Does "Tiger Parenting" Exist? Parenting Profiles of Chinese Americans and Adolescent Developmental Outcomes

Su Yeong Kim, **Yijie Wang**, **Diana Orozco-Lapray**, **Yishan Shen**, and **Mohammed Murtuza**
University of Texas at Austin

Abstract

"Tiger parenting," as described by Chua (2011), has put parenting in Asian American families in the spotlight. The current study identified parenting profiles in Chinese American families and explored their effects on adolescent adjustment. In a three-wave longitudinal design spanning eight years, from early adolescence to emerging adulthood, adolescents (54% female), fathers and mothers from 444 Chinese American families reported on eight parenting dimensions (e.g., warmth and shaming) and six developmental outcomes (e.g., GPA and academic pressure). Latent profile analyses on the eight parenting dimensions demonstrated four parenting profiles: supportive, tiger, easygoing, and harsh parenting. Over time, the percentage of parents classified as tiger parents decreased among mothers but increased among fathers. Path analyses showed that the supportive parenting profile, which was the most common, was associated with the best developmental outcomes, followed by easygoing parenting, tiger parenting, and harsh parenting. Compared with the supportive parenting profile, a tiger parenting profile was associated with lower GPA and educational attainment, as well as less of a sense of family obligation; it was also associated with more academic pressure, more depressive symptoms and a greater sense of alienation. The current study suggests that, contrary to the common perception, tiger parenting is not the most typical parenting profile in Chinese American families, nor does it lead to optimal adjustment among Chinese American adolescents.

Keywords

parenting profiles; Chinese; tiger parenting; adolescent adjustment

There is a common perception that Asian American parents are authoritarians when it comes to schoolwork and extracurricular activities, and exceedingly demanding of their children both academically and at home. Recently, these parents have been termed "tiger parents" (Chua, 2011) for the ferocity with which they discipline their children and for their emphasis on the importance of family obligation and academic achievement. They are also viewed as displaying relatively less warmth and affection towards their children, and as running households that do not exhibit democratic values. The spotlight on tiger parenting has caused the public to question whether the control these parents exert over their children is appropriate, and whether their parenting practices positively or negatively affect children's development. Studies have yet to find empirical evidence to support or refute these concerns. The current study uses longitudinal data from Chinese American adolescents and their parents to examine the parenting profiles that may exist specifically within this group, and the adolescent outcomes that may be associated with each emerging parenting profile.

Correspondence concerning this article should be sent to Su Yeong Kim, Department of Human Development and Family Sciences, 108 E Dean Keeton St., Stop A2702, The University of Texas at Austin, Austin, TX 78712. sykim@prc.utexas.edu.

Parenting in Asian Americans

"*All decent parents want to do what's best for their children. The Chinese just have a totally different idea of how to do that*" (Chua, 2011, p. 63). Chua's book, in which she presents a personal account of her own parenting practices, stirred parents and experts nationwide. She claims to be a tiger mother herself, and argues that the methods she used to raise her daughters are aligned with the Chinese cultural emphasis on academic achievement and family obligation – two means by which adolescents bring honor to the family (Chao, 1994). This is in contrast to European American practices, which emphasize the importance of children's self-esteem and personal growth (Chao & Tseng, 2002). These differences between the motivations of Asian and European-American parents may mean that western-derived parenting profiles are not as applicable to Asian Americans.

Parenting Dimensions and Profiles

Research on parenting styles originated with Baumrind's research on parental control, which identified three parenting styles: authoritative, authoritarian, and permissive (Baumrind, 1966). Maccoby and Martin expanded on Baumrind's work by reassessing parenting profiles using two dimensions, responsiveness (warmth) and demandingness (control), which allowed them to identify an additional parenting profile: negligent (Maccoby & Martin, 1983). Authoritative parenting is viewed as supportive, with parents granting autonomy and encouraging communication (Darling & Steinberg, 1993). This style is correlated with positive academic outcomes and increased competence. Authoritarian parenting is viewed as harsh, with parents using fear to elicit behavioral compliance (Darling & Steinberg, 1993); parents may also use power and control to produce desired behaviors in their children (Baumrind, 1966). These methods are correlated with increased depressive symptoms and lower self-esteem (Nguyen, 2008). While both of these parenting profiles are characterized by the use of control, the type of control (power) differs. Authoritative parents employ confrontive power, which is open to negotiation and reasoning, while authoritarian parents use coercive power, which is aimed at maintaining the hierarchical structure of the parent-child relationship (Baumrind, 2012). A negligent parenting profile characterizes parents who exert low levels of control and who are largely unresponsive to their children. In contrast, a permissive parenting profile characterizes parents who are more responsive, maintain low levels of control, are nonpunitive, and low in demandingness (Baumrind, 1966). While these parenting profiles have become widely accepted in the literature, they were initially identified using a population of toddlers and young children in well-functioning, European American families (Baumrind, 1966; Maccoby & Martin, 1983). Scholars are increasingly recognizing the need to assess parental profiles using expanded dimensions to accommodate ethnic populations and different developmental periods (Steinberg, Lamborn, Dornbusch, & Darling, 1992).

Previous research on parenting practices in ethnic minority groups indicates that cultural values and practices may impact parenting styles such that the western-derived profiles established by Baumrind (1966) and expanded by Maccoby and Martin (1983) are not as applicable to these groups. Working from the hypothesis that ethnic minorities' parenting practices may differ from those evinced in the classical profiles, Rodriguez, Donovick, and Crowley (2009) found the classic parenting styles did indeed have less relevance in the case of ethnic minority families. Studies conducted on ethnic minority parents have found that these parents exhibit lower levels of parental sensitivity, use culturally specific types of parental control, and exhibit higher levels of protectiveness (Chao, 1994; Mesman, van Ijzendoorn, & Bakermans-Kranenburg, 2012; Rodriguez, et al., 2009). Overall, these studies question whether the classic parenting styles accurately capture parenting practices in ethnic minorities such as Asian Americans.

Previous studies on Asian parents have employed classic labels, but have added caveats such as, "authoritative and psychologically controlling" (Chan, Bowes, & Wyver, 2009, p. 849) to the classic authoritarian label. Such parenting may be an example of "tiger parenting," even though the term is relatively new. Recently, the term "tiger parent" was popularized, and is colloquially understood to refer to Asian American parents (Chua, 2011). The hypothesized "tiger parenting" profile may be characterized by high levels of both authoritativeness and authoritarianism among Asian parents, and may be viewed as the culturally salient merger of the classic authoritative and authoritarian parenting profiles (Chan, et al., 2009; Xu et al., 2005). In addition to the tiger parenting profile, we expect to find additional parenting profiles in our sample. For example, a profile in which parents are supportive may be similar to the classic authoritative profile, a profile in which parents are characterized as harsh may be similar to the classic authoritarian profile, and a profile in which parents are easygoing may be similar to the classic negligent and/or permissive parenting profiles.

Contemporary scholars are increasingly recognizing the importance of using multiple dimensions, both positive and negative, to define parenting profiles (Nelson, Padilla-Walker, Christensen, Evans, & Carroll, 2011). Accordingly, the current study conceptualizes its potential parenting profiles as reflecting varying levels of eight different parenting dimensions. The classic dimension of warmth is expanded to include both positive (parental warmth) and negative (parental hostility) dimensions in an effort to distinguish between the mere lack of warmth and the presence of actual hostility. The classic dimension of control is expanded to include the multiple facets of control – specifically, positive control is measured by parental monitoring and democratic parenting; negative control is measured by psychological control and punitive parenting. Additionally, inductive reasoning, which is a measure of parents' effective communication with their children, is included as part of the fourth dimension, along with shaming, which has been shown to play a significant role in the socialization of Chinese-origin children (Fung, 1999). Fung (1999) notes that Asian parents actively pressure their children to internalize feelings of shame for not conforming to norms or for failing to perform as parents expect. These expanded dimensions allow for a more comprehensive measurement of control and warmth than can be identified using the classical profiles.

A possible "supportive" parenting profile emergent in this study would score high on positive measures (parental warmth, democratic parenting, parental monitoring, and inductive reasoning) and low on negative measures (parental hostility, psychological control, punitive parenting, and shaming). Another possible profile, one characterized as "harsh", would score low on positive measures and high on negative measures. A profile characterized as "easygoing" may score low on both positive and negative measures. Finally, a profile characterized as "tiger parenting" may score high on both positive and negative measures.

A Variable-centered vs. a Person-centered Approach

In a variable-centered approach to studying parenting, each parenting dimension is examined in isolation. The disadvantage of this approach is that the effect of individual parenting dimensions may differ depending on the parenting styles compiled from multiple dimensions (Kerr, Stattin, & Ozdemir, 2012). For example, high levels of control may be perceived differently when accompanied by high levels of warmth than when they are accompanied by low levels of warmth (Keijsers, Frijns, Branje, & Meeus, 2009). Although parenting is multi-faceted, empirical studies that create profiles have relied on arbitrary cutoffs or a median split approach in order to create parenting styles using two dimensions. For example, Chao (2001) and Berge, Wall, Loth, and Neumark-Sztainer (2010) identified

the four traditional parenting profiles by placing subjects rated as high (above the median) or low (below the median) in two dimensions into a four-tier parenting classification system. One notable limitation in this type of analysis is the researcher may misclassify subjects by artificially placing an equal number of participants into each of the four profiles, which may not accurately depict the prevalence of each profile in the sample. In addition, by focusing on only two dimensions, this approach precludes the inclusion of other important dimensions used to define parenting profiles, such as autonomy granting/communication (Darling & Steinberg, 1993).

The current study uses multiple parenting dimensions in a latent profile analysis to create the clusters that define parenting profiles in a sample of Chinese Americans. Nelson, Padilla-Walker, Christensen, Evans, and Carroll (2011) also examined eight dimensions of parenting using a person-centered approach. The advantage of a person-centered approach, such as latent profile analysis, is that it allows the data to determine the optimal number of solutions (profiles) and can provide the probability of a participant belonging to one of the profiles. A person-centered approach eliminates any presumed bias towards a specified number of solutions, and is advantageous for its applicability to multi-dimensional models (Weaver & Kim, 2008).

Parenting Profiles across Adolescent Developmental Periods and across Reporters

In the current study, parenting profiles are assessed during early, middle, and late adolescence. It may be possible for parenting profiles emergent at one developmental period to differ from those at another developmental period. Nelson, Padilla-Walker, Christensen, Evans, and Carroll (2011) examined parenting during young adulthood and concluded that, while classical parenting styles were applicable to their sample, other parenting styles may be more relevant during emerging adulthood. The current study allows for an examination of parenting styles at developmental periods from early adolescence to emerging adulthood, and addresses whether the tiger parenting profile is evident throughout adolescence or only during specific developmental periods by a specific parent in the family.

The common adage "strict father, kind mother" (Chao & Tseng, 2002) in Chinese families suggests that the mother may be responsible for daily upbringing and emotional guidance, while the father may be responsible for discipline and socialization outside the home. At this time, little research has yet examined whether mothers and fathers may take on the roles of disciplinarian and compassionate parent to varying degrees at different times during a child's development. If the tiger parenting profile does exist, it may be more evident during a particular time period, since parenting practices may be influenced by what mothers and fathers deem most appropriate for meeting the developmental needs of their children at any given time (Costigan & Dokis, 2006; Inman, Howard, Beaumont, & Walker, 2007). For example, mothers may be tiger parents during the earlier years, when they are more responsible for children's socialization in the home, up until their children's transition into adolescence. Fathers, on the other hand, might take on the tiger parenting role as adolescents gain more autonomy and independence during emerging adulthood.

In addition to parents' reports on their own parenting styles, adolescents' perspectives on their parents' parenting is also important to assess. Parents and adolescents may not agree about which style of parenting is practiced in the home. Indeed, there is a high level of mismatch between the parenting practices Chinese American adolescents experience and those they deem to be examples of ideal parenting, suggesting a large discrepancy between parent and adolescent reports of parenting practices (Wu & Chao, 2011).

Parenting Profiles and Adolescent Outcomes

This study evaluates multiple domains of adolescent outcomes associated with each parenting profile that emerged in a Chinese American sample. Assessing multiple adolescent outcomes can provide a better understanding of how parenting profiles affect overall adjustment across the developmental periods of early adolescence, middle adolescence, and emerging adulthood. The outcomes include academic achievement, educational attainment, academic pressure, depressive symptoms, parent-child alienation and family obligation. Previous studies have evaluated the role of parenting profiles in relation to a single outcome, such as academic achievement or depressive symptoms. By examining these and other outcomes together, the current study may be able to address how parenting profiles relate to the "achievement/adjustment paradox" wherein Asian American students have high levels of academic achievement, but low levels of psychological adjustment (Qin, 2008). This paradox may be most evident among Asian American adolescents whose parents fit into the "tiger parenting" profile.

Previous research has identified authoritative parenting as positively correlated and authoritarian parenting as negatively correlated with GPA (measure of academic achievement) (Steinberg, et al., 1992). Chao and Tseng (2002) emphasize that Chinese parents measure success by their children's performance in school and their children's adherence to familial responsibilities, which means that children may feel a strong sense of academic pressure and family obligation. It is also important to assess adolescent adjustment by measuring outcomes such as parent-child alienation and depressive symptoms. Research has found that unsupportive parenting behaviors decrease parent-child bonding, leading adolescents to develop an increased sense of alienation from their parents (S. Y. Kim, Chen, Wang, Shen, & Orozco-Lapray, 2012). In addition, authoritarian-like parenting practices may also increase adolescents' depressive symptoms (Nguyen, 2008).

We expect that if "tiger parenting" does indeed emerge as a parenting profile, it may be the most likely of the profiles to relate to the achievement/adjustment paradox, given that tiger parenting's emphasis on high academic achievement and strong sense of family obligation may go hand-in-hand with high academic pressure and heightened adolescent depressive symptoms. This study will also explore whether the achievement/adjustment paradox is evident in other profiles specific to Chinese American parenting that may emerge.

Current Study

Chua's book (2011) instigated a need to assess parenting profiles using an expanded model of parenting dimensions that may better reflect the parenting practices of a sample of Chinese Americans. First, this study aims to identify parenting profiles for Chinese American mothers and fathers separately, and to determine if a tiger parenting profile emerges, by using both parent self-reports and adolescent reports of parenting practices (warmth, parental monitoring, democratic parenting, inductive reasoning, hostility, psychological control, shaming, and punitive parenting). Second, this study will evaluate various adolescent outcomes (academic achievement, educational attainment, academic pressure, depressive symptoms, parent-child alienation and family obligation) associated with each parenting profile across three distinct developmental periods: early adolescence, middle adolescence and emerging adulthood.

Methods

Participants

Participants were Chinese American families participating in a three-wave longitudinal study, with data gathered every four years. Adolescents were initially recruited from seven middle schools in Northern California. There were 444 families in Wave 1, 350 families in Wave 2 and 330 families in Wave 3. Slightly over half of the adolescent sample is female (n = 246, 54%). The age of the adolescents in the initial wave ranges from 12 to 15 (M = 13.03, SD = 0.73) years old. Median family income is in the range of $30,001 to $45,000 across all three waves. Median parental education level is some high school education for both fathers and mothers. Most (75%) of the adolescents were born in U.S., whereas 91% of the mothers and 88% of the fathers were born outside the U.S. Most of the participants originally came from Hong Kong or southern provinces of China. Fewer than 10 families hailed from Taiwan. The occupational status of immigrant parents is wide-ranging, from those in professional occupations (e.g., banker or computer programmer) to unskilled laborers (e.g. construction worker or janitor). The majority speaks Cantonese; less than 10% of the families speak Mandarin as their home language.

Procedure

Participants were initially recruited from seven middle schools in major metropolitan areas of Northern California. With the aid of school administrators, Chinese American students were identified, and all eligible families were sent a letter describing the research project in both Chinese and English. The forty-seven percent of these families that returned parent consent and adolescent assent received a packet of questionnaires for the mother, father, and target adolescent in the household. Participants were instructed to complete the questionnaires alone and not to discuss answers with friends and/or family members. They were also instructed to seal their questionnaires in the provided envelopes immediately following the completion of their responses. Within approximately 2–3 weeks after sending the questionnaire packet, research assistants visited each school to collect the completed questionnaires during the students' lunch periods. Among the families who agreed to participate, 76% returned surveys. Four years after the initial wave, families were asked to participate in the second wave, and after another four years had passed, they were asked to participate in the third wave of data collection. Families who returned questionnaires were compensated a nominal amount of money ($30 at Wave 1, $50 at Wave 2, and $130 at Wave 3) for their participation.

Questionnaires were prepared in English and Chinese. The questionnaires were first translated to Chinese and then back-translated to English. Any inconsistencies with the original English version scale were resolved by bilingual/bicultural research assistants with careful consideration of culturally appropriate meanings of items. Around 71 percent parents used the Chinese language version of the questionnaire and the majority (85%) of adolescents used the English version.

Attrition analyses were conducted at Waves 2 and 3 to compare families who participated with those who did not on the demographic variables measured at Wave 1 (i.e., parental education, family income, parent and child generational status, parent and child age). Only one significant difference emerged: boys were less likely than girls to have continued participating ($\chi^2(1)$ = 7.20 to 10.41, p < .01). Adolescent sex is included as a covariate for all analyses.

Measures

Parenting dimensions—Adolescents, mothers and fathers all responded to questions about eight parenting dimensions: parental warmth, inductive reasoning, parental monitoring, democratic parenting, parental hostility, psychological control, shaming, and punitive parenting. The internal consistency for each parenting dimension was from acceptable to high across waves and informants (a = .65 to .91), except for mother report of democratic parenting at Wave 1 (a = .59).

Parental warmth, inductive reasoning, parental monitoring, and parental hostility were assessed through measures adapted from the Iowa Youth and Families Project (Conger, Patterson, & Ge, 1995; Ge, Best, Conger, & Simons, 1996). *Parental warmth* was measured with eight items about an affective dimension of parenting on a seven-point scale. Some examples of the items are "act loving, affectionate, and caring," "listen carefully," and "act supportive and understanding." Using a five-point scale, participants also rated four items assessing *inductive reasoning* (e.g., give reasons for decisions; ask for the target child's opinion before making decisions; and discipline by reasoning, explaining or talking), as well as three items assessing *parental monitoring* (e.g., know whereabouts of the target child; know who the target child is with; know when the target child comes home). *Parental hostility* was assessed using seven items about parents' hostile behavior towards their children on a seven-point scale. Some examples of the items are "shout or yell," "get angry," and "insult or swear" at the target child.

Democratic parenting and punitive parenting were assessed through two subscales of the Parenting Practices Questionnaire (Robinson, Mandleco, Olson, & Hart, 1995) using a five-point scale. *Democratic parenting* was measured with five items about parents' autonomy granting (e.g., encourage the target child to freely express himself/herself, allow the target child to give input into family rules, and take into account the target child's preferences). *Punitive parenting* was measured with four items about parents' use of punitive discipline (e.g., punish the target child by taking privileges away with little or no explanation, discipline first and ask questions later, and use threat of punishment with little or no explanation).

Psychological control was assessed through a measure of psychological control adapted by Barber (1996) from the Child's Report of Parental Behavior Inventory (Schaefer, 1965). Using a three-point scale, all participants rated eight items about parents' attempts to regulate children's psychological experience (e.g., change the subject whenever the target child has something to say, avoid looking at the target child if disappointed, and become less friendly when the target child does not see things in the parent's way).

Shaming was assessed through an unpublished measure developed by Ruth K. Chao at the University of California, Riverside. Using a three-point scale, participants rated five items about parents' attempts to socialize their children by inducing feelings of shame. The five items are: "Teach my child what not to do by using examples of bad behavior in other youths," "Teach my child by pointing out other youths that I think are successful," "Tell my child to consider my wishes or expectations in his/her actions or behaviors," "Tell my child that his/her actions should bring respect and honor to the family," and, "Tell my child that his/her actions should not bring shame to me."

Adolescent adjustment—Adolescent adjustment was measured using six indicators: academic achievement, education attainment, academic pressure, depressive symptoms, parent-child alienation, and family obligation. The internal consistency of each outcome was high across waves and informants (a = .72 to .89). The internal consistency for academic

achievement and educational attainment was not computed because they were measures with a single item.

Academic achievement was measured at Waves 1 and 2 using unweighted Grade Point Average (GPA, without physical education courses) from school records. In Wave 3, adolescents reported their current *education attainment* using a scale ranging from (1) "high school dropout" to (5) "currently in graduate school (medical, law, Master's Degree, etc.)". *Academic pressure* was measured at Waves 1 and 2 using a scale developed by the first author. On a five-point scale, adolescents rated three items about the pressure they felt to succeed in school. The three items are: "Feel pressure from my parents to do well in school," "Get annoyed when my parents remind me about the importance of getting good grades," and "Stressed out about getting good grades." Adolescent *depressive symptoms* were assessed using the Center for Epidemiologic Studies of Depression Scale (CES-D) (Radloff, 1977). Using a four-point scale, adolescents, fathers, and mothers each rated 20 items about adolescents' depressed mood. *Parent-child alienation* was assessed through the alienation subscale of the Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987). Using a five-point scale, adolescents, fathers, and mothers each rated eight items on adolescents' feeling of alienation from their parents (e.g., do not get much attention at home, have to rely on oneself when having a problem to solve, and get upset a lot more than parents know about). The measure of *family obligation* was adapted from a scale developed by Fuligni, Tseng and Lam (1999). Using a five-point scale, adolescents rated 13 items about family obligation (e.g., providing assistance to the family as a child, do well for the sake of the family, and make sacrifices for the family).

Demographic information—At all three waves, adolescents answered questions on their sex, age, and whether they were born in the U.S. At all three waves, fathers and mothers answered questions on their age, highest level of education attained and whether they were born in the U.S. These variables were included as covariates when examining the differences in adolescent adjustment among the various parenting profiles.

Results

Analysis Plan

All the analyses were conducted separately for adolescent report of maternal parenting, adolescent report of paternal parenting, mother report of own parenting and father report of own parenting, and also separately for Waves 1, 2 and 3. Data analyses proceeded in two steps. First, parenting profiles indicated by the eight parenting dimensions were explored using Latent Profile Analyses (LPA). LPA assumes there are subpopulations in the sample, with distinct profiles comprised of multiple indicators, and attempts to identify these subpopulations. To determine the optimal number of profiles, a series of models were fitted to estimate between two to five parenting profiles sequentially. Each model was compared with its previous model (i.e., *n* class model compared to *n-1* class model) on multiple fit indices to determine whether estimating one more class improved model fit. The best fitting model was chosen when there was no further improvement by adding more classes. Indices included Bayesian information criterion (BIC), the sample size adjusted BIC (ABIC), and a log-likelihood based test (i.e., Lo-Mendel-Rubin (LMR) test) (Nylund, Asparouhov, & Muthén, 2007). Smaller BIC and ABIC values indicated better model fit, and a significant LMR test indicated that a given model significantly improved model fit compared to the previous model. Using a combination of multiple model fit indices strengthens the reliability of class enumeration (B. O. Muthén, 2003). The number of random starts was increased to ensure that the final model converged at a stable solution (Hipp & Bauer, 2006).

Second, the effect of parenting profiles on adolescent adjustment was examined using path analyses. All the outcome variables were included as dependent variables in the same model, and dichotomous variables representing the parenting profiles were treated as the independent variables. In each model, when there were *n* parenting profiles, *n-1* dichotomous variables were created, with the last parenting profile as the reference group. The coefficient estimation for each dichotomous variable indicated how each separate parenting profile was associated with adolescent adjustment relative to the reference parenting profile. The reference group was rotated to obtain all possible comparisons among parenting profiles. Demographic variables were controlled for, including adolescents' sex, age, and birth place, as well as parents' age, birth place, and highest education level attained.

All the analyses were conducted in Mplus 6.12 (Muthén & Muthén, 1998–2011). Mplus handles missing data with full-information maximum likelihood (FIML) by default. FIML uses all the available information in its estimates and is therefore recommended among the current methods of handling missing data (Graham, 2009).

Parenting Profiles

Our first research question focused on whether there were different parenting profiles based on the eight parenting dimensions. For all the chosen optimal solutions derived from latent profile analyses, BIC and ABIC were the lowest, or the decline in BIC and ABIC between two adjacent models began to level off. In addition, the LMR test was significant, or marginally significant, between the optimal solution and its previous model, but not significant among any following models. The optimal solutions of parenting profiles are displayed in Table 1. In the discussion that follows, the number of parenting profiles in each optimal solution is described, then each parenting profile is labeled, and finally, the prevalence of each parenting profile in the current sample is examined.

The optimal solutions were stable over time for adolescent-reported maternal parenting (four profiles across three waves), most differentiated in middle adolescence for adolescent-reported paternal parenting (four profiles at Wave 2 compared to three profiles at Waves 1 and 3), less differentiated over time for mother-reported maternal parenting (four, three, and two profiles from Waves 1 to 3), and most differentiated in emerging adulthood for father-reported paternal parenting (three profiles at Wave 3 compared to two profiles at Waves 1 and 2). Solutions with the same number of profiles show a similar pattern of mean levels on the eight parenting dimensions. Examples of mean levels for the eight parenting dimensions in a four-profile, a three-profile, and a two-profile solution are displayed in Figures 1a, 1b and 1c, respectively.

When the optimal solution was four profiles, each parenting profile was labeled according to its relative mean values compared to those of the other profiles on the four positive parenting dimensions (parental warmth, inductive reasoning, parental monitoring and democratic parenting) and the four negative parenting dimensions (parental hostility, psychological control, shaming and punitive parenting). Specifically, the parenting profile that scored relatively high on the positive parenting dimensions and low on the negative parenting dimensions was labeled as "supportive parenting"; the parenting profile that scored relatively high on both the positive and negative parenting dimensions was consistent with our operationalization of "tiger parenting" and was labeled accordingly; the parenting profile that scored relatively low on both the positive and negative parenting dimensions was labeled as "easygoing parenting"; and the parenting profile that scored relatively low on the positive parenting dimensions but high on the negative parenting dimensions was labeled as "harsh parenting." The same labeling scheme was applied when the optimal solution was three or two profiles.

Table 1 also shows the group size of each parenting profile. In general, supportive parenting was the largest group, followed by tiger parenting and/or easygoing parenting, and harsh parenting was the smallest group. Comparing adolescent and parent reports, the percentage of the sample classified as "supportive" tended to be smaller in the adolescent reports than in the parent reports. On the other hand, the percentage of the sample classified as "tiger" or "harsh" tended to be larger in the adolescent reports than in the parent reports. Regarding the changes in group size across waves, although there were no clear patterns for supportive, easygoing or harsh parenting, a pattern did emerge for tiger parenting. Specifically, the percentage of the sample that fit the profile for tiger parenting decreased among mothers but increased among fathers according to both adolescent and parent reports.

Parenting Profiles and Adolescent Adjustment

Our second research question was how parenting profiles were associated with adolescent adjustment. The coefficient estimates from path analyses are displayed in Table 2, indicating each parenting profile's association with adolescent adjustment relative to the reference parenting profile. For each type of report, there were significant associations between parenting profiles and each developmental outcome in at least one of the three waves, with one exception: father-reported paternal parenting profiles were not significantly related to adolescent-reported academic pressure.

In general, supportive parenting was associated with best developmental outcomes, followed, in order, by easygoing parenting, tiger parenting and harsh parenting. This pattern was consistent for both adolescent and parent reports. Specifically, when being compared to the other three groups, supportive parenting profile, as reported by either adolescents or parents, was associated with higher GPA (β = .13 to .28, $p <= .007$) and educational attainment (β = .18 to .24, $p <= .002$); a lower level of academic pressure (β = −.33 to −.16, $p <= .003$), depressive symptoms (β = −.40 to −.13, $p <= .006$) and feelings of alienation from their parents (β = −.51 to −.16, $p <= .007$); and a stronger sense of family obligation (β = .14 to .41, $p <= .008$). In addition, compared to easygoing parenting, tiger parenting was associated with higher levels of academic pressure (β = .17 to .26, $p <= .005$), depressive symptoms (β = .17 to .24, $p <= .008$) and feelings of alienation from their parents (β = .16 to .30, $p <= .001$). The only exception was that tiger parenting among mothers as reported by adolescents at Wave 1 was significantly related to higher family obligation compared to easygoing parenting (β = .18, $p = .001$). Lastly, compared to tiger parenting, harsh parenting was associated with higher levels of depressive symptoms (β = .19, $p = .001$), higher levels of alienation from their parents (β = .20 to .27, $p < .001$) and lower levels of family obligation (β = −.32 to −.21, $p < .001$).

Discussion

The current study identifies parenting profiles within a Chinese American sample using multiple dimensions of parenting practices. More importantly, the current study provides empirical support for the existence of Chua's (2011) concept of tiger parenting. Up to four parenting profiles are identified: "supportive parenting", "easygoing parenting", "tiger parenting" and "harsh parenting", with supportive parenting making up the largest proportion, tiger parenting and easygoing parenting making up the second or third largest proportion, depending on the developmental period and the informant, and harsh parenting making up the smallest proportion. In most cases, of the various aspects of adolescents' developmental outcomes investigated, supportive parenting is associated with the best outcomes, easygoing parenting is associated with similar or better outcomes than tiger parenting, and harsh parenting is associated with similar or worse outcomes than tiger parenting. As expected, tiger parenting is associated with high academic pressure.

The current study takes a person-centered approach by conducting a latent profile analysis to identify parenting profiles within a sample of Chinese Americans. A person-centered approach is more advantageous than a variable-centered approach because the impact of parenting practices is examined in the context of parenting styles, which represent a combination of different levels of various parenting practices (Kerr, et al., 2012). A classic person-centered approach to parenting studies is the median-split analysis, which has several shortcomings (Berge, et al., 2010). First, the number of profiles is pre-determined. Second, models with multiple dimensions can be extremely complicated. For example, with eight dimensions, the number in our study, a median-split approach would lead to 256 profiles. Third, all profiles are presumed to consist of equal number of participants, which is not realistic. Latent profile analysis, on the other hand, allows for the identification of different numbers of profiles – three to five in our study – and selects the optimal solution based on the model fit to the data. In addition, the group size varied among all the parenting profiles, which enabled us to compare the prevalence of each profile in the current sample.

The profiles identified in the current study are similar to the classic parenting styles in that warmth and control are the general criteria for distinguishing profiles. For example, supportive parenting is akin to the classic authoritative parenting style, with high scores on both parental warmth and positive control, while harsh parenting is akin to the authoritarian parenting style, with low scores on parental warmth and high scores on negative control. However, our parenting dimensions are more nuanced and comprehensive than the two classic parenting dimensions of warmth and control, which means that the parenting profiles that emerge in this study are distinct from the classic parenting styles. For example, in order to capture the multi-faceted nature of parental control, the classic dimension has been parceled into multiple dimensions across both positive (parental monitoring and democratic parenting) and negative (psychological control and punitive control) constructs. The classic dimension of parental warmth has been expanded to include not only warmth, but also hostility. Considering warmth and hostility as separate dimensions, rather than as two extreme poles of a single dimension, allowed us to distinguish tiger parenting (high warmth, high hostility) from easygoing parenting (low warmth, low hostility).

Our profiles also included the dimension of inductive reasoning, because reasoning and explanation provide an avenue for better parent-child communication, which is considered to be an important component of authoritative parenting (Darling & Steinberg, 1993). Inductive reasoning is also key for distinguishing between confrontive control of authoritative parenting from coercive control of authoritarian parenting (Baumrind, 2012). Finally, a culturally specific dimension of shaming has been included to create culturally meaningful parenting profiles. The results show that supportive parenting, which is most beneficial for adolescent adjustment, includes higher extent of shaming than easygoing parenting, although not as high as the level of shaming in tiger or harsh parenting. Our results suggest that the use of shaming is an important component of being a supportive and successful parent in Chinese culture, but the dimension of shaming is completely absent in the classic authoritative parenting style. Thus, the culturally specific parenting profiles that emerged in this study are not merely interchangeable with the classic parenting styles.

Whereas most of the existing research on this topic uses either a cross-sectional or a short-term longitudinal design only, covering one or two specific developmental periods, the current study goes beyond these studies by using a longitudinal design that covers three developmental periods (early adolescence, middle adolescence and emerging adulthood) and gathers data from multiple informants. This allows for an examination of whether or not parenting styles remain consistent across different developmental periods, as parenting may vary according to children's changing developmental needs (Nelson et al., 2011). Indeed, our results consistently show that the proportion of tiger mothers tends to decrease or

disappear across waves, whereas the proportion of tiger fathers tends to increase or emerge, and this is so regardless of informant.

Traditional Chinese parents are supposed to be, as the adage goes, "strict father and kind mother," meaning that the father exerts restrictive control and the mother manifests warmth (Chao & Tseng, 2002). However, our results suggest that the roles of mothers and fathers change over time in a way that is tied to the development of their children. It appears that mothers gradually relinquish their role as the tiger parent to fathers over the period of time from early adolescence to emerging adulthood. The reason for this phenomenon is not known yet, but one possible explanation may have to do with the role Asian American parents play in the socialization of their children. In Asian American families, mothers are responsible for the socialization of young children at home (Inman, et al., 2007), while fathers are responsible for the socialization of children outside of the home (Costigan & Dokis, 2006). Therefore, tiger parenting, as a culturally rooted parenting style, may be more likely to be used by mothers during earlier periods of adolescence, when adolescents' social interactions are more likely to occur within the family. As children move into later periods of adolescence and emerging adulthood, and begin to interact more with the wider society, fathers may become more responsible for disciplining the child, and thus may begin to take over the role of tiger parent.

Unlike many previous studies, which have relied on adolescent self-reports about their parents' practices, this study uses reports from both adolescents and their parents, for both maternal and paternal parenting practices. This allows for a comparison between adolescent reports and parents' self-reports of parenting. The results suggest that, compared to their parents' self-reports, adolescents are less likely to categorize their parents as supportive and more likely to categorize them as harsh or tiger parents. Previous research has shown that Chinese American adolescents are more likely than their European American counterparts to experience a salient mismatch between their ideals and perceptions of the parent-adolescent relationship (Wu & Chao, 2011). Because of this mismatch, which may deepen the typical parent-child generational gap, Chinese American adolescents are more likely than their parents to report negative parenting practices. The current study provides additional empirical evidence for a discrepancy in the perceptions of adolescents and parents within Chinese American families, and emphasizes the importance of comparing reports from target adolescents and their parents.

The current study also compares the developmental outcomes associated with each emerging parenting profile for both mothers and fathers, and across different periods of adolescence. Despite the widely accepted notion of an "achievement/adjustment paradox" in Asian Americans, particularly in the children of tiger parents, the current study findings do not seem to support the existence of such a paradox. Regardless of the parenting profile, high academic achievement and high educational attainment are always accompanied by high levels of psychological adjustment, and low academic achievement and low educational attainment are accompanied by low levels of psychological adjustment. The widely agreed-upon paradox may be operative when comparing Asian American adolescents to their non-Asian peers, but within the current sample of Chinese American adolescents, levels of achievement and adjustment are found to go hand in hand.

Tiger parenting, which owes its existence to the belief that "academic achievement reflects successful parenting" (Chua, 2011), ironically does not result in the best educational attainment or the best academic achievement; instead, it results in children experiencing a level of academic pressure that is as high as that associated with harsh parenting. It is actually supportive parenting, not tiger parenting, that is associated with the best developmental outcomes: low academic pressure, high GPA, high educational attainment,

low depressive symptoms, low parent-child alienation, and high family obligation. These results are to some extent consistent with the literature on the authoritative parenting style within European American samples (Steinberg, Elmen, & Mounts, 1989). Easygoing parenting is associated with similar or better developmental outcomes than tiger parenting, with the exception of Wave 1 family obligation for the adolescent-reported maternal parenting profiles. Harsh parenting is associated with similar or worse developmental outcomes than tiger parenting, which reflects findings in the literature on authoritarian parenting (Nguyen, 2008). These differences are consistent across parent and adolescent reports.

There are some limitations of this study. First, the sample is selected from an area with a dense Chinese American population. Students in the initial sample were recruited from schools with a sizable proportion (>20%) of Asians in the student population, which is four times higher than the 5.6% that the Asian population represents in the United States (Hoeffel, Rastogi, Kim, & Shahid, 2010). Because families function in the context of the larger community, and because tiger parenting is a culturally specific construct, other studies may not be able to replicate our results. Tiger parenting may not emerge in other areas of the U.S., where the Chinese American population is smaller, or it may emerge but not be associated with the same developmental outcomes as in the current study. Second, the current study, as one of the first attempts to investigate Asian American parenting profiles, uses a sample of only Chinese American families, the largest ethnic group of Asian Americans in the U.S. (Hoeffel, et al., 2010). It is not known whether the study findings are applicable to other Asian ethnic groups, who share similar collectivistic values that may also emphasize children's academic achievement as a way to bring honor to the family (B. S. Kim, Atkinson, & Yang, 1999). Third, due to the culturally specific measures used (e.g., shaming), the new parenting profiles created in the current study may not be applicable to non-Asian racial or ethnic groups, such as European Americans. This is because the mean values that represent the various parenting profiles within a Chinese American sample may not be similar to those of other groups, such as European Americans, who generally show higher mean values on parental warmth and lower mean values on parental control. In other words, it may be that the parents identified as supportive in the current study would no longer be identified as supportive if they were part of a sample that included European American families.

There are at least two future research directions to consider. First, the effect of parenting practices may depend on the child's own characteristics. Chua's (2011) book shows that tiger parenting may not result in the same developmental outcomes in different children, even when they are siblings with the same tiger parent. Studies that compare the developmental outcomes of siblings can be conducted in the future to see how each child's specific characteristics can affect the way tiger parenting and other parenting profiles relate to adolescent outcomes. Second, results of the current study suggest that the parenting practices that comprise parenting profiles are not permanent, but vary over time. It may be that parenting practices fluctuate on a daily basis. Future studies could use a daily diary approach to investigate the changes in parenting practices and their relation to adolescents' developmental outcomes in a short-term intensive longitudinal study.

This study represents an initial effort at documenting and evaluating tiger parenting, which is oftentimes perceived by the public as distinctively Chinese or Asian American way of parenting. As controversial as tiger parenting has been, it is relatively understudied. The current study suggests that tiger parenting does exist in Chinese American families, but it is not the most common parenting profile, nor is it associated with optimal developmental outcomes in adolescents.

Acknowledgments

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Figure 1a.
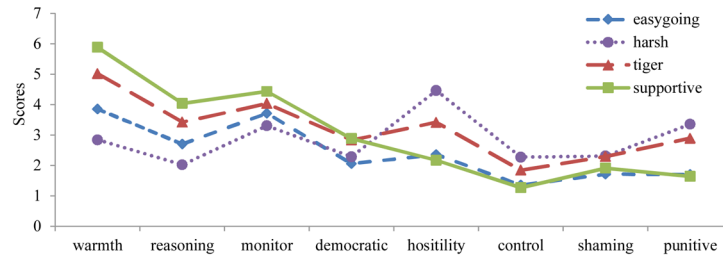
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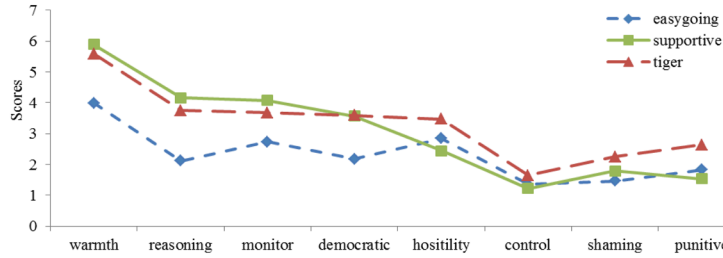
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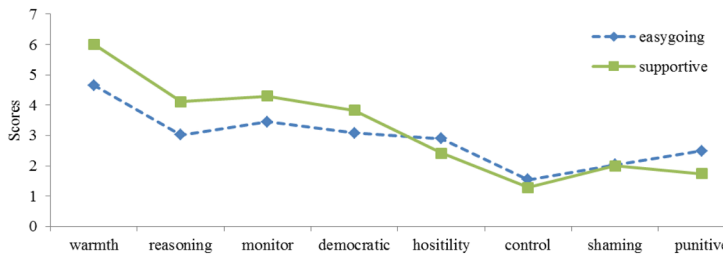
Figure 1.
Figure 1a. Four Parenting Profiles Estimated from Adolescents' Report of Maternal Parenting Practices at Wave 1
Figure 1b. Three Parenting Profiles Estimated from Mothers' Report of Maternal Parenting Practices at Wave 2.
Figure 1c. Two Parenting Profiles Estimated from Fathers' Report of Paternal Parenting Practices at Wave 1.

Table 1

Classification Estimation from Parenting Latent Profile Analyses

| | Classes | | | | |
| | 1 Supportive | 2 Tiger | 3 Easygoing | 4 Harsh | Total |
	N (%)	N (%)	N (%)	N (%)	
W1 Maternal Parenting (A)	199 (45.0%)	123 (27.8%)	86 (19.5%)	34 (7.7%)	442
W2 Maternal Parenting (A)	139 (40.3%)	66 (19.1%)	97 (28.1%)	43 (12.5%)	345
W3 Maternal Parenting (A)	136 (42.4%)	59 (18.4%)	109 (34.0%)	17 (5.3%)	321
W1 Paternal Parenting (A)	272 (63.4%)	80 (18.6%)	77 (17.9%)	–	429
W2 Paternal Parenting (A)	131 (39.8%)	91 (27.7%)	77 (23.4%)	30 (9.1%)	329
W3 Paternal Parenting (A)	179 (58.3%)	85 (27.7%)	43 (14.0%)	–	307
W1 Maternal Parenting (M)	142 (34.8%)	55 (13.5%)	182 (44.6%)	29 (7.1%)	408
W2 Maternal Parenting (M)	239 (77.3%)	52 (16.8%)	18 (5.8%)	–	309
W3 Maternal Parenting (M)	210 (70.7%)	–	87 (29.3%)	–	297
W1 Paternal Parenting (F)	276 (72.4%)	–	105 (27.6%)	–	381
W2 Paternal Parenting (F)	208 (74.3%)	–	72 (25.7%)	–	280
W3 Paternal Parenting (F)	188 (69.6%)	52 (19.3%)	30 (11.1%)	–	270

Note: W = wave; A = adolescent report; M = mother report; F = father report; the sample sizes in Waves 1, 2, and 3 are 444, 350, and 330, respectively.

Table 2

Coefficients Estimates from Path Analyses on the Relationship between Parenting Profiles and Adolescent Adjustment

Outcome	Wave	Adolescent Report Maternal Parenting						Adolescent Report Paternal Parenting						Mother Report Maternal Parenting						Father Report Paternal Parenting		
		E	R_S T	R_S H	R_E T	R_E H	R_T H	E	R_S T	R_S H	R_E T	R_E H	R_T H	E	R_S T	R_S H	R_E T	R_E H	R_T H	E	R_S T	R_E T
GPA Attainment	w1	-.06	-.18***	-.04	-.11	.00	.07	-.05	-.10		-.05			-.07	-.15**	-.08	-.10	-.04	.04	-.13**		
	w2	-.13	-.25***	-.13	-.13	-.04	.08	-.17**	-.28***	-.06	-.09	.05	.11	.03	-.07		-.12			.06		
	w3	-.15	-.15	-.24***	-.02	-.17**	-.16	-.11	-.19**		-.05			-.14						-.09	-.18**	-.07
Academic Pressure (A)	w1	.11	.30***	.24***	.17**	.16**	.06	.02	.27***		.26***			.08	.16**	.12	.11	.08	.00	-.03		
	w2	.16**	.33***	.26***	.19**	.14	-.02	.13	.16**	.21***	.03	.12	.10	.02	.03		.00			-.13		
Depressive Symptoms (A)	w1	.24***	.30***	.30***	.03	.14**	.12	.13**	.28***		.15			.13	.18**	.16**	.09	.09	.03	.01		
	w2	.12	.25***	.40***	.15	.31***	.19**	.20***	.22***	.25***	.00	.11	.11	.01	.04		.03			-.00		
	w3	.13	.35***	.21***	.24***	.15**	.01	.05	.27***		.20			.08						-.03	.19**	.22
Depressive Symptoms (P)	w1	.13	.18**	.13**	.03	.04	.03	.07	.12		.04			.26***	.29***	.33***	.11	.19***	.11	.24***		
	w2	.09	.12	.14	.04	.08	.04	.13	.08	.18**	-.05	.09	.13	.14	.13		-.09			.15		
	w3	.11	.26***	.24***	.17**	.19**	.09	.08	.21**		.11			.21***						.08	.29***	.18
Alienation (A)	w1	.31***	.43***	.46***	.08	.25***	.20***	.16***	.46***		.30***			.09	.18**	.18**	.12	.13	.05	.04		
	w2	.30***	.33***	.51***	.07	.29***	.23***	.26***	.26***	.43***	-.01	.26***	.27***	.07	.12		.00			-.05		
	w3	.33***	.37***	.47***	.10	.31***	.26***	.29***	.45***		.08			.16**						.04	.20**	.14
Alienation (P)	w1	.03	.07	.08	.04	.06	.03	.11	.04		-.07			.28***	.35***	.27***	.16**	.13**	.01	.29***		
	w2	.07	.16	.17**	.09	.12	.04	.07	.14	.25***	.07	.21**	.16	.23***	.22***		-.15			.22***		
	w3	.22***	.21***	.19***	.04	.09	.07	.11	.24***		.10			.31***						.23***	.41***	.12
Family Obligation (A)	w1	-.32***	-.18**	-.38***	.18**	-.17**	-.28***	-.30***	-.27***		.04			-.10	-.07	-.14**	.00	-.09	-.09	-.08		
	w2	-.24***	-.10	-.41***	.11	-.23***	-.32***	-.26***	-.11	-.28***	.16	-.11	-.21***	-.04	-.03		.03			-.16**		
	w3	-.20***	-.13	-.23***	.03	-.13	-.15	-.19**	-.20***		.05			-.01						-.11	-.05	.08

Notes: R_S = supportive parenting as the reference group, R_E = easygoing parenting as the reference group, R_T = tiger parenting as the reference group; E = easygoing, T = tiger, H = harsh; A = adolescent report, P = parent report; the significance level of group differences was adjusted using Bonferroni Correction in order to reduce Type I error from multiple comparisons among groups. $p < .0083$; blank cells indicate the particular parenting profile did not emerge.

** $p < .0083$.

*** $p < .001$.