

# Model Minority of a Different Kind? Academic Competence and Behavioral Health of Chinese Children Adopted Into White American Families

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Asian American students' favorable academic achievement has mainly and frequently been attributed to their family cultural values. Children who immigrated to the United States as infants or toddlers through international adoption and are subsequently growing up in White families are a unique group of American children of Chinese heritage. In this article, 4 studies were used to determine how the lack of exposure to Asian family cultural values might affect adopted Chinese children's academic outcomes and behavioral health. Study 1 compared 180 adopted Chinese youth with 153 U.S.-born peers on self-reported school adjustment and behavioral health. Study 2 examined 224 adopted Chinese youth's self-reported academic competence and global self-esteem. Study 3 reported teachers' judgment on 71 adopted Chinese youth's academic competence and parents' ratings on the same 71 youth's behavioral problems. Study 4 compared 40 mothers' reports of behavioral problems in their biological children and adoptive Chinese children. All adopted children were girls, as the vast majority of children adopted from China are girls. Results from the 4 studies showed that despite lacking the Asian family cultural background, the adopted Chinese children had favorable academic and behavioral health status, which resembled what has been demonstrated by Asian American students.

## *What is the public significance of this article?*

Favorable academic achievement of Asian American children has mainly and frequently been attributed to parenting practices shaped by Asian family cultural values. Chinese children adopted into White American families represent a unique case of separation between race and family culture. Reports from adoptees, adoptive parents, and teachers converged on the finding that Chinese adoptees had similarly favorable academic outcomes and behavioral health status, despite lacking the Asian family cultural background.

*Keywords:* model minority, adoption, Chinese American children, academic performance, behavioral health

Asian American students have been documented to academically outperform their White counterparts, as well as their peers from other minority groups (Hsin & Xie, 2014; Kao & Thompson, 2003; Peng & Wright, 1994; Wing, 2007; Wong, 1990). Their favorable academic profile has been reflected in test scores, grades, achievement motivation, educational attitudes, and educational beliefs and aspirations (Eaton & Dembo, 1997; Huang & Waxman, 1995; Linnehan, 2001).

The most common and frequent explanation for good academic outcomes of Asian American children is Asian family cultural values. Family cultural values have been shown to drive parenting

behaviors and practices (Darling & Steinberg, 1993). One key dimension of the Asian American family cultural values is the top priority of children's educational achievement (Kim, Atkinson, & Umemoto, 2001). Asian American family's emphasis on educational achievement is linked to various types of parenting practices aimed to help their children succeed academically. These practices frequently include strict parenting style, high parental educational expectations, and heavy educational investment. In terms of parenting style, Asian American parents exercise more authoritarian parenting and parental control than White American parents (Chao, 1996; Lin & Fu, 1990). In terms of parental expectations, Asian American parents place higher expectations on educational achievement than White American families and other minority families (Aldous, 2006; Chao, 2001; Kao, 1995; Okagaki & Frensch, 1998; Pearce, 2006; Schneider, & Lee, 1990; Tran & Birman, 2010; Wong & Halgin, 2006; Yamamoto & Holloway, 2010). According to Goyette and Xie (1999) and Kao (1995), Asian American family cultural and behavioral practices contribute to Asian American students' higher academic performance more so than higher parental education. Schneider and Lee (1990)

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argued that although high expectations from parents, teachers, and peers all contribute to Asian American students' higher academic performance, parental expectations were "extremely powerful" (p. 374). High educational expectations often drive Asian American families to invest more heavily in their children's education than White families and other minority American families do (Goyette & Xie, 1999; Kao, 1995; Sun, 1998; Zhou & Lee, 2017).

Implicit in this explanation is the overall notion that these practices lead Asian American children to internalize their family cultural values and translate them into educational aspirations, academic behaviors, and academic attitudes and beliefs that are conducive to higher performance (Asakawa, 2001; Lee & Ying, 2000). Although the family cultural value explanation has been supported by many studies and makes intuitive sense, another body of literature has recently emerged, calling for a closer investigation of and possible alternative narrative to the critical significance of parenting practices shaped by Asian American family cultural values in Asian American students' favorable academic achievement. Specifically, in America today, there is a large number of China-born children growing up in families where both parents are White. They are a unique group of first-generation Americans, most of whom are girls born in impoverished Chinese families that could not take care of them and subsequently relinquished them to institutional care (Johnson, Banghan, & Wang, 1998). They immigrated to the United States through international adoption when most of them were infants or toddlers and are growing up exposed to parenting practices shaped by White American family cultural values.

Comparing with Asian American families, White American families that have adopted Chinese children differ fundamentally in family cultural values. Typically speaking, because White adoptive parents are outsiders to the Chinese culture and hold individualistic cultural beliefs, the adoptive families likely resemble typical middle-class White American families in parenting, educational expectations, and educational investment. Indeed, White adoptive parents of Chinese children have been shown to be highly authoritative in parenting (Tan, Camras, Deng, Zhang, & Lu, 2012). They were primarily concerned about ensuring that their adopted children recover from orphanage deprivation and catch-up developmentally (rather than academic achievement), especially in early childhood (Tan, 2010). Inevitably, the adopted Chinese children are socialized to some cultural norms and beliefs that are incongruent with Asian family cultural values that many Asian American children adhere to (e.g., filial piety and family obligations).

As such, the Asian family cultural value explanation that has been proposed as the main reason for Asian American students' favorable academic outcomes does not really apply to the adopted Chinese children. Consequently, it would be reasonable to hypothesize that adopted Chinese children would not outperform their White or minority counterparts academically, which nonadopted Chinese American students have demonstrated.

However, a competing hypothesis has actually been supported by research on adopted Chinese children's academic performance and behavioral health. Specifically, converging evidence has shown that adopted Chinese children are a "positive outlier" in comparison with nonadopted children in terms of academic performance (Dalen & Rygvold, 2006; Tan & Camras, 2011) and in comparison with children adopted from other backgrounds in

terms of behavioral health (Hawk & McCall, 2010). Studies from the United States and Norway have demonstrated that unlike other adoptees, Chinese adoptees resemble nonadopted students in academic performance and behavioral health. For instance, in a large study on teachers' ratings of 610 K-grade to 12th-grade adopted Chinese children's academic performance and social competence in school, Tan and Camras (2011) found that the adopted Chinese children scored higher than their classmates on academic performance and were on par or better than the U.S. norms on social competence. In Norway, Dalen and Rygvold (2006) compared the academic achievement of 77 adopted Chinese children with 77 Norwegian-born classmates who were matched on gender, age, and geographic location. The children were between 7 and 13 years of age ( $M = 8.65$ ,  $SD = 1.55$ ) and had spent 2 to 53 months in orphanages in China before adoption ( $M = 6.88$  months,  $SD = 9.23$ ). There was no group difference in teachers' ratings on academic performance, daily language ability, academic language ability, behavioral health, school behaviors, or prosocial behaviors. However, it should be noted that the literature is generally lacking on self-reported academic competence and behavioral health among children adopted from China. The adopted Chinese children's favorable outcomes are even more remarkable when considering the overwhelming evidence that poor academic competence and poor behavioral health outcomes have been frequently reported for children adopted domestically and from most other countries (Juffer & van IJzendoorn, 2005; van IJzendoorn, Juffer, & Poelhuis, 2005).

### Purpose of the Current Article

To comprehensively evaluate adopted Chinese children's outcomes in the absence of Chinese cultural upbringing, results from four studies guided by different questions and that used different designs were reported in this article. All studies were approved by the author's university's institutional review board (IRB). Study 1 (IRB: PRO0026088) compared self-reported school adjustment and behavioral health between 180 adopted Chinese youth and 153 nonadopted America-born peers. Study 2 (IRB: PRO0000207) investigated 224 adopted Chinese youth's self-reported academic performance and global self-esteem. Study 3 (IRB: PRO0000207) focused on 71 adopted Chinese youth's behavioral health as reported by adoptive parents and academic competence as reported by teachers. Study 4 (IRB: PRO0000207) compared mothers' ratings on the behavioral health of 40 adopted Chinese children and 40 of their biological children.

To reduce possible social desirability bias from relying solely on self-reports, additional data sources that complemented one another (nonadopted peers, parents, and teachers) were included. To obtain a clearer profile of the adopted Chinese children's academic and behavioral status, they were compared with nonadopted peers, nonadopted siblings, and classmates. Finally, related but somewhat different constructs of academic outcomes (school adjustment and academic competence) and behavioral health (mental disorders, global self-esteem, and behavioral adjustment) were investigated across the four studies. Because the vast majority of children who were adopted from China are girls, this article is focused on girls. Note that the decision to go beyond academic outcome to include behavioral health was informed by some studies showing that the pressure for excellence and to meet parents' high educational

expectations increased the mental health risk for Asian American youth (Qin, Way, & Mukherjee, 2008; Sue, Sue, Sue, & Takeuchi, 1995), whereas other studies showing that Asian students' good academic performance served as a protective factor for behavioral health (Thompson & Kiang, 2010; Whaley & Noel, 2013).

### Study 1: Adopted and Nonadopted Youth's School Adjustment and Behavioral Health

#### Method

**Participants.** Study 1 included a group of 180 adopted Chinese youth and a comparison group of 153 nonadopted American youth ( $N = 333$ ). The adopted youth were from a longitudinal study on their development. To meet the selection criterion for the current study, the youth needed to be 12 to 21 years old (as the key measure was designed for this age-group). The parents of the eligible children (about 600) were contacted via e-mail first to inquire if they would be interested in having their children participate in the study. Upon receiving a positive response, a personalized survey link hosted by Qualtrics was e-mailed to the parent if the eligible participant was <18 years of age. The parent was then asked to forward the link to the child. If the participant was 18 years or older, the personalized link was e-mailed to the parent, or if the parent had responded with the child's e-mail, the link was sent to the adoptee directly. In total, 400 surveys were requested and 264 adoptees completed or partially completed the survey, yielding a response rate of 66%. For the current analysis, eight adoptees who graduated from high school (but not attending college) and 68 who entered colleges and universities were excluded. In addition, eight adoptees were excluded from data analysis for missing key data. This resulted in a sample of 180 adopted Chinese girls in Grades 6 to 12. These youths lived in 38 states and Washington DC and attended 169 different schools.

The nonadopted comparison group included 153 girls in Grades 6 to 12, including 67 (43.8%) Whites, 38 (24.6%) Hispanics, 30 (19.6%) Blacks, two (1.3%) Asians, and 16 (10.5%) self-identified as Native American, mixed, multiracial/biracial and other. They were recruited from 34 public and private schools in a southeastern state of the United States that is ranked among the top five states that had adopted the largest number of children from China. During participant recruitment, close attention was paid to ensure that targeted schools were located in communities that varied widely in socioeconomic status (SES) and racial diversity. Information about the study was distributed to the students with the cooperation of the teachers. Students were given information about the study, along with the informed consent form for their parents to sign if they were interested in participating in the study. Upon receiving parental consent and student assent (for those <18 years) or students' consent (for those who were  $\geq 18$  years), data were collected individually at the participant's school. Similar to the adopted youth, a survey link hosted by Qualtrics was used to gather data. Note that in some incidences, a backup paper-and-pencil survey had to be used instead due to Internet connection issues on the participants' campus.

**Measures.** The participant first responded to demographic questions on date of birth (which was used together with the date of data collection to calculate her age) and ethnicity (only for nonadopted participants. They filled out how they ethnically iden-

tified themselves). Then, they provided data in the areas mentioned next.

**Self-report of personality.** The adolescent form of the Self-Report of Personality (SRP) of the third edition of the Behavior Assessment System for Children (Reynolds & Kamphaus, 2016) was used to gather data on self-reported behavioral health. It was designed for those aged 12 to 21 years. It has 189 items that are either true/false or measured on a 4-point Likert scale (*never, sometimes, often, and almost always*). Based on the third edition of the Behavior Assessment System for Children manual, depending on the wording (i.e., negative or positive), a 0 or 2 point is assigned to true/false items, whereas a 0, 1, 2, or 3 point is assigned to Likert scale items. The SRP gathers data in four broad domains, which are described next.

**School adjustment problems.** This scale is the sum of three subscales: Negative Attitude Toward School, Negative Attitude Toward Teachers, and Sensation-Seeking. The *Negative Attitude Toward School* subscale has eight items (e.g., I hate school). Positively worded items are reverse-scored so that a higher sum indicates more negative attitude. The *Negative Attitude Toward Teachers* subscale includes nine items (e.g., Teachers are unfair). Positively worded items are reverse-scored so that a higher sum indicates more negative attitude. Finally, the *Sensation-Seeking* subscale has nine items (e.g., I like to take risks). A higher sum indicates more problems with sensation-seeking. In the current study, the internal consistency coefficients for the three subscales were .84, .85, and .84 for *Negative Attitude Toward School*, *Negative Attitude Toward Teachers*, and *Sensation-Seeking*, respectively. In data analysis, the sum of each subscale was used, with higher scores indicating more problematic behaviors. A higher score for the total of the summary scale of School Adjustment Problems indicates more problems at school.

**Internalizing problems.** This scale is the sum of seven subscales: Atypicality, Locus of Control, Social Stress, Anxiety, Depression, Sense of Inadequacy, and Somatization. The *Atypicality* subscale includes 10 items (e.g., I feel like people are out to get me). The *Locus of Control* subscale includes eight items (e.g., My parents expect too much from me). The *Social Stress* subscale includes 11 items (e.g., People say bad things to me). The *Anxiety* subscale consists of 13 items (e.g., Little things bother me). The *Depression* subscale consists of 12 items (e.g., I used to be happier). The *Sense of Inadequacy* subscale includes 12 items (e.g., I never seem to get anything right). Finally, the *Somatization* subscale includes seven items (e.g., Often I feel sick in my stomach). In the current sample, the internal consistency for the seven subscales ranged from .78 (*Somatization*) to .91 (*Atypicality*). In data analysis, the sum of each scale was used, with higher scores indicating more problematic behaviors. A higher total score for the summary scale Internalizing Problems indicates more problems.

**Attention-deficit/hyperactivity disorder.** This scale is the sum of two subscales: Inattention and Hyperactivity. The *Inattention* subscale comprised eight items (e.g., I have trouble paying attention to the teachers). The *Hyperactivity* subscale comprised eight items (e.g., I have trouble standing still in line). The internal consistency for the two subscales was .87 and .82, respectively. In data analysis, the sum of the items was used, with a higher total score indicating more attention-deficit/hyperactivity disorder symptoms.

**Prosocial adjustment.** The scale is the sum of four subscales: Relations With Parents, Interpersonal Relations, Self-Esteem, and Self-Reliance. The *Relations With Parents* subscale has 11 items (e.g., My parents listen to what I say). The *Interpersonal Relations* subscale describes peer relations. It has 15 items (e.g., I am liked by others). Negatively worded items are reverse-scored so that a higher sum indicated more positive peer relations. The *Self-Esteem* subscale has seven items (e.g., I am happy with who I am). Finally, the *Self-Reliance* subscale includes nine items (e.g., I am someone you can rely on). In the current sample, the internal consistency coefficients for the four subscales were .92, .84, .88, and .80, respectively. Different from the other three scales, a higher total score in Prosocial Adjustment indicates better behavioral health.

**Mental disorder diagnosis and health service.** The participants were asked if they have been diagnosed by a professional (e.g., psychiatrist) to have a list of 13 different mental disorders or problems (No = 0 and Yes = 1). These disorders included mood disorder (i.e., depression), anxiety disorder (i.e., panic disorder, phobia, generalized anxiety, posttraumatic stress disorder, attachment disorder, and eating disorder), and developmental/behavioral disorders (i.e., attention-deficit disorder/attention-deficit/hyperactivity disorder, oppositional defiant disorder, obsessive-compulsive disorder, conduct disorder, and self-injury), and drug/alcohol addiction, plus three open-ended questions for the participants to list other disorders. Because treatment might have an impact on the functioning of children with mental health problems, the participants were asked if they were (No = 0 and Yes = 1) currently taking medication for physical illness, if they were currently taking medication for mental health problems, and if they were receiving counseling or psychotherapy for mental health problems.

## Results

The 180 adopted Chinese youth were 10.6 to 23.8 years old ( $M = 14.9$ ,  $SD = 2.1$ ); the 153 nonadopted youth were 11.9 to 21.2 years old ( $M = 15.5$ ,  $SD = 2.2$ ). The adopted Chinese youth were somewhat younger than the nonadopted youth ( $df = 330$ ,  $t = 2.45$ ,  $p < .05$ ). The adopted Chinese youth were adopted at 18.8 months, on average ( $SD = 20.9$ ). In other words, on average, the adoptees lived in China for about 1.5 years before arriving in the United States.

**School adjustment and behavioral health.** Table 1 summarizes the means ( $SD$ s) of the SRP measures for the adopted and nonadopted youth. Overall, the adopted youth scored more favorably (i.e., either lower scores on problem scales or higher scores on adaptation scales) than nonadopted youth on all four summary scales and 14 of the 16 subscales. This finding remained after age of the youth was controlled for. Subsequent separate comparisons of the adopted Chinese youth against White youth, Black youth, and Hispanic youth from the nonadopted youth group yielded similar results.

**Mental disorders and treatments.** As shown in Table 2, the two groups were not different in the rates of mental disorder diagnoses and treatments for physical and mental health problems. Among the adopted youth, 9.3% were receiving counseling/psychotherapy, 6.4% were taking medication for mental disorders, and 8.7% were taking medication for physical illness. The corresponding rates for the nonadopted youth were 8.5%, 5.3%, and 12.4%, respectively. The group differences were not statistically significant. Subsequent separate comparison of the adopted Chinese youth with White youth, Black youth, and Hispanic youth in the nonadopted youth group similarly revealed no group difference.

Table 1  
Study 1: Summary of *T* Test Results of Self-Report of Personality Measures for Adopted and Nonadopted Youth ( $N = 333$ )

BASC	Adopted youth	Nonadopted youth	<i>T</i> test	Cohen's <i>d</i>
<i>N</i>	180	153		
School Adjustment Problems	17.5 (8.4)	25.4 (11.6)	7.2***	0.79
Negative attitude to school	5.8 (4.3)	8.2 (4.8)	4.7***	0.52
Negative attitude to teachers	3.8 (3.4)	7.3 (5.1)	7.4***	0.82
Sensation-seeking	7.9 (4.3)	10.0 (5.8)	3.7***	0.41
Internalizing Problems	34.7 (23.0)	51.0 (28.6)	5.7***	0.63
Atypical behaviors	3.6 (3.4)	5.8 (4.9)	4.7***	0.52
Poor locus of control	3.2 (3.1)	6.0 (4.7)	6.4***	0.70
Social stress	6.4 (4.7)	8.2 (5.6)	3.1**	0.34
Depression	5.3 (5.4)	8.1 (7.1)	4.1***	0.45
Anxiety	12.5 (6.7)	16.2 (8.2)	4.4***	0.49
Inadequacy	7.1 (5.0)	9.6 (5.9)	4.0***	0.46
Somatization	1.7 (2.2)	3.7 (3.6)	6.3***	0.69
Attention-Deficit/Hyperactivity Disorder	12.7 (7.5)	16.0 (9.1)	3.6***	0.39
Attention problems	5.2 (4.3)	9.0 (5.3)	5.3***	0.58
Hyperactivity	6.5 (4.0)	7.0 (4.9)	.87	0.10
Personal Adjustment	76.0 (14.5)	68.5 (15.9)	4.5***	-0.50
Relationship quality with parents	24.8 (5.0)	20.3 (7.3)	6.6***	-0.73
Interpersonal relations	19.4 (4.2)	18.2 (4.6)	2.5*	-0.28
Self-esteem	13.2 (4.5)	12.1 (4.7)	2.3*	-0.25
Self-reliance	18.7 (4.4)	17.9 (4.5)	1.7	-0.19

Note. BASC = Behavior Assessment System for Children. For School Problems, Internalizing Problems, and Attention-Deficit/Hyperactivity Disorder and their subscales, higher scores indicate poorer behavioral health; for Personal Adjustment scale and its subscales, higher scores indicate better behavioral health.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 2  
*Study 1: Mental Disorder Diagnoses in Adopted Chinese Youth and Nonadopted Youth*  
 (N = 325)

Mental disorder diagnosis	Adopted youth	Nonadopted youth	$\chi^2$
N	172	153	
Any mood and anxiety disorder	27 (15.7%)	32 (20.9%)	1.48
Generalized anxiety disorder	17 (9.9%)	22 (14.4%)	
Depression	15 (8.7%)	23 (15.0%)	
Attachment disorder	8 (4.7%)	2 (1.3%)	
Eating disorder	1 (0.6%)	3 (2.0%)	
Panic disorder	4 (2.3%)	2 (1.3%)	
Posttraumatic stress disorder	8 (4.7%)	1 (0.7%)	
Any behavioral disorder	18 (10.5%)	27 (17.7%)	3.50*
Attention-deficit disorder/attention-deficit/hyperactivity disorder	16 (9.3%)	19 (12.4%)	
Obsessive-compulsive disorder	4 (2.3%)	14 (9.2%)	
Self-injury	3 (1.7%)	7 (4.6%)	
Oppositional defiant disorder	2 (1.2%)	1 (0.7%)	
Drug/Alcohol addiction	0	0	
Medical and psychological treatment	32 (18.6%)	33 (21.5%)	0.44
Counseling/psychotherapy	16 (9.3%)	13 (8.5%)	
Medication for mental illness	11 (6.4%)	8 (5.3%)	
Medication for physical illness	15 (8.7%)	19 (12.4%)	

\*  $p < .10$ .

Attachment disorder and posttraumatic stress disorder appeared to be more common in the adopted youth, whereas obsessive-compulsive disorder seemed more common in the nonadopted youth. The occurrence was too few for any meaningful discussion, however. Subsequent comparisons between the adopted youth and nonadopted White youth, Black youth, and Hispanic youth yielded similar results.

## Study 2: Adopted Chinese Youth's Academic Performance and Global Self-Esteem

### Method

**Participants.** The participants were recruited from families that had adopted children from China. In recruiting adopted youth for the study, an e-mail was first sent to parents who had previously participated in a longitudinal study on the development of the adopted children. The parents were instructed to respond to the e-mail with basic information about number of children they had and each child's age. For families with children who were 11 years or older, the parents were asked if they would give consent for a child survey prepared for their children. The survey was requested for 385 adopted children in total. A personalized survey link was then sent to the parent, along with a request for the parent to pass the link along to the child. Overall, 234 of the 385 adoptees completed the surveys (about 61% response rate), including 224 girls and 10 boys. In data analysis, the 10 boys were excluded because most of them had special needs.

### Measures.

**Academic performance.** A five-item Academic Competence Scale adapted from the Social Skills Rating System teacher report (SSRS; Gresham & Elliott, 1990) was used to gather the adoptees' self-report on their overall academic performance, performance in math, performance in English/reading, achievement motivation, and intellectual ability on a 5-point Likert scale (1 = *lower 10%* of

*the class* and 5 = *highest 10%* of the class). To corroborate the adoptees' self-report, adoptive parents were asked to independently rate their children's performance in the same five areas and to explain the basis for their ratings. Overall, report cards and parent-teacher conferences were the major bases for parental ratings. Ratings from the adoptees and the parents were strongly correlated,  $r = .74$ ,  $p < .001$ , suggesting good validity in the adoptees' self-report. The internal consistency for the adoptees' self-ratings was .86.

**Global self-esteem.** The Rosenberg Self-Esteem Scale (Rosenberg, 1965) was used to gather data on the adoptees' global self-esteem. The Rosenberg Self-Esteem Scale is a widely used self-report measure on global self-esteem among youths. It has 10 items on a 4-point Likert scale (0 = *strongly disagree* and 3 = *strongly agree*). An example is "I am a person of worth." It yields a unidimensional score. Internal consistency for the current sample was .91. In data analysis, the sum score was used. Higher scores indicate higher self-esteem.

### Results

The 224 adopted youth were 11 to 21 years old ( $M = 13.6$  years,  $SD = 2.1$ ) and from 185 adoptive families (65.4% were headed by two parents). The adoptive mothers' average age was 54 years ( $SD = 5.5$ ). Nearly 60% of the adoptive mothers had at least a master's degree, and nearly 50% of the families reported an annual income of \$90,000 to \$150,000 or more. At the time of adoption, most adoptees (88%) were  $\leq 24$  months old ( $M = 17.4$ ,  $SD = 18.2$ ). They were adopted from 109 different orphanages in 19 Chinese provinces and municipalities. All but six girls (97.4%) lived in families where one or both parents were White.

**Academic performance.** The adopted youth's average academic competence was 4.0 ( $SD = .80$ ; 1 = *lowest 10%* of the class and 5 = *highest 10%* of the class). Overall, over 60% to 70% of the adopted Chinese youth self-reported that their academic per-

formance was about the top 20% of their classes, and about 30% to 40% of the adopted Chinese youth reported that they were among the highest 10% of their classes (Table 3). Their academic performance was not correlated with their age,  $r = -.10$ ,  $p = .12$ , adoptive mothers' education,  $r = .01$ ,  $p = .92$ , or household income,  $r = -.01$ ,  $p = .91$ .

**Global self-esteem.** The adopted Chinese youth's global self-esteem scores ranged from 0 to 30 ( $N = 216$ ;  $M = 22.5$ ,  $SD = 5.6$ ), and 9.3% of them scored within the range considered low global self-esteem (i.e., scores at 15 or lower), and 14.8% of them scored at the highest level (i.e., 30). Their global self-esteem was negatively correlated with their age,  $r = -.26$ ,  $p < .001$ , but was not correlated with the adoptive mothers' education level,  $r = -.05$ ,  $p = .51$ , or household income,  $r = .03$ ,  $p = .67$ . The adopted youth's global self-esteem scores were positively correlated with their academic performance scores,  $r = .34$ ,  $p < .001$ .

### Study 3: Adopted Chinese Youth's Behavioral Health and Academic Competence

#### Method

**Participants.** The third study focused on parents' and teachers' ratings of 71 adopted Chinese youth's academic performance and behavioral health. The adoptive mothers and teachers were a subsample from a larger longitudinal study on adopted Chinese children's postadoption development. The parents were identified based on the fact that they had children who were in Grades 6 to 12, and the teachers were identified because they provided ratings on these children's academic competence.

#### Measures.

**Academic competence.** The Academic Competence Scale from the Social Skills Rating System (Gresham & Elliott, 1990) was used to obtain teacher's judgment on the adopted youth's academic competence. Almost all of the teachers were non-Asian. The Academic Competence Scale includes nine items on the teacher's judgment of the child's academic or learning behaviors (e.g., performance in reading) as compared with other students in the same classroom using a 1 to 5 scale (1 = lowest 10% and 5 = highest 10%). For the current sample, the internal consistency was .93. For each of the adopted youth, the English and math teachers were asked to participate. For 34 of the 71 adopted youth, both teachers provided data and the remaining 37 adoptees only had data from one of the teachers. Because the ratings from two teachers were strongly correlated at .70 ( $p < .001$ ), the average of the two teachers' ratings was used to reflect the adopted youth's

academic competence. In data analysis, the average of the nine items was used, with a higher score indicating higher academic competence.

**Child Behavior Checklist.** The adoptive mothers first provided data on their age, ethnicity, educational levels, marital status, profession, and household income, as well as the adopted children's background (e.g., age at adoption). Then they filled out the 118-item Child Behavior Checklist for 6- to 18-year-olds (CBCL/6-18; Achenbach & Rescorla, 2001). The CBCL is a standardized parental rating of the youth's behavioral health. It asks parents to report the extent to which each of the behaviors (e.g., arguing a lot) applies to their child (0 = not true, 1 = somewhat/sometimes true, and 2 = very true or often true).

A Total Problems score for the child is obtained by adding the 1s and 2s. Two scale scores—Internalizing Problems (e.g., anxiety) and Externalizing Problems (e.g., rule breaking)—are obtained by adding scores of different syndromes. Each syndrome comprises a set of problems that tend to co-occur. The Internalizing Problems scale comprises three syndromes: *anxiety/depression* (13 items), *withdrawal* (eight items), and *somatic complaints* (11 items). The Externalizing Problems scale comprises two syndromes: *rule-breaking behavior* (17 items) and *aggression* (18 items). The internal consistency for this sample was .94 for Total Problems, .85 for Internalizing Problems, and .91 for Externalizing Problems. In data analysis, the recommendation by Achenbach and Rescorla (2001) was followed to use the standardized scores ( $t$  scores).  $T$  scores at 60 or higher are considered to be in the borderline clinical/clinical range.

#### Results

The 71 adopted Chinese youth were 11.2 to 18.0 years old ( $M = 13.0$ ,  $SD = 1.4$ ), with an average age of 23.5 months ( $SD = 29.4$ ) at the time of adoption. They lived in 64 families, 45 (90.3%) of which had two parents. The adoptive mothers were, on average, 53 years old ( $SD = 5.0$ ), and the adoptive fathers were, on average, 55 years old ( $SD = 6.5$ ). The adoptive mothers' educational levels ranged from some college (9, 14.1%) to 4-year college (26, 40.6%) to master's (19, 29.7%) to doctorate (10, 15.6%). The 45 adoptive fathers' education levels ranged from high school (1, 2.2%) to some college (5, 10.9%) to 4-year college (21, 45.7%) to master's (9, 19.6%) to doctorate (10, 21.7%). In terms of annual household income, 26.6% of the families made \$150,000 or more and no families made less than \$40,000. Not surprisingly, most parents held professional jobs (e.g., accountants, actuaries, bankers, busi-

Table 3  
Study 2: Adopted Chinese Youth's Self-Rating of Academic Competence Within Their Classes  
( $N = 221-222$ )

Academic competence	Self-ratings				
	Lowest 10%	Next lowest 20%	Middle 40%	Next highest 20%	Highest 10%
Overall academic performance	4 (1.8%)	2 (0.9%)	49 (22.2%)	72 (32.6%)	94 (42.5%)
Performance in reading	4 (1.8%)	13 (5.9%)	43 (19.4%)	69 (31.1%)	93 (41.9%)
Performance in math	7 (3.2%)	22 (9.9%)	56 (25.2%)	69 (31.1%)	68 (30.6%)
Overall motivation to succeed	4 (1.8%)	6 (2.7%)	50 (22.5%)	69 (31.1%)	93 (41.9%)
Intellectual functioning	4 (1.8%)	3 (1.4%)	66 (29.7%)	65 (29.3%)	84 (37.8%)

ness owners, computer analysts, computer programmers, engineers, financial analysts, lawyers, professors, and physicians).

**Academic competence.** Based on the teachers' judgment, the adopted Chinese youth's average academic performance score was 4.28 (*SD* = .63; range = 2.0–5), which would place them among the top 15% in their classes (an average of 4 corresponds to top 20% and an average of 5 corresponds to the highest 10%). Table 4 summarizes teachers' ratings of the adopted Chinese youth in comparison with their classmates in different aspects of their academic competence. It is particularly noteworthy that over 40% of the adopted Chinese youth were rated by their teachers to be among the highest 10% in their classes in overall academic performance, nearly 70% were rated to be among the highest 10% in overall motivation to succeed, about 75% were rated to be among the highest 10% in terms of parental encouragement to succeed, and nearly 80% were rated to be among the highest 10% in overall classroom behavior.

**Behavioral health.** Based on parent ratings, the adopted Chinese youth's average of CBCL Internalizing Problems, Externalizing Problems, and Total Problems was 50.8 (*SD* = 9.8), 47.7 (*SD* = 10.1), and 49.1 (*SD* = 10.6), respectively. These averages were very similar to the U.S. norm (*M* = 50, *SD* = 10). Based on the CBCL scoring manual, the rate of borderline clinical/clinical adjustment was 23.6% for Internalizing Problems, 13.9% for Externalizing Problems, and 20.8% for Total CBCL Problems. These rates were similar or lower than the U.S. norm. The correlation between teacher-rated academic competence and parent-rated behavioral health was rather modest: Academic performance's correlation coefficient was  $-.18$  ( $p = .11$ ) with CBCL Internalizing Problems,  $-.25$  ( $p < .05$ ) with CBCL Externalizing Problems, and  $-.28$  ( $p < .05$ ) with CBCL Total Problems.

### Study 4: Adoptive Mothers' Ratings of Adopted Chinese Children and Biological Children's Behavioral Health

#### Method

**Participants.** The fourth study focused on 40 adoptive families where the adoptive parents had biological children and then adopted children from China. All 40 families were headed by two White parents. They were selected because their biological children were living in the same household as the adopted children and

were within the age range of the key measure (i.e., the CBCL). For families that have more than one biological or adopted child, the children who were closest in age were identified. Therefore, one biological child and one adopted child from each family were included in the analysis.

**Measures.** For each sibling pair, the adoptive mother completed the CBCL for both children. Depending on the age of the child, the mother either completed the CBCL for preschool children or CBCL for school-age children. As described earlier, the CBCL yields an Internalizing Problems scale, an Externalizing Problems scale, and a Total Problems scale. To minimize the potential effect of age and gender difference between adopted children and the biological children, standardized scores (*t* scores) were used in data analysis.

#### Results

Of the 40 adopted–biological pairs, the biological children included 23 boys and 17 girls, whereas the adopted children included 37 girls and 3 boys. The average age of the biological children was 7.7 years (*SD* = 3.3), and the average age of the adopted children was 3.7 years (*SD* = 2.0). Their average age at adoption was 1.1 years (*SD* = .64). The adoptive families had high SES, as demonstrated by high educational level (e.g., 50% of the mothers and 47.5% of the fathers had a graduate-level education) and an average household income of about \$110,000.

*T* tests were performed to compare the perceptions of the mothers to their biological children and adopted children's behavioral health measured with the CBCL. The results showed that the two groups did not differ on Internalizing Problems (biological children: *M* = 47.1, *SD* = 8.9; adopted children: *M* = 44.1, *SD* = 9.1),  $t(df = 78) = 1.45, p = .15$ . The two groups did not differ on either Externalizing Problems (biological children: *M* = 45.2, *SD* = 9.3; adopted children: *M* = 44.6, *SD* = 10.8),  $t(df = 78) = .30, p = .77$ , or Total Problems (biological children: *M* = 45.9, *SD* = 9.3; adopted children: *M* = 44.9, *SD* = 9.5),  $t(df = 78) = .45, p = .65$ . These results suggest that the adoptive parents did not perceive the adopted children differently from their biological children in behavioral health. Finally, the mothers' ratings of their biological children's CBCL scores were not at all correlated with their ratings of their adopted children's CBCL scores.

Table 4  
Study 3: Teachers' Ratings of Adopted Chinese Youth's Academic Competence in Comparison With Their Classmates (*N* = 71)

Academic competence	Teachers' ratings				
	Lowest 10%	Next lowest 20%	Middle 40%	Next highest 20%	Highest 10%
Overall academic performance	1 (1.4%)	3 (4.2%)	10 (14.1%)	28 (39.4%)	29 (40.9%)
Performance in reading	1 (1.4%)	3 (4.2%)	11 (15.5%)	34 (47.9%)	22 (31.0%)
Performance in math	1 (1.4%)	4 (5.6%)	15 (21.1%)	26 (36.6%)	25 (35.2%)
Grade-level expectations in reading	1 (1.4%)	5 (7.0%)	10 (14.1%)	27 (38.0%)	28 (39.4%)
Grade-level expectations in math	1 (1.4%)	6 (8.5%)	11 (15.5%)	23 (32.4%)	30 (42.3%)
Overall motivation to succeed	0	0	6 (8.5%)	16 (22.5%)	49 (69.0%)
Parental encouragement to succeed	0	0	0	18 (25.3%)	53 (74.7%)
Intellectual functioning	1 (1.4%)	0	10 (13.9%)	31 (43.7%)	29 (40.9%)
Overall classroom behavior	1 (1.4%)	0	3 (4.2%)	11 (15.5%)	56 (78.9%)

## Conclusion

Collectively, findings from the four studies showed that based on self-reports, the adopted Chinese youth had fewer school problems and more favorable behavioral health status than nonadopted peers, as well as favorable academic performance and global self-esteem. Similarly, teacher reports showed that adopted Chinese youth outperformed their classmates on academic competence. Finally, parent reports showed that the adopted Chinese children did not differ from the norm or adoptive parents' biological children in behavioral health. These results suggest that overall the adopted Chinese children demonstrated favorable academic outcomes and behavioral health status, despite lacking an Asian American family cultural background.

## Discussion

Due to the favorable academic achievement in comparison with other ethnic minority American students, Asian American students have been regarded as a "model minority." The current article took advantage of a unique situation involving Chinese children adopted and raised by White parents to disentangle the complexity of a reported relationship between Asian family cultural values and Chinese children's good academic outcomes and behavioral health. The adopted Chinese children in the four studies have been raised by White American parents since infancy or toddlerhood following their immigration to the United States via international adoption. Specifically, data on academic outcomes and behavioral health of adopted Chinese children were analyzed to further understand the role of Asian family cultural values in Asian American children's good academic competence and behavioral health.

Findings from the four studies challenge the long-held belief that Asian American family cultural values are the main cause of Asian American students' favorable academic outcomes. Specifically, despite the absence of the key ingredients that underlie the "model minority" phenomenon, the adopted Chinese children demonstrated an academic and behavioral profile akin to the "model minority" stereotype. Results reported in this article also showed that more favorable academic outcomes were correlated with more favorable behavioral health outcomes. Findings reported in this article are not unique. Almost all existing studies on adopted Chinese children's development have in fact shown that within the population of adopted children, Chinese children outperform domestic adoptees and other international adoptees in behavioral health (see the review by Hawk & McCall, 2010) and academic performance (Dalen & Rygvold, 2006). Phenotypically speaking, there is an apparent overlap between the current studies on adopted Chinese children and existing studies on Chinese American children, and therefore, it may be tempting to conclude that the reported good outcomes are due to the characteristics inherent to children of Chinese ancestry. More meaningful and plausible explanations may lie in the possibility that the model minority stereotype might have impacted the educational experiences of the adopted Chinese children, as well as adoption-specific mechanisms that might have ensured that the most promising orphanage children be placed into highly motivated families.

First, as the notion of Asian Americans being "model minority" becoming more entrenched in discussions on minority education and academic achievement, this stereotype has been endorsed by some teachers (Chang & Demyan, 2007; Wong, 1980) and inter-

nalized by some Asian American students themselves (Cheng & Liu, 2017). Several recent studies have found that internalization of the model minority-achievement orientation was positively correlated with Asian American youth's grade point average (Yoo, Miller, & Yip, 2015), and a stronger endorsement of the model minority stereotype was associated with higher academic competence and self-efficacy among Asian American students (Kiang, Witkow, & Thompson, 2016; Schneider & Lee, 1990). Therefore, it may be possible that internalization of the model minority myth by the adopted Chinese children and stereotyped perceptions of their teachers on Chinese American students (e.g., smart, hard-working, and complacent) might have played a role in the ratings of their academic performance and behaviors. Although no research has investigated whether White adoptive parents apply the model minority stereotype in perceiving their children, there is research suggesting that White Americans perceive Asian Americans to be more prepared for college, to be more motivated, and to have higher expectations for career success (Wong, Lai, Nagasawa, & Lin, 1998). It is therefore possible that the adoptive parents might use the model minority stereotype as well. It was beyond the scope of the design of the four studies included in this article to directly test specific links between the internalized model minority myth or the internalized model minority stereotype and perceived or actual favorable academic performance. To do so, direct assessment of the internalized model minority myth among adopted youth and the internalized model minority stereotype among their teachers would be needed.

Second, the adopted Chinese children's favorable outcomes may be related to their relatively young ages at adoption and adoptive family's high SES status (Tan & Marfo, 2006). Because most of the Chinese children were infants or toddlers at the time of adoption, they had an adequate amount of time to catch up in language development before starting school, as on average, the adopted Chinese children's English language skills become comparable with their age peers at about 18 months after arrival (Tan & Yang, 2005). The high SES of adoptive families does not seem to explain the favorable outcomes alone, as children adopted from other countries and regions by similarly high-SES families usually have more adjustment problems and perform more poorly in academic performance than nonadopted children (Hawk & McCall, 2010; van IJzendoorn et al., 2005). Nonetheless, the high-SES family environment likely facilitated the rapid recovery of adopted Chinese children from early deprivation and postadoption developmental catch-up, making it possible for them to start school with adequate language, cognitive, and social skills.

Third, two processes of "hyperselectivity" that occur within China might offer some insights. The processes resemble the hyperselectivity used by the United States to screen potential incoming immigrants, as described by Zhou and Lee (2017). Specifically, because only a selected group of children could be placed for international adoption out of a much larger pool of orphanage children, there likely was a screening process to determine who should be selected. It is likely that the selected ones were those deemed by the authorities to best represent China. The selection process might have succeeded in identifying and placing children with stronger cognitive and social-emotional potentials who subsequently thrived in an enriched environment. The other process is that China is hyperselective about who are qualified to adopt Chinese children. The qualifications go well beyond typical



background clearance, education, and employment to include being at least 40 years older than the child, owning home and property, proof of good physical and mental health, and being married for at least 5 years (China Center for Children's Welfare & Adoption, 2017). The two selection mechanisms seemed to have succeeded in identifying young children who would benefit maximally from adoption and finding parents who are highly prepared to raise children with institutional experiences.

### Future Directions

Overall, the current article represents a different approach to study the model minority phenomenon. To gain a deeper understanding of Asian American students' academic achievement, future research may need to use innovative methodologies to investigate how phenotype, family cultural values, parental educational expectations, parenting practices, and societal expectations dynamically shape their development. For instance, studies (even very small-scale case studies) on the academic outcomes of non-Asian children adopted by Asian parents would likely yield highly valuable insights into the interplay between race and family culture in children's social and academic development in America. Insights might be also gained from studying Asian American students who struggle academically despite high parental expectations, heavy educational investment, and internalization of the model minority stereotype.

### Limitation

Although this article has the strength of using a novel design to further examine the model minority phenomenon, there are three limitations. First, because this article focused on girls, findings may not apply to adopted Chinese boys. Second, the adopted Chinese youth in Study 1 lived in many different states, whereas the comparison group was from one state. In Study 4, the age and gender difference between the adopted children and biological children was a limitation and an inherent problem with this type of design. Third and finally, even though different informants provided data and different measures were used to assess academic and behavioral outcomes, the four studies relied on volunteers. As such, the findings may not represent those who were not included in the studies. These limitations should be kept in mind when interpreting the results.

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