### *Measures*

The present study used two assessments to measure parenting styles/practices and children's temperament, and were obtained through parents' self reports.

*Parenting styles/practices.* The Parenting Practices Questionnaire was designed to assess parenting styles with different aspects of parenting practices (Robinson et al., 1995). The present study used 9 items which identified two different parenting styles (authoritarian and authoritative), and each style consisted of 2-3 sub-scales (see Table 2). The measure asked participants to rate on a 5-point Likert-type scale, from 1 (*never*) to 5 (*always*) (see Appendix A). An example for the factor of warmth and involvement is: "I give comfort and understanding when my child is upset." An example for verbal hostility is: "I yell or shout when my child misbehaves." Robinson et al. (1995) presented coefficient  $\alpha$ s for the Parenting Practices Questionnaire administered to a sample of 1251 volunteer parents who resided in Utah. The coefficient  $\alpha$  for the Authoritative Items was .91, and for the Authoritarian Items was .86 (Robinson et al., 1995). For the Taiwanese sample, the present study used the Chinese version

developed by Wu et al. (2002). In the present study, the reliability of these parenting styles was from  $\alpha=.35$  to  $\alpha=.85$  (see Table 4). Authoritarian parenting styles did not evidence acceptable levels of reliability for American sample ( $\alpha=.35$ ) (see Table 4), because the numbers of American participants who reported “*never*” was the same as the number who reported “*sometimes*” for one item: “I give my children reasons why rules should be obeyed” which might lower the reliability of authoritarian scale. We felt that it was still theoretically important to examine how it relates to parents’ perceptions of children’s temperament and cultural group. However, it should be noted the interpretations of the results including this scales for American sample should be done with much caution.

Table 2

*Factors for the Parenting Practices Questionnaire*

Parenting style	Factors	items
Authoritative	Warmth and involvement	I give comfort and understanding when child is upset.
		I am responsive to child’s feelings or needs.
	Reasoning/induction	I explain the consequences of the child’s behavior.
		I give child reasons why rules should be obeyed.
		I explain how we feel about his/her good and bad behavior.
Authoritarian	Verbal hostility	I yell or shout when child misbehaves.
	Corporal punishment	I used physical punishment as a way of disciplining my child.
		I guide child by punishment more than by reason.
Lack of follow through	I threaten child with punishment more often than giving it.	

*Children’s temperament.* The present study adopted the Children’s Behavior Questionnaire (Rothbart, Ahadi, Hershey, & Fisher, 2001) to assess temperament. The measure is intended to

assess perceptions of children's temperament in 3-7 year-old children. The original measure consisted of 94 items relating to behavioral tendencies displayed by children. The present study revised this measure by selecting 30 items relating to two broad factors (12 items relating to Negative Affectivity which refers to the temperament of experiencing aversive emotions and 18 items relating to Extraversion/Surgency, which indicates positive emotional expression such as smiling and laughter, positive anticipation and activity level (Klein-Tasman & Mervis, 2003)) with each factor consisting of 5-6 subscales (see Table 3). The questionnaire asked parents to rate the degree to which they agree with each item on a seven-point scale, from 1 (*extremely untrue*) to 7 (*extremely true*) (see Appendix B). Samples of items for Negative Affectivity were: "my child has temper tantrums when s/he doesn't get what s/he wants," "when my child is angry about something, s/he tends to stay upset for ten minutes or longer," and "my child rarely becomes discouraged when s/he has trouble making something work." On the other hand, samples of items for Extraversion/ Surgency were: "my child gets so worked up before an exciting event that s/he has trouble sitting still," " my child hardly ever laughs out loud during play with other children," and " my child moves about actively (runs, climbs, jumps) when playing in the house." Rothbart et al. (2001) presented internal consistency coefficients for CBQ scales administered to a sample of 411 parents with 4-8-year-old children at the University of Oregon. Coefficient  $\alpha$ s for the CBQ scale rating of 4-5-year-olds ranged from .64 to .92, with a mean of .73, and of 6-7-year-olds ranged from .67 to .92, with a mean of .75 (Rothbart et al., 2001). For the Taiwanese sample, the Chinese version of The Children's Behavior Questionnaire was translated by two Taiwanese graduates with a Bachelor Degree in psychology; one translated into Chinese and then the other one back translated into English. In the present study, the reliability of The Children's Behavior Questionnaire was from  $\alpha=.50$  to  $\alpha=.82$  (see Table 3).

Although the factor of Negative Affectivity of children’s temperament did not evidence acceptable levels of reliability for United States sample ( $\alpha=.50$ ) (see Table 4), we felt that it was theoretically important to examine how it relates to parenting styles. However, it should be noted the interpretations of the results including this scale for American sample should be done with much caution.

Table 3

*Factors of the Children’s Behaviors Questionnaire*

<b>Factor</b>	<b>Scale</b>	<b>Factor</b>	<b>Scale</b>
Negative Affectivity	Discomfort	Extraversion / Surgency	Positive Anticipation
	Fear		High intensity pleasure
	Anger /Frustration		Smiling /laughter
	Sadness		Activity level
			Impulsivity (-)
			Shyness (-)

Table 4

*Reliability for The Parenting Practices Questionnaire and The Children's Behavior Questionnaire*

Measures	Cronbach's Alphas		
	All	Taiwan	United States
PPQ <sup>a</sup> – Authoritative	.85	.83	.75
PPQ – Authoritarian	.80	.60	.35
CBQ <sup>b</sup> – Extraversion/Surgency	.79	.75	.82
CBQ – Negative Affectivity	.68	.75	.50

*Note.* <sup>a</sup>: PPQ = The Parenting Practices Questionnaire

<sup>b</sup>: CBQ = The Children's Behavior Questionnaire

### *Analyses*

The present study examined the links between parenting styles/practices, children's temperament, and culture (Taiwan vs. United States). Descriptive statistics were used to summarize the demographic information of both parents and children (i.e. ages and education levels), as well as parenting styles and children's temperament.

Correlation analysis was used to assess for parenting styles in relation to parents' perceptions of children's temperament, and the nationality which represents different cultures to see which contextual factors are more likely correlated with which parenting styles. Analysis of variance is used to compare group differences between Taiwan and the United State samples. Multiple regression analysis was conducted to determine the links between parents' perceptions of children's temperament and culture. In addition, hierarchical regression analyses were used to examine possible interaction effects of culture and perceived temperament contributing to reports of parenting practices.

## CHAPTER FOUR

### RESULTS

The results are presented in three parts. First, a description of two measures are presented and their intercorrelations. Second, the similarities and differences between Taiwanese and American parents in their perceptions of children's temperament and parenting styles are compared. Finally, I examine the relations between parents' perceptions of children's temperament and parenting styles for each ethnic group.

#### *Descriptive Statistics*

Means, standard deviations, and correlations among all scales utilized in the present study are shown in Table 5. On average, parenting styles were significantly related to ethnic group. Taiwanese parents were more likely to report using authoritarian parenting style,  $r = .76, p \leq .01$ ; while American mothers were more likely to score high on authoritative parenting,  $r = -.48, p \leq .01$ . Authoritarian parenting style was negatively associated with authoritative style,  $r = -.32, p \leq .01$ . We also found the relations between parents' perceptions of children's temperament and ethnic groups. American parents were more likely to perceive their children Extraversion/Surgency,  $F(1, 86) = 6.906, p \leq .01$  (see Table 1). The differences are going to be discussed in the next section as well as the similarities between these two ethnic groups. Regarding the demographic characteristics from the sample, father's education was positively related to mother's education,  $r = .52, p \leq .01$ . In addition, child's age was also negatively associated with the number of children in the family.

#### *Differences and Similarities between Two Cultural Groups*

We compared the means of the variables between two ethnic groups to examine whether there were differences between these two ethnic groups by utilizing ANOVA (see Table 1) and

correlations (see Table 6 & Table 7). The present study found that the parenting style Taiwanese parents adopted were significantly different from those used by American parents, for authoritative, ( $F[1, 86] = 25.58, p \leq .005$ ); and for authoritarian, ( $F[1, 86] = 120.92, p \leq .005$  [see Table 1]). In other words, Taiwanese parents were more likely to adopt authoritarian parenting styles and less likely to adopt authoritative parenting styles than American parents. In addition, parents' perceptions of children's temperament were also different between the two cultural groups (for Extraversion/Surgency,  $F(1, 86) = 6.906, p \leq .01$ ; see Table 1), which indicated that American parents were more likely to perceive their children as being higher on dimensions of Extraversion/Surgency than Taiwanese parents. Regarding the correlations among the variable in different ethnic groups, in the Taiwan sample we found that authoritative parenting style was not significantly associated with authoritarian parenting style ( $r = .09, ns$ ). In addition, Taiwanese parents who had older children were more likely to perceive Negative Affectivity of their children ( $r = .36, p \leq .01$ ; see Table 7). However, American mothers were more likely to report using authoritative parenting styles when childrearing sons than daughters ( $r = -.37, p \leq .05$ ; see Table 7) and those American mothers with a younger child were more likely to adopt authoritarian parenting styles ( $r = -.36, p \leq .05$ ; see Table 7). Besides, the more children in the family, the more likely that American mothers reported using authoritarian parenting style ( $r = .45, p \leq .01$ ; see Table 7). Moreover, in the American sample, mothers' education attainment was positively related to their perceptions of Extraversion/Surgency of their children ( $r = .37, p \leq .05$ ; see Table 7).



Table 5

*Means, Standard Deviations, and Correlations between Variables in the Total Sample*

	M	SD	1	2	3	4	5	6	7	8	9
1. Place <sup>a</sup>	-	-									
2. Gender <sup>b</sup>	-	-	-.04								
3. Age	5.21	1.07	.34**	-.13							
4. # in the family	2.09	0.72	-.16	.02	-.12*						
5. Father's education <sup>c</sup>	3.02	1.16	-.25*	.04	-.04	.09					
6. Mother's education	3.18	0.79	-.13	.16	-.08	.12	.52**				
7. Authoritative	21.51	3.22	-.48**	.09	-.04	.01	-.07	-.10			
8. Authoritarian	9.81	3.24	.76**	-.04	.18	-.01	.20	.04	-.32**		
9. Negative Affectivity	4.48	0.80	-.05	-.01	.21	.09	-.00	.12	.02	-.01	
10. Extraversion/Surgency	4.99	0.77	-.27*	-.15	-.14	.07	-.18	.07	.16	-.17	-.04

*Note.* <sup>a</sup>: 1 = sample from United States; 2 = sample from Taiwan;

<sup>b</sup>: 0 = male; 1 = female;

<sup>c</sup>: 1 = 6<sup>th</sup> grade to 6 = doctoral degree

Minimum N = 85. \*\* p < .01. \* p < .05.

Table 6

*Means, Standard Deviations, and Correlations between Variables in the Taiwanese Sample*

	M	SD	1	2	3	4	5	6	7	8
1. Gender <sup>a</sup>	-	-								
2. Age	5.49	1.12	-.12							
3. # in the family	2.00	0.55	.00	-.10						
4. Father's education <sup>b</sup>	3.75	1.10	-.01	.12	-.12					
5. Mother's education	3.74	0.72	.11	.03	.01	.57**				
6. Authoritative	20.30	3.31	.25	.14	-.20	.13	-.05			
7. Authoritarian	11.76	2.25	.03	-.05	-.05	.13	-.02	.09		
8. Negative Affectivity	4.45	0.89	-.04	.36**	.19	.01	.10	-.04	.03	
9. Extraversion/ Surgency	4.82	0.73	-.06	-.01	-.19	-.24	-.11	.07	-.02	-.11

Note. <sup>a</sup>: 0 = male; 1 = female;

<sup>b</sup>: 1 = 6<sup>th</sup> grade to 6 = doctoral degree

Minimum N = 52. \*\* p < .01. \* p < .05.

Table 7

*Means, Standard Deviations, and Correlations between Variables in the United States Sample*

	M	SD	1	2	3	4	5	6	7	8
1. Gender <sup>a</sup>	-	-								
2. Age	4.75	0.79	-.11							
3. # in the family	2.24	0.92	.03	-.37*						
4. Father's education <sup>b</sup>	4.33	1.19	-.10	.08	-.24					
5. Mother's education	3.94	0.89	-.21	.14	-.17	.45**				
6. Authoritative	23.44	1.86	-.37*	.17	.08	-.14	-.02			
7. Authoritarian	6.71	1.83	-.08	-.36*	.45**	-.19	-.21	.03		
8. Negative Affectivity	4.53	0.66	.06	-.04	-.03	.00	.19	.15	.10	
9. Extraversion/ Surgency	5.25	0.77	-.33	-.19	.22	.06	.37*	-.04	.21	.05

Note. <sup>a</sup>: 0 = male; 1 = female;

<sup>b</sup>: 1 = 6<sup>th</sup> grade to 6 = doctoral degree

Minimum N = 33. \*\* p < .01. \* p < .05.

### *Hierarchical Regression Analyses*

Four regression analyses were conducted to predict each parenting style (authoritative vs. authoritarian) by using demographic characteristics and different perception of children's temperament factors as independent variables (see Table 8 - 11). In model 2, ethnic group did predict both authoritative and authoritarian parenting styles when using the predictors of gender, age, both father's and mother's education and Negative Affectivity, for authoritative,  $\beta = -.56$ ,  $p \leq .005$  (see Table 8), for authoritarian,  $\beta = .82$ ,  $p \leq .005$  (see Table 10). However, after adding the interaction of place and Negative Affectivity in model 3, the interaction effects did not significantly predict either authoritative parenting style ( $\beta = .78$ , ns) or authoritarian parenting style ( $\beta = -.13$ , ns) (see Table 8 & Table 10). For the predictor of Extraversion/Surgency, in model two, the present study still found the results supporting the hypotheses that culture did have an impact on parents' adaptation of parenting styles, for authoritative,  $\beta = -.51$ ,  $p \leq .005$  (see Table 9), for authoritarian,  $\beta = .81$ ,  $p \leq .005$  (see Table 11). However, including the interaction of ethnic groups and Extraversion/Surgency into Model 3, there was no significant evidence supporting the hypothesis that culture moderated the relationship between parents' perceptions of children's temperament and parenting styles (authoritative,  $\beta = .36$ , ns [see Table 9]) authoritarian,  $\beta = -.26$ , ns [see Table 11]). The results showed that the model 2 accounted for a statistically significant 24% of variance in authoritative parenting (for Negative Affectivity,  $F(6, 76) = 4.40$ ,  $p \leq .005$ ; for Extraversion/Surgency,  $F(6, 77) = 4.48$ ,  $p \leq .005$ ), and a statistically significant 53% of variance in authoritarian parenting (for Negative Affectivity,  $F(6, 76) = 20.37$ ,  $p \leq .005$ ; for Extraversion/Surgency,  $F(6, 77) = 20.50$ ,  $p \leq .005$ ).

Table 8

*Summary of Hierarchical Regression Analyses Predicting Authoritative Parenting (Negative Affectivity)*

Predictor Variable	B	SE B	$\beta$	R <sup>2</sup>
<b>Step 1</b>				
Child sex	.57	.74	.09	
Child age	-.01	.03	-.04	
Father's education <sup>a</sup>	.05	.67	.02	
Mother's education	.23	.55	.06	
				.02
<b>Step 2</b>				
Child sex	.67	.66	.10	
Child age	.05	.03	.19	
Father's education	-.26	.33	-.10	
Mother's education	.24	.49	.06	
Location	-3.70	.74	-.56 ***	
Negative Affectivity	-.16	.41	-.04	
				.26 ***
<b>Step 3</b>				
Child sex	.65	.66	.10	
Child age	.06	.03	.21	
Father's education	-.59	.33	-.10	
Mother's education	.30	.49	.07	
Location	.60	4.12	.09	
Negative Affectivity	1.50	1.62	.68	
Location x Negative Affectivity	-.97	.91	-.78	
				.27 ***

Note. <sup>a</sup>: 1 = 6<sup>th</sup> grade to 6 = doctoral degree

\*\*\*  $p \leq .005$ , \*\*  $p \leq .01$ , \*  $p \leq .05$

Table 9

*Summary of Hierarchical Regression Analyses Predicting Authoritative Parenting  
(Extraversion/Surgency)*

Predictor Variable	B	SE B	$\beta$	R <sup>2</sup>
<b>Step 1</b>				
Child sex	.57	.73	.09	
Child age	-.01	.03	-.03	
Father's education <sup>a</sup>	.06	.37	.02	
Mother's education	.22	.54	.05	
				.02
<b>Step 2</b>				
Child sex	.66	.65	.10	
Child age	.04	.03	.16	
Father's education	-.36	.33	-.13	
Mother's education	.40	.49	.10	
Location	-3.36	.74	-.51 ***	
Extraversion/Surgency	.45	.45	.11	
				.26 ***
<b>Step 3</b>				
Child sex	.63	.65	.10	
Child age	.04	.03	.15	
Father's education	-.36	.33	-.13	
Mother's education	.33	.50	.08	
Location	-5.79	4.77	-.87	
Extraversion/Surgency	-.32	1.56	-.08	
Location x Extraversion/Surgency	.48	.94	.36	
				.26 ***

Note. <sup>a</sup>: 1 = 6<sup>th</sup> grade to 6 = doctoral degree

\*\*\*  $p \leq .005$ , \*\*  $p \leq .01$ , \*  $p \leq .05$

Table 10

*Summary of Hierarchical Regression Analyses Predicting Authoritarian Parenting (Negative Affectivity)*

Predictor Variable	B	SE B	$\beta$	R <sup>2</sup>
<b>Step 1</b>				
Child sex	-.15	.72	-.02	
Child age	.06	.03	.23	
Father's education <sup>a</sup>	-.63	.36	-.22	
Mother's education	.39	.53	.10	
				.10
<b>Step 2</b>				
Child sex	-.30	.48	-.05	
Child age	-.03	.02	-.11	
Father's education	-.16	.24	-.06	
Mother's education	.37	.36	.09	
Location	5.48	.54	.82 ***	
Negative Affectivity	.23	.30	.06	
				.62 ***
<b>Step 3</b>				
Child sex	-.31	.48	-.05	
Child age	-.03	.02	-.11	
Father's education	-.16	.24	-.06	
Mother's education	.38	.36	.09	
Location	6.23	3.01	.93	
Negative Affectivity	.52	1.18	.13	
Location x Negative Affectivity	-.17	.67	-.13	
				.62 ***

Note. <sup>a</sup>: 1 = 6<sup>th</sup> grade to 6 = doctoral degree

\*\*\*  $p \leq .005$ , \*\*  $p \leq .01$ , \*  $p \leq .05$

Table 11

*Summary of Hierarchical Regression Analyses Predicting Authoritarian Parenting  
(Extraversion/Surgency)*

Predictor Variable	B	SE B	$\beta$	R <sup>2</sup>
<b>Step 1</b>				
Child sex	-.24	.71	-.04	
Child age	.05	.03	.21	
Father's education <sup>a</sup>	-.67	.35	-.24	
Mother's education	.44	.53	.10	
				.09
<b>Step 2</b>				
Child sex	-.13	.47	-.02	
Child age	-.02	.02	-.06	
Father's education	-.17	.24	-.06	
Mother's education	.35	.35	.08	
Location	5.44	.54	.81 ***	
Extraversion/Surgency	.35	.33	.08	
				.62 ***
<b>Step 3</b>				
Child sex	-.11	.48	-.02	
Child age	-.02	.02	-.06	
Father's education	-.17	.24	-.06	
Mother's education	.39	.37	.09	
Location	7.21	3.47	1.08	
Extraversion/Surgency	.91	1.14	.21	
Location x Extraversion/Surgency	-.35	.68	-.26	
				.62 ***

Note. <sup>a</sup>: 1 = 6<sup>th</sup> grade to 6 = doctoral degree

\*\*\*  $p \leq .005$ , \*\*  $p \leq .01$ , \*  $p \leq .05$



## CHAPTER FIVE

### DISCUSSION

The findings of the present study have several implications for our understanding of contextual factors in relation to parenting styles. In particular, the findings emphasize the role of culture impact on parenting styles. In addition, the present study recruited participants from two different countries (Taiwan vs. the United States) to examine influences on parenting. The present study also demonstrates the predominance of culture over temperament in contributing to parent's reports of parenting behaviors. In addition, this study found that there is not an interaction effect between culture and temperament predicting parenting.

#### *Cultural Impact on Parenting*

Ecological systems theory and previous studies suggest that parenting styles are influenced by culture. As expected, cultures do influence parents' adaptation of parenting styles to socialize their children in the way corresponding with their cultural values and beliefs (Olsen et al., 2001). The results of the present study showed that Taiwanese parents were more likely to report using authoritarian parenting style and less likely to report authoritative parenting styles. Previous studies have demonstrated that parents inheriting Chinese cultural values and beliefs are more likely to report using authoritarian parenting styles (Chao, 1994; Jose et al., 2000; Wu et al., 2002). Chao (1994) has proposed that the concept of "training" might play an important role in shaping parenting process which the present study also has demonstrated. Traditional Confucian values have been emphasized by Chinese culture for more than 5,000 years and the education system magnifies this value by teaching students with Confucian's materials (e.g. the passing down of Confucian sayings). This is particularly true for those who have attended senior high school and college (Lee & Kuo, 2000; Leung et al., 1998). For example, a Confucian saying

advises that “Those who love their parents dare not show rudeness to others” (Lin, 1935, p.179). Another example is that “Jian zhi bu cong, you jing bu wei, lao er wu yuan”, which means that you should always obey your parents even if you disagree with their thoughts; more importantly, you shouldn’t complain about it even if you are tired of it. In the present study, the mean level of both fathers’ and mothers’ education attainment were bachelor’s Degrees which might mean that these Taiwanese parents were more likely to be familiar with the Confucian values and to integrate these values with parenting practices.

#### *Interaction of Temperament and Culture*

In order to examine the possible interaction between cultures and the perceptions of children’s temperament, the present study conducted hierarchical regression analysis to find out which variables might significantly predict the parenting styles. The present study found significant associations between culture and children’s temperament (e.g. extraversion/surgency). However, the effect of cultures on perception of children’s temperament diminished when conducting the hierarchical regression analyses. Therefore, the present study failed to find the moderation effects of the interactions of cultural and parents’ perceptions of children’s temperament on parents’ adaptation of parenting styles.

#### *Perceptions of Temperament*

Regarding parents’ perceptions of children’s temperament, the present study failed to find evidence supporting an association between parenting styles and children’s temperament. Here, the present study proposed some potential causes that lead to the results of not being able to find the relationship. First, the scale the present study utilized might not be appropriate to assess parents’ perceptions of children’s temperament characteristics. The present study chose only 33 items with 11 sub-scales to assess children’s temperament in contrast to the 94 items used in the

original instrument (Rothbart et al., 2001). Second, the samples from Taiwan and from United States were relatively small for conducting statistical analyses with sufficient power to assess small effects. Besides, the discrepancy between the Taiwanese and American sample was too large (54 vs. 34) to make the statistical comparisons trustworthy. Third, The Children's Behavior Questionnaire (Rothbart et al, 2001) might not be applicable for assessing parents' perceptions of children's temperament. Adapting more than one measure to assess parents' perceptions of children's temperament might be one possible solution to this problem. The Chinese version of The Children's Behavior Questionnaire distributed in Taiwan might not be completely culturally valid. The instrument was translated by two graduates with a Bachelor's Degree in Psychology, but there is a possibility that some of the meaning of the items did not stay comparable across the different test versions.

#### *Limitations*

As with all studies, the present study was limited in several ways. First, the present study relied on the samples of convenience, in particular to the sample recruited from Pullman, WA. However, it was precisely such a demographic profile of highly educated parents who are more likely to be responsive and nurturant. Second, although the regression suggested that cultures did influence parents' adaptation of parenting styles, it could not prove the causality of this relation. A cross-sectional study has no basis for estimating causality. Third, the present study relied on self-reported data. The interpersonal relationships in particular to the relationship between parents and children should be bidirectional and reciprocal (Collins et al., 2000). Besides, the present study relied on the quantitative data only which might limit the information to test the hypotheses. Fourth, the present study selected some of items from these two questionnaires in order to raise the response rate which might end in lower reliability of these measures. Moreover,

the translations of the questionnaire might not be theoretically appropriate to account for the results the present study had found. Fifth, time limits caused small samples in the present study, in particular to the United State sample. Finally, the results proposed by the present study only relied on correlation and regression techniques. Single-level methods are not the most efficient techniques to examine interaction among demographic characteristics, parents' perceptions of children's temperament, and cultures. Hence, the findings presented in the present study are preliminary and must be replicated in the future.

### *Conclusion*

In conclusion, the results found by the present study suggest that researchers might underestimate the cultural impact on parenting styles. Regarding the contemporary globalizing condition, western cultures, such as fast-food restaurants and Hollywood movie industry, have already influenced this small island of Taiwan for a long period. Therefore, the rationale of parenting education switched its focus to teach parents to be more responsive and negotiable. This could underestimate the effect of Chinese culture on authoritarian parenting style in Taiwan. Moreover, according to ecological system approach (Bronfenbrenner, 1977), there are hundreds of factors affecting parents' adaptation of parenting styles. In study of cultural impact, it is essential to test the hypotheses not only with parenting styles, but also with parental beliefs and parental goals. We must not simply explore culture as a direct predictor of parenting styles, but as a moderator of psychological relations as well. Although the present study lacked sufficient consideration of the complicated parenting process, it still simply provided evidence for cultural difference in parenting style.

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Appendix A  
The Parenting Practices Questionnaire

1. I guide my child by punishment more than by reason.

1	2	3	4	5
Never	once in a while	about half of the time	very often	always

2. I spoil my child.

1	2	3	4	5
Never	once in a while	about half of the time	very often	always

3. I give comfort and understanding when my child is upset.

1	2	3	4	5
Never	once in a while	about half of the time	very often	always

4. I yell or shout when my child misbehaves.

1	2	3	4	5
Never	once in a while	about half of the time	very often	always

5. I am responsive to my child's feelings or needs.

1	2	3	4	5
Never	once in a while	about half of the time	very often	always

6. I give my child reasons why rules should be obeyed.

1	2	3	4	5
Never	once in a while	about half of the time	very often	always

7. I threaten my child with punishment more often than actually giving it.

1	2	3	4	5
Never	once in a while	about half of the time	very often	always

8. I use physical punishment as a way of disciplining my child.

1	2	3	4	5
Never	once in a while	about half of the time	very often	always

9. I explain to my child how I feel about the child's good and bad behavior.

1	2	3	4	5
Never	once in a while	about half of the time	very often	always

## Appendix B

### The Children's Behavior Questionnaire (CBQ)

1. Is not very bothered by pain.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

2. Likes going down high slides or other adventurous activities.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

3. Gets so worked up before an exciting event that s/he has trouble sitting still.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

4. Cries sadly when a favorite toy gets lost or broken.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

5. Has temper tantrums when s/he doesn't get what s/he wants.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

6. When outside, often sits quietly.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

7. Tends to become sad if the family's plans don't work out.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

8. Moves about actively (runs, climbs, jumps) when playing in the house.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

9. Often rushes into new situations.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

10. Is quite upset by a little cut or bruise.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

11. Gets quite frustrated when prevented from doing something s/he wants to do.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

12. When angry about something, s/he tends to stay upset for ten minutes or longer.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

13. Is sometimes shy even around people s/he has known a long time.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

14. Is afraid of fire.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

15. Hardly ever laughs out loud during play with other children.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

16. Tends to say the first thing that comes to mind, without stopping to think about it.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

17. Acts shy around new people.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

18. Sometimes smiles or giggles playing by her/himself.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

19. Becomes very excited before an outing (e.g., picnic, party).

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

20. If upset, cheers up quickly when s/he thinks about something else.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

21. Is comfortable asking other children to play.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

22. Rarely gets upset when told s/he has to go to bed.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

23. Is afraid of the dark.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

24. Is likely to cry when even a little bit hurt.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

25. Is rarely frightened by “monsters” seen on TV or at movies.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

26. Likes to go high and fast when pushed on a swing.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

27. Rarely becomes discouraged when s/he has trouble making something work.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

28. Is very difficult to soothe when s/he has become upset.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

29. Smiles a lot at people s/he likes.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

30. Is among the last children to try out a new activity.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

31. Is full of energy, even in the evening.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

32. Enjoys riding a tricycle or bicycle fast and recklessly.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable

33. Remains pretty calm about upcoming desserts like ice cream.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true nor untrue	slightly true	quite true	extremely true	not applicable