Cultural Adaptation, Parenting and Child Mental Health Among English Speaking Asian American Immigrant Families

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Abstract

Contrary to the "model minority" myth, Asian American children, especially those from low-income immigrant families, are at risk for both behavioral and emotional problems early in life. Little is known, however, about the underlying developmental mechanisms placing Asian American children at risk, including the role of cultural adaptation and parenting. This study examined cultural adaptation, parenting practices and culture related parenting values and child mental health in a sample of 157 English speaking Asian American immigrant families of children enrolled in early childhood education programs in low-income, urban neighborhoods. Overall, cultural adaptation and parenting cultural values and behaviors were related to aspects of child mental health in meaningful ways. Parents' cultural value of independence appears to be especially salient (e.g., negatively related to behavior problems and positively related to adaptive behavior) and significantly mediates the link between cultural adaptation and adaptive behavior. Study findings have implications for supporting Asian American immigrant families to promote their young children's mental health.

Keywords

Asian Americans; Cultural adaptation; Parenting; Cultural socialization; Parenting Values

INTRODUCTION

Health disparities research indicates that children of Asian immigrants are at greater risk for poor mental health and interpersonal relationships compared with children of US-born white and children of US-born Asian parents [1]. A series of studies document that mental health disparities in Asian Americans (ASAs) can be attributed to differences in multiple social determinants, including social status, service access, quality of living environment, and social and human capital [2-5]. However, how migration and acculturation experiences influence parenting and contribute to ASA children's mental health disparities is not well understood. This study addresses this current literature gap by studying the role of acculturation on parenting and of parenting on and child mental health to better understand the mechanisms of mental health disparities in young ASA children.

Cultural Adaptation in Immigrant Parents

Upon immigrating, immigrants usually go through a period of adjustment (known as acculturation) to the new culture, in which they may adopt the beliefs (e.g., childrearing values, attitudes) and behaviors (e.g., language use, parenting practices) of the dominant cultural group, while retaining those from their culture of origin in a process known as enculturation [6]. Among parents who immigrate to the United States (US), acculturation and enculturation, collectively referred to as cultural adaptation, appear to be related to parenting beliefs and practices, such that more acculturated parents hold values and employ strategies that are more consistent with a Westernized parenting approach [7, 8]. As values shift, socialization messages based on cultural values and parenting practices consistent with these socialization messages may also shift [9-11]. But while current research underscores the importance of studying parenting from a cultural perspective, most cultural adaptation and parenting research focuses on parents of older children, and only a few empirical studies have examined mechanisms in younger children [11, 12]. Cultural adaptation and health research is even more limited with ASA populations [13], one of the fastest growing minority populations in the US (projected to be 9% of the total population by 2050 [14, 15]). This study therefore addresses this critical gap in the literature by examining parents' cultural adaptation and its relation to parenting and child mental health in an English speaking immigrant pan-Asian sample of parents and their young children [11].

In contemporary health research, cultural adaptation has been studied in two ways. The *linear* (or *unidemensional*) approach, which has historically been espoused, posits that cultural adaptation is a single process where one simultaneously loses his or her ethnic characteristics when adopting the host characteristics. The *orthogonal* approach supports a *bidimensional framework* of cultural adaptation where ones' ethnic and host characteristics move along separate but parallel continuums, thus creating two distinct levels of orientation--- acculturation and enculturation [6, 13]. Acculturation refers to the adaptation to mainstream culture (e.g., US), while enculturation refers to the maintenance of a culture of origin (e.g., Chinese) [16]. The bidimensional framework allows for the simultaneous examination of acculturation and enculturation and reflects current theoretical models of cultural adaptation.

According to Berry [6, 17], acculturation and enculturation interact to result in one of four categories of cultural adaption, including 1) *assimilation*, or low participation in one's culture of origin (i.e., low enculturation) combined with high participation in the new culture (i.e., high acculturation); 2) *separation,* or low participation in one's new culture (i.e., low acculturation) combined with high participation in the culture of origin (i.e., high enculturation); 3) *marginalization*, or low participation in both the culture of origin and the new culture (i.e., low acculturation and enculturation); and 4) *integration or biculturalism*, or the simultaneous participation in one's culture of origin and the new culture (i.e., high acculturation and enculturation). While Berry and colleagues have suggested measuring acculturation using categorical or continues approaches (i.e., using 4 acculturation groups or 4 continues scales) [18, 19], it remains unknown whether different approaches yield similar results. This study applies Berry's model and considers both categorical and continuous approaches to examine associations between parents' cultural adaptation and child mental

health, and tests whether the associations between parents' cultural adaptation and child mental health are mediated by parenting (socialization beliefs and parenting practices).

Cultural Adaptation, Parenting and Early Childhood Mental Health

A growing literature has documented the role of cultural adaptation on parenting [13, 20-23] and child mental health [13, 16, 24-26]. Although some studies have suggested that biculturalism may best promote immigrant well-being [27, 28], the relations between parents' cultural adaptation and parenting in early childhood development are not well understood among ASA populations. Findings from the limited empirical studies are also inconsistent. For example, some studies report that higher levels of acculturation (e.g., integrated or assimilated acculturation style, English spoken in household) in ASA immigrant parents are related to more authoritative parenting (e.g., responsive and nurturing parenting) [29]; more engaged parenting (monitoring of behavior and involvement in learning) and less harsh parenting (e.g., physical discipline) [7, 12, 22, 30]. These positive aspects of parenting have in turn been associated with lower levels of child behavior problems [30]. In contrast, other studies find no association between parental acculturation/ enculturation and parenting [31, 32]. Inconsistent findings may be attributed to differences across studies in age of participant children (i.e., most ASA studies are of elementary school children or adolescents), in the conceptualization and measurement of cultural adaption (i.e., most studies used continuous measures of acculturation and/or enculturation and do not consider the interaction of both dimensions of acculturation or Barry's categories of cultural adaptation groups), and the inclusion of culture related parenting (e.g., values, socialization practices).

In an effort to elucidate processes of cultural adaptation and child development, Calzada and colleagues [16, 33] developed a conceptual model that considers cultural values as fundamental to the child rearing goals of parents. Parents' cultural values influence the ways in which parents interpret their children's behavior, which impact their interactions with their children [34-39]. Parents transmit their culture-specific values and goals through a process called cultural socialization [40]. Cultural socialization is posited to play a role in the transmission of cultural values, attitudes, messages and behaviors to children [41], and it is thought to vary with level of acculturation, with implications for parenting practices and child development [11, 42, 43].

A small literature shows the influence of cultural adaption on ASA parents' cultural socialization and child development. Greater acculturation in ASA parents has been linked with greater socialization valuing of child independence [7], whereas greater enculturation has been related to more traditional childrearing values and attitudes (e.g., respect) in ASA parents [19]. In addition, ASA parents who valued child independence or valued more "Westernized" parenting practices (e.g., reliance on non-physical discipline) engaged in more parental monitoring, warmth, and authoritative parenting practices [12, 44]. However, no study that we are aware of has examined these associations in young children, or the "interaction of acculturation and enculturation dimensions" on multi-dimensional parenting constructs in relation to mental health outcomes in preschool-aged ASA children.

The Present Study

Building on the existing literature, the present study examines Calzada's cultural model of parenting and child development with ASA families of young children. Consistent with advances in cultural adaptation theories, this study considers both acculturation and enculturation, and assesses cultural adaptation categorically (i.e., in interaction) and continuously. This study also includes a multi-dimensional conceptualization of parenting (i.e., values and practices) and child behavioral health (i.e., internalizing, externalizing, adaptive behavior). As shown in Figure 1, the model proposes mediational links from cultural adaptation to parental cultural socialization and parenting practices to child behavioral health. Based on previous studies with Latino immigrant families of young children [11], we expected to find support for this cultural framework.

METHODS

Participants

This study was based on a cross-sectional design. Our sample recruitment was limited to parents who spoke English because of limited resources for translation and bilingual staffing. One hundred and sixty-eight ASA parents were recruited from community-based early childhood programs across 12 communities in New York City. Children who were 2nd generation (US-born; n=11; 6%) were excluded from the present analyses because of potential generational differences that could not be explored given the small sample size of this subgroup.

Among the remaining 157 ASA immigrant families, the majority of parents were mothers (92%) and 8% were fathers. Parents came from 15 Asian countries; 52% from East Asian countries (China, Taiwan, Hong Kong, Korea), 25% from South Asian countries (Bangladesh, India, Pakistan), 15% from Caribbean countries (Indo-Caribbean from Trinidad and Guyana who self-identified as Indian), and 8% from South East Asian countries (Philippines, Indonesia, Vietnam). The average length of residence in the US was 13.01 years (SD = 8.51). The majority of parents (87%) immigrated after age 12. The average age of the parents was 35.33 years (SD = 6.06); 65% of parents had more than a high school education (50% were educated in the US); 83% of parents were bilingual (spoke both English and Asian languages) and 17% spoke primarily English. The average number of children in study families was 1.93 (SD = 0.85), and 45% of the families were classified as poor (based on either income-to-need ratio 1, or receipt of government aid). The average age of the study children was 4.62 (SD=0.43), 55% were boys, and 90% were born in the US. At the time of the study, participants resided across 84 census tracts in New York City. About half of the families (46%) lived in neighborhoods with a high concentration of Asians (more than 40% of Asians in their tract), and 44% of the families lived in poor neighborhoods (defined as over 30% of families in tracts with income-to-need ratio 200%). Table 1 shows means and standard deviations of the study variables.

Procedure

Participants were recruited from early childhood programs housed in community-based organizations. Early childhood programs were first identified through a regional pre-

kindergarten program list, and programs serving large numbers of Asian children were contacted and asked to partner with researchers in the recruitment of eligible families. From October 2008 through April 2010, families of children between 3 and 5 years of age who were enrolled in one of the partner programs and in which at least one parent was born in Asia or self-identified as Asian were eligible for the study. Program directors were asked to distribute fliers to families, and study staff was present at pick-up and drop-off times to discuss the study with parents. Eligible parents provided consent and were interviewed at the program site. For parents with scheduling constraints, interviews were conducted by phone. Parents reported on their cultural adaptation, parenting cultural values and practices, and child mental health. Study children's teachers were asked to report on child mental health. There were 44 teachers (average 3.53 students (SD = 2.75) per teacher) who participated in the study and provided ratings for their students. The study procedures and method of consent were approved by the Internal Review Boards of New York University School of Medicine (IRB number: i08-276).

Measures

Measures that have been developed for and/or validated with Asian American populations in the US [18, 45, 46], with exception of the Cultural Socialization scale, were used in this study. We carefully examined the psychometric properties of each scale to ensure its reliability and validity in the present study sample, as described below.

Cultural Adaptation—As described earlier, this study assessed cultural adaption in categorical and continuous ways. The Abbreviated Multidimensional Acculturation Scale (AMAS) [47] was applied to create categorical cultural adaptation groups, and the East Asian Acculturation Measure (EAAM) [18] was applied to assessed acculturation on a linear/continuous scale. The AMAS assesses *bidimensional* parents' cultural adaptation, and it taps into language, cultural competence (the individual's knowledge of the culture as well as his or her ability to function competently within it), and identity. This study utilized the *US identity* (6 items, α=.92) and *Ethnic/Asian identity* (6 items, α= .94) scales only. Sample items include "I feel that I am part of US/Asian culture," and "I am proud of being US American/Asian." Parents were asked to rate each item on a 4-point-likert scale (1=not at all or strongly disagree; 2=a little bit or somewhat disagree, 3= somewhat well or somewhat agree, 4= extremely well or strongly agree). Guided by Berry's four cultural adaptation strategies [6, 17], we created four cultural adaptation groups. Participants were categorized based on their scores on US Identity and Ethnic Identity. A scale score was considered low if the average score was 1 (Strongly Disagree) or 2 (Somewhat Disagree), and high if it was 3 (Somewhat Agree) or 4 (Strongly Agree); the cut-off 3 (3 vs. < 3) was conceptually meaningful (i.e., agree versus disagree) and also corresponded to the midpoint of the scale. US and Ethnic Identity were considered together to determine categorization. Parents who were low on US Identity and Ethnic Identity were categorized as having a Marginalized Identity; those low on US Identity and high on Ethnic Identity were categorized as having a Separated Identity; those high on US Identity and low on Ethnic Identity were categorized as having an Assimilated Identity; and those high on both identity scales were categorized as having an Integrated/Bicultural Identity.

To consider cultural adaptation from a linear/continuous perspective, we applied the *Integration scale* from the EAAM (5 items, α=.85, 1-4 point scale as the AMAS) [18]. Sample items for EAAM Integration biculturalism scale include "I tell jokes both in English and in my native language" and "I feel that both Asians and Americans value me."

Parenting Cultural Values—An abbreviated version of the Cultural Socialization (CS) scale [11] was used to assess parenting cultural values. The CS scale assesses socialization messages related to a traditional/collectivistic value—*respect* and to a Westernized value—*independence* [44, 48, 49]. The original CS scale consists of 37 items (rated on a 7-point-likert scale; 1=strongly disagree, 7= extremely agree). Following Calzada et al. (2012), a 20-item version was applied. Both the *respect* scale (11 items; α=.76; sample item: "I believe that children should obey no matter what") and *Independence* scale (9 items; α=.82; sample item: "I encourage my child to ask questions about what is happening around him/her") demonstrated adequate reliability in the present ASA sample. Consistent with Calzada's study with a Latino immigrant sample [11], the correlation between the two scales was low (*r*=.13), suggesting independent constructs. In addition, we found high *respect* was associated with low social economic status (e.g., poor or low educated families), and high *independence* was associated with a more authoritative style of parenting (e.g., encourage expression of negative emotions, reinforce positive behaviors) in our Asian sample, suggesting support for construct validity.

Parenting Practices—Two rating scales (5-point likert-type scale) were used: Parenting Practices Interview (PPI) [50] and Responses to Children and Emotion Questionnaire (RTCE) [51]. Three scales were used to assess three domains of parenting: *Harsh/Inconsistent Response to Misbehavior* (12 items; α=.65; e.g., "How often do you slap or hit your child", "If you ask your child to do something and s/he doesn't do it, how often do you give up trying to get him/her to do it"); *Reinforcement of* Adaptive Behavior (6 items; α=.74; e.g., "How often do you praise or compliment your child"); and *Discouragement of Child Emotion Expression* (18 items, α=.93; e.g., "When my child is feeling angry/sad, I give her a disapproving look"). Intercorrelations among the three scales were low, ranging from .05 to .19 (see Table 1), indicating that they measured distinct aspects of parenting.

Child Mental Health—Teacher and Parent report versions of the Behavioral Assessment System for Children-2nd Edition (BASC-2)- Preschool Version [52] assess a range of child behaviors. This study considered broadband scales of externalizing problems (e.g., aggression, hyperactivity), internalizing problems (e.g., anxiety, depression, somatization), and adaptive behavior (e.g., adaptability, social skills). Parents and teachers rated each item in terms of how often their child/student has engaged in each behavior during the past 4 weeks on a 4 point scale (0=never, 3=almost always). Internal consistency for these three scales ranged from .83 to .86 for parent ratings and .91 to .93 for teacher ratings.

Analyses

To test the mediation mechanism (the link between cultural adaptation and child behavioral health is mediated through parenting), a series of regression analyses were carried out based on Baron and Kenny's traditional mediation methodology [53]. The mediation model

incorporates examination of four links: (a) cultural adaption and parenting; (b) parenting and child mental health, with adjustment of cultural adaptation; (c) cultural adaptation and child mental health; and (c') cultural adaption and child mental health, with adjustment of parenting (see Figure 1 for the tested paths). If (a) and (b) are different from zero when employing a joint significance test strategy [54] or if (c) is significantly related, but (c') is not related, it suggests a mediation mechanism [53].

In model testing, a set of parenting measures (including values and behaviors) were included in the model simultaneously. Each child outcome was tested separately. For school behavioral outcomes, which were assessed based on teacher-rating, linear mixed effect models (using SAS PROC MIXED procedure [55]) were applied to account for nesting of children within teachers/classrooms [56]. All models adjusted for family poverty.

RESULTS

Cultural Adaptation, Parenting and Child Mental Health

The categorization of AMAS US Identity and Ethnic Identity resulted in four groups: integrated/bicultural (n=78; 50%), separated (n= 57; 36%), marginalized (n=11; 7%), and assimilated (n=8; 5%). Table 2 shows demographic characteristics, parenting and child mental health outcome for the four groups. Because of small sample sizes for the marginalized and assimilated groups, we limited group comparison analyses to the integrated/ bicultural and separated groups. Relative to separated parents, integrated/ bicultural parents were more likely to have received education in the US, have been in the US for more years, report valuing independence, report lower rates of harsh parenting and rate their children as having higher levels of adaptive behavior.

Table 1 presents unadjusted correlations among cultural adaptation, parenting, and child mental health outcomes using continuous scales. Overall, patterns of associations were in expected directions. Biculturalism (the continuous measure) was associated with greater valuing of independence and more adaptive and less internalizing child behaviors at home. Parental value of independence was associated with more use of reinforcement of adaptive behaviors, more adaptive behaviors at home and less internalizing problems at school. Parents' harsh/inconsistent responses to child misbehaviors and discouragement of child emotion expression were associated with high externalizing and internalizing problems and less adaptive behaviors at home.

Mediation Mechanisms

Cultural Adaptation and Child Behavior (c path)—In inspecting the relations between parental cultural adaptation and child mental health, we examined this association using continuous and categorical cultural adaptation measurement approaches (see Model 1 in Tables 3(a) and 3(b)). We found consistent patterns across approaches (bolded numbers in Tables 3a and b indicate consistent findings). Integrated/or high bicultural ASA parents rated their children as more adaptive compared to the separated or less bicultural ASA parents, after adjusting for family poverty. Using the continuous acculturation measure, we also found that bicultural parents tend to have children with lower internalizing problems (at

home). However, parents' cultural adaptation (either studied in a continuous or categorical way) was not significantly associated with any child behaviors at school (based on teacher report).

Adjusted Association between Cultural Adaptation and Child Behavior (c' path)—The adjusted association was examined in comparison to the unadjusted association (Model 1) to better understand the overall mediation mechanisms. Again, we found similar patterns of results across approaches. Specifically, after considering parenting (Model 2), we found the association between the biculturalism and child adaptive behaviors was no longer significant (for parent measure) or became less associated (for teacher measure) in comparison to the Model 1 results, In addition, the adjusted association between biculturalism (measures on a continuous scale) and child internalizing problems (parent report) showed no significant association when comparing the model without adjusting for parenting. Findings indicated that the parenting measures partially mediated the link between parental biculturalism and child adaptive behaviors.

Cultural Adaptation and Parenting Cultural Values and Behaviors (a path)—We found the same pattern of associations across approaches. After adjusting for family poverty, integration/biculturalism was significantly associated with parent value of independence (Estimate (SE) = .27 (.10), p =.01 and Estimate (SE) = .32 (.08), p <.001 when biculturalism was measured as categorical and continuous variable, respectively). However, we did not find similar associations between biculturalism and the three parenting behavior measures.

Parenting Cultural Values and Behaviors and Child Behavior (b path)—In examining the adjusted association between parenting and child outcomes, several consistent patterns emerged across different measurement approaches for biculturalism. The bolded numbers in Tables 3a and b Model 2 indicate the consistency. We found that parents' value of independence was associated with more adaptive behaviors at home and less internalizing problems at school. Parents' who used more harsh/inconsistent response to their child's misbehaviors were associated with more externalizing and internalizing problems at home, but less internalizing problems at school. Furthermore, parents' discouragement of emotion expression was associated with more externalizing and internalizing problems at home.

There were also some inconsistent findings depending on the ways biculturalism was assessed. In the model that adjusted for continuous biculturalism (Table 3a), we found the parent value of independence was associated with less externalizing problems at home, and parents' reinforcement of adaptive behaviors was associated with more externalizing problems at school. In the model that adjusted for categorical biculturalism (Table 3b), we also found parents' value of respect was associated more internalizing problems at home; parents' harsh/inconsistent response to misbehaviors was associated with less adaptive behaviors (at home); and parents reinforcement of adaptive behaviors was associated with more externalizing problems at home.

As suggested by MacKinnon and colleagues [54], an alternative approach to testing mediation paths is to apply "a joint significant test strategy" using Sobel tests. We carried out Sobel tests for the paths that showed significant associations between parent cultural

adaption and parenting, and between parenting and child outcomes. We found significant mediational paths for Biculturalism (measured as a continuous variable) $\rightarrow$ Cultural socialization of independence $\rightarrow$ Child externalizing problems (parent rating) and Adaptive behaviors (parent rating), with Sobel tests = -1.90, $p = .056$; 2.50, $p = .02$ for child externalizing problems and child adaptive behavior, respectively. When considering biculturalism as a categorical outcome (1 = bicultural, 0/reference = Separation), two mediational paths were also found: Biculturalism $\rightarrow$ Cultural socialization of independence $\rightarrow$ Adaptive behavior (parent rating), Internalizing problems (teacher rating) (Sobel test = 2.12, $p = .034$ for adaptive behaviors; Sobel test = -1.78, $p = .075$ for internalizing problems).

DISCUSSION

This study examined a cultural model of parenting and child development that included cultural adaptation, parenting and child outcomes in a diverse ASA sample of young children. As hypothesized, biculturalism was associated with more "Westernized" parenting practices (including valuing independence and use fewer harsh/inconsistent response to misbehavior) [7, 8, 12, 22, 30], and these parenting practices were in turn associated with fewer behavioral problems and more adaptive behaviors at home and school [30]. Findings support the important role of parents' cultural adaption in ASA children's early mental health functioning. In addition, our findings regarding the associations between parenting and child behavioral outcomes are largely consistent with the literature. This suggests at least some degree of cross-cultural consistency in developmental mechanisms.

Our study contributes to the literature in several important ways. This study applies a *bidimensional* cultural adaptation framework, and considers the "interaction" of acculturation and enculturation (i.e., biculturalism, separation, assimilation, marginalization). Previous development and health studies with immigrant populations tended to include acculturation and enculturation as two separate dimensions, and failed to consider their potential interaction (individuals might have high or/and low score on acculturation or enculturation domains), which might contribute to inconsistent findings in the field. Given the theoretical importance of cultural adaptation patterns and their link with parenting, studies examining the differential impact of cultural adaptation patterns on child development are critical to advance scientific understanding [11, 20, 21]. Our findings suggest that ASA immigrant populations who have lived in the US a number of years and who speak English are more likely to fall under the integrated/bicultural or separated cultural adaptation groups, and less likely to fall under the marginalized or assimilated cultural adaptation groups. Our findings highlight the importance of carefully characterizing study samples in order to do better cross study comparisons. In addition, this study applied both continuous and categorical measures of cultural adaptation (i.e., biculturalism). These measurement approaches are distinctly different, but yielded somewhat similar findings. Our comparison approach contributes to assessment methodology, and informs appropriateness of both assessment choices for researchers who are interested in acculturation research [57]. In considering how to measure acculturation, we suggest a categorical instead of continuous approach. This approach is more parsimonious and is more commonly used in the literature. Moreover, a categorical approach allows for meaningful group comparisons (with a defined reference group), facilitating interpretation of results in our study and in relation to past

research findings. A third contribution of this study is that it addresses inconsistent findings from previous research by considering several important confounders in research design. We limited our sample to immigrants and English speaking ASA families, and controlled for poverty. In examining the association between cultural adaptation categories and parenting and child outcomes, we further limited our sample to two larger subgroups (integration and separation cultural adaptation groups). Although findings may not be generalizable to 2nd generation ASA parents or non-English speaking families, our design reduces biases and allows for a clear understanding of study findings. Future research may build on these findings by studying other ASA subpopulations to fully understand developmental mechanisms in ASA children. Additionally, we examined a range of parenting practices given their relevance to child development and implications for adaption of evidence-based interventions. We not only considered conventional measures of parenting (such as discipline practices, positive reinforcement, emotion socialization that are commonly targeted in parenting interventions), but also culturally-specific and understudied parenting constructs (cultural socialization values). Our findings add new evidence to the cross-culture literature, and support the importance of these domains in young ASA children's behavioral well-being. Finally, this study assesses multiple domains of child outcomes in multiple contexts (e.g., at school and home based on teacher and parent ratings), which allows us to better understand whether the impact of cultural adaptation and parenting on children's behaviors varies by contexts or behavioral domains.

Consistent with the literature [58-60], we found significant mediational paths for integration/ biculturalism → cultural socialization of independence → child adaptive behaviors. There were some unexpected findings as well. For example, we did not find direct associations between separation/biculturalism and parents' value of respect, nor did we find direct associations between separation/biculturalism and ASA parents' use of behavioral reinforcement and emotional socialization. The inconsistent findings may be explained, at least in part, by the high levels of English competence among the parents in this sample [12]. It is also possible that this study oversampled ASA families with bicultural and separated identity, and did not include families with marginalized and assimilated identity, which may have prevented us from observing the full spectrum of associations between cultural adaption and cultural socialization practices.

Another unexpected finding was the association between parent harsh/inconsistent response to misbehaviors and teacher-rated internalizing problems. We found higher use of harsh/ inconsistent discipline was associated with less internalizing problems at school (the opposite association was found at home). There are several explanations for this finding. It may be that teachers are not as sensitive in identifying child internalizing problems in ASA children given that many symptoms (e.g., withdrawn) may be considered as culturally-normative or adaptive. It is also likely that child behaviors are context specific, leading to differences in behaviors at school versus home (e.g., high harsh/inconsistent parenting may only related to poor parent-child relationships. To compensate for poor relationships at home, these children may seek positive adult attention at school and develop good teacher-child relationships). Future studies are needed to better understand the context of school and home relationships and their joint influence on ASA child development. Despite the inconsistency, our study found evidence of the unique role for each parenting domain

(including valuing respect, reinforcing adaptive behaviors, and emotional socialization), and these parenting domains contribute significantly in one or multiple domains of social behavioral outcomes (e.g., problem behaviors). These findings have important implications for informing future behavioral intervention design for ASA children. For example, parenting interventions with bicultural/integrated ASA parents aiming to decrease harsh parenting might see greater impact on child outcomes given that these parents are more accepting of the cultural value of independence. However, additional strategies may need to be developed for less acculturated (e.g., separated) parents to promote the cultural value of independence in addition to positive parenting practices.

There are several limitations worth noting. This study used data from a cross-sectional study, based on voluntary community sample, and was limited to English-speaking ASA parents in New York City. This study also included a diverse ASA sample, with small sample sizes for regional subgroups. It is important that future studies test the conceptual model with English and non-English speaking immigrants, a more representative population sample, marginalized and assimilated acculturated individuals, and later generation parents, using a longitudinal design.

SUMMARY

Developmental and health behavioral research on ethnic minority children has not focused on Asian American children despite the fact that Asian American children experience risk for social and behavioral problems. In addition, existing research has ignored the interaction of acculturation and enculturation in studying the influence of cultural adaptation on health and development. This study addresses several major gaps in the literature by examining mediational mechanisms of ASA parents' cultural adaptation on multiple domains of parenting (including cultural socialization messages) and child mental health outcomes. Using Calzada's culture, parenting, and child development framework and considering research methodology that may disentangle the mixed findings reported in the literature, this study identified several important mediational paths. Findings suggest a complex interplay among culture, parenting, and child factors. Overall, our findings suggest that early childhood interventions that strengthen positive parenting practices (e.g., improve emotional socialization, reduce harsh/inconsistent response to misbehavior) hold promise for effective mental health promotion for young ASA children and families.

Acknowledgments

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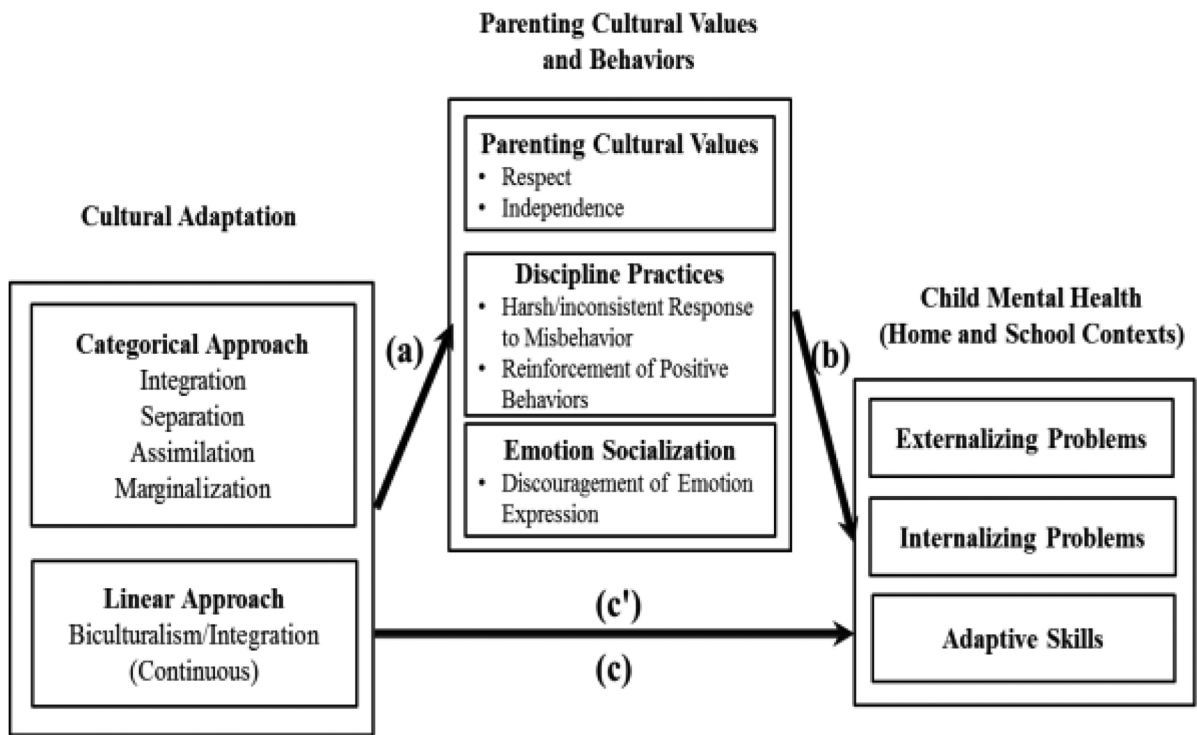
Figure 1.
Conceptual Mediation Model of Cultural Adaptation on Parenting and Child Mental Health

Table 1

Descriptive Results and Correlations for Study Variables

	Mean (SD)	1	2	3	4	5	6	7	8	9	10	11
Cultural Adaptation												
1. Biculturalism	3.18 (.67)	1.00										
Parenting Cultural Values												
2. Respect	4.77 (.95)	−.09	1.00									
3. Independence	6.05 (.71)	.32¥	.13	1.00								
Parenting Practices												
4. Harsh/inconsistent responses	2.49 (.43)	−.07	−.12	−.14	1.00							
5. Reinforce positive behaviors	3.45 (.63)	.13	.03	.29¥	.05	1.00						
6. Discourage Emotion Expression	1.53 (.57)	−.03	.09	−.02	.19*	−.08	1.00					
Child Mental Health												
7. Externalizing (P)	50.77 (8.52)	−.03	.07	−.16*	.35¥	.01	.31¥	1.00				
8. Internalizing (P)	52.95 (10.81)	−.17*	.15	−.13	.24‡	−.05	.26¥	.62¥	1.00			
9. Adaptive (P)	47.42 (9.40)	.19*	−.07	.34¥	−.16*	.23‡	−.18*	−.34¥	−.28¥	1.00		
10. Externalizing (T)	50.58 (9.14)	.05	.07	−.02	−.15	.12	−.10	.01	−.01	.06	1.00	
11. Internalizing (T)	52.74 (12.17)	−.13	.11	−.18*	−.14	.09	−.12	−.04	.08	−.02	.60¥	1.00
12. Adaptive (T)	46.50 (8.90)	−.18*	−.10	.03	.08	.01	−.11	−.07	−.10	.22‡	−.15	−.01

Note. Correlations were based on the full sample. (P) = Parent-rating; (T) = Teacher-rating.

*
p<.05

‡
p <.01

¥
p <.001.

Table 2

Demographic Characteristics, Parenting Values and Behaviors, and Child Mental Health by Cultural Adaptation Group

	Integrated/Bicultural Identity	Separated Identity	Marginalized Identity	Assimilated Identity	Integrated-Separated Comparisons
Demographic	M (SD) or %	M (SD) or %	M (SD) or %	M (SD) or %	*p*
Poor	44.9%	38.6%	63.6%	62.5%	.466
> High School Education	71.4%	64.8%	54.5%	25.0%	.422
Parent Receive US Education	55.8%	35.2%	63.6%	62.5%	.020
Year of immigration	15.43 (9.58)	10.73 (6.20)	8.80 (7.32)	14.17 (9.28)	.003
American Identity	3.39 (.39)	2.24 (.49)	2.25 (.57)	3.50 (.43)	<.001
Ethnic Identity	3.72 (.37)	3.66 (.38)	2.48 (.46)	1.90 (.80)	.414
Biculturalism	3.45 (.64)	3.00 (.54)	2.51 (.65)	2.53 (.36)	<.001
Parenting Cultural Values					
Respect	4.84 (.95)	4.60 (.97)	4.92 (.95)	5.15 (.93)	.146
Independence	6.24 (.55)	5.98 (.64)	5.24 (.83)	5.80 (1.33)	.013
Parenting Practices					
Harsh/Inconsistent Responses	2.58 (.60)	2.77 (.53)	2.55 (.40)	2.37 (.63)	.054
Reinforce Positive Behaviors	3.48 (.62)	3.47 (.59)	2.77 (.66)	3.96 (.52)	.905
Emotion Socialization					
Discourage Emotion Expression	1.45 (.57)	1.59 (.56)	1.62 (.54)	1.79 (.75)	.170
Child Functioning					
Externalizing (P)	50.65 (8.60)	51.47 (8.50)	50.73 (10.76)	49.75 (5.42)	.589
Internalizing (P)	51.81 (10.04)	53.94 (10.60)	53.80 (16.05)	56.75 (11.71)	.242
Adaptive (P)	50.08 (8.75)	43.89 (8.89)	45.45 (9.82)	45.63 (6.07)	<.001
Externalizing (T)	50.87 (10.19)	49.71 (6.78)	48.54 (8.46)	57.00 (11.71)	.354
Internalizing (T)	51.86 (12.46)	51.94 (8.77)	54.00 (14.95)	67.13 (18.46)	.695
Adaptive (T)	46.60 (8.77)	46.21 (8.97)	48.64 (12.70)	46.13 (7.26)	.754

Note. (P) = Parent rating; (T) = Teacher rating. A poor family is defined as either poverty below federal guideline (income to need ration <=100%) or receive government aid (WIC, TANF, housing assistance, social Medicaid, medicare, or SSI)

Table 3

Associations of Cultural Adaptation, Parenting and Child Mental Health

(a) Cultural Adaptation as a Continuous Variable

| | Home Behaviors | | | | | | School Behaviors | | | | | |
| | Externalizing (P) | | Internalizing (P) | | Adaptive (P) | | Externalizing (T) | | Internalizing (T) | | Adaptive (T) | |
	Estimate (SE)	P	Estimate (SE)	P	Estimate (SE)	P	Estimate (SE)	P	Estimate (SE)	P	Estimate (SE)	P
Model 1												
Biculturalism	−0.50 (1.11)	.651	−3.13 (1.36)	.023	2.84 (1.06)	.008	1.40 (0.97)	.152	−1.29 (1.30)	.322	−1.84 (1.08)	.090
Model 2												
Biculturalism	0.54 (1.05)	.608	−2.20 (1.35)	.106	1.21 (1.05)	.251	0.76 (1.10)	.491	1.17 (2.13)	.586	−2.03 (1.16)	.084
Respect	1.05 (0.72)	.147	1.42 (0.93)	.128	−0.76 (0.73)	.298	−0.29 (0.75)	.697	0.23 (0.97)	.811	−0.22 (0.81)	.786
Independence	−2.24 (1.04)	.033	−1.37 (1.35)	.313	3.33 (1.04)	.002	−0.10 (1.07)	.923	−2.50 (1.35)	.067	1.09 (1.14)	.342
Harsh/Inconsistent response to misbehaviors	6.49 (1.57)	<.001	6.40 (2.01)	.002	−2.41 (1.56)	.126	−1.15 (1.56)	.463	−3.63 (1.95)	.066	1.27 (1.68)	.452
Reinforce positive behaviors	1.65 (1.10)	<.136	1.04 (1.42)	.467	1.76 (1.10)	.113	2.33 (1.17)	.049	1.27 (1.46)	.387	−0.97 (1.23)	.432
Discourage Emotion Expression	3.26 (1.15)	.005	3.34 (1.49)	.026	−1.45 (1.15)	.209	−0.56 (1.14)	.621	−0.60 (1.43)	.674	−0.88 (1.23)	.476

(b) Cultural Adaptation as a Categorical Variable

| | Home Behaviors | | | | | | School Behaviors | | | | | |
| | Externalizing (P) | | Internalizing (P) | | Adaptive (P) | | Externalizing (T) | | Internalizing (T) | | Adaptive (T) | |
	Estimate (SE)	P	Estimate (SE)	P	Estimate (SE)	P	Estimate (SE)	P	Estimate (SE)	P	Estimate (SE)	P
Model 1												
Integration	−0.50 (1.54)	.745	−2.52 (1.83)	.172	4.35 (1.43)	.003	1.01 (1.30)	.442	0.61 (1.57)	.699	0.65 (1.42)	.647
Model 2												
Integration	0.70 (1.43)	.625	−1.43 (1.76)	.419	3.18 (1.37)	.022	1.07 (1.38)	.441	1.21 (1.62)	.558	1.01 (1.49)	.501
Respect	1.32 (0.76)	.088	1.95 (0.94)	.042	−1.01 (0.73)	.172	−0.25 (0.76)	.743	0.22 (0.92)	.813	0.10 (0.83)	.907
Independence	−2.01 (1.22)	.103	−0.15 (1.56)	.462	4.01 (1.17)	.001	−0.05 (1.22)	.968	−3.43 (1.45)	.021	0.21 (1.30)	.873
Harsh/Inconsistent response to misbehaviors	2.34 (1.30)	.075	6.05 (2.13)	.005	−3.71 (1.65)	.026	−1.32 (1.65)	.424	−4.11 (1.94)	.038	.74 (1.78)	.681
Reinforce positive behaviors	6.85 (1.72)	<.001	−0.04 (1.51)	.982	1.82 (1.17)	.122	1.42 (1.25)	.260	0.11 (1.46)	.938	−0.36 (1.33)	.785
Discourage Emotion Expression	3.03 (1.28)	.020	3.57 (1.58)	.026	−0.31 (1.23)	.980	0.08 (1.23)	.945	0.52 (1.45)	.718	0.05 (1.32)	.972

Note. Analyses based on multivariate linear regression analyses using the full ASA sample. (P) = Parent rating; (T) = Teacher rating For teacher-rated outcomes, mixed model analysis was applied, which controlled for teacher nesting. All models control for family poverty.

Note. Analyses based on multivariate linear regression analyses using sample that grouped in integrated or separated cultural adaptation groups (n=135). Integrated culture adaptation (1=Integrated; 0= Separated). For teacher-rated outcomes, mixed model analysis was applied, which controlled for teacher nesting. All models control for family poverty.