

# Perceptions of the Acceptability of Parent Training Among Chinese Immigrant Parents: Contributions of Cultural Factors and Clinical Need

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Parent training (PT) is well established for reducing child externalizing problems; however, lower rates of engagement in PT among ethnic minority/immigrant families have been found. We assessed PT acceptability among Chinese immigrant parents and explored clinical and cultural factors that may be associated with acceptability. Participants were a community sample of 145 Chinese immigrant parents (84% mothers) between the ages of 32 and 65 years ( $M=43.3$  years,  $SD=6.2$ ) who had children (84 boys, 59 girls) between the ages of 4 and 17 years ( $M=10.7$  years,  $SD=3.6$ ). Results suggest that parents found positive reinforcement techniques significantly more acceptable, less problematic, and more likely to be supported by others than punishment-based techniques. Parents who endorsed the Chinese child-rearing value of shaming were less likely to find PT acceptable. Parents who reported greater dysfunction in parent–child interactions rated PT as more acceptable, and families with prior Child Protective Services (CPS) involvement rated PT as less acceptable. However, previous mental health treatment appears to bolster

acceptability among parents with prior CPS involvement. Clinical implications for addressing barriers to PT engagement and future research directions are discussed.

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*Keywords:* parent training; Chinese immigrant parents; treatment engagement; treatment acceptability

PARENT TRAINING (PT) is a well-established class of interventions for reducing child conduct problems (Eyberg, Nelson, & Boggs, 2008) and risk of child maltreatment (Hughes & Gottlieb, 2004). Although some studies have shown that ethnic minority families benefit as much as non-Hispanic White (NHW) families (Chaffin et al., 2004; Reid, Webster-Stratton, & Beauchaine, 2001), others documented disparities in outcomes (Caughy, Miller, Genevro, Huang, & Nautiyal, 2003; Conduct Problems Prevention Research Group, 2002). In controlled trials, immigrant and minority parents have also been found to be less likely to enroll in PT (Reid et al., 2001) and more likely to drop out compared to NHWs (Holden, Lavigne, & Cameron, 1990; Kazdin & Whitley, 2003). Even when attendance is controlled, minority parents may participate less actively (Orrell-Valente, Pinderhughes, Valente, & Laird, 1999) and may need more sessions to complete treatment (Fernandez, Butler, & Eyberg,

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2011; McCabe & Yeh, 2009) compared to NHWs. Thus, increased attrition and marginal participation complicate the dissemination of PT to ethnic minorities.

Beyond global access barriers that help to explain disparities in engagement in PT (Caughy et al., 2003; Conduct Problems Prevention Research Group, 2002), understanding ethnic minority parents' perceptions of PT interventions can inform dissemination efforts. Perceptions of the acceptability, relevance, effectiveness, and demandingness of treatment procedures are related to treatment initiation, persistence, and therapeutic change (Kazdin, 2000). Several scholars have remarked on cultural barriers in the implementation of PT with families from diverse cultural backgrounds (Forehand & Kotchick, 1996, 2002). The proximal targets of change in PT are child-rearing practices that are deeply rooted in culturally determined socialization goals, beliefs about child development, and values about family relations (Keller et al., 2006). PT involves teaching parents to use operant procedures to modify child behavior (Eyberg, 1993). Techniques typically involve positive reinforcement (e.g., praise, rewards) to increase desired behaviors and negative punishment techniques that withdraw reinforcement to reduce misbehavior (e.g., time-out, loss of privileges, selective attention). Wide variation in parenting practices across ethnic groups may influence receptivity to these prescribed changes in parent-child interactions (Kazdin, Holland, & Crowley, 1997).

In addition to cultural factors, clinical factors may also play a role in determining treatment acceptability among ethnic-minority parents. Acceptability of PT may be increased by clinical need characteristics, such as severity of youths' behavior problems, parental distress, and past experience with mental health (MH) services. Ethnic minorities are less likely to underutilize services when their symptoms are severe and level of distress/impairment is high (U.S. Department of Health and Human Services, 2001). Parents reporting high levels of youth MH need are more likely to seek services (Logan & King, 2002; Sayal, Taylor, & Beecham, 2003), a link that is explained by perceptions of caregiver burden (Angold et al., 1998). Distressed parents may be motivated to learn techniques that help to decrease family burden and youth disruptive behaviors. Furthermore, parents who have previously utilized youth MH services may view PT techniques as more acceptable compared to those without prior services, owing to familiarity with behavior change principles. High ratings of satisfaction with PT reported by ethnic minorities at the conclusion of treatment suggest that firsthand experience may yield positive

treatment attitudes (McCabe & Yeh, 2009; Reid et al., 2001).

Conversely, other clinical factors may be associated with negative attitudes toward PT. For example, allegations of maltreatment reported to Child Protective Services (CPS) represent a common referral pathway into PT (Barth et al., 2005). However, CPS-involved parents may be more mistrustful of professional intervention and less likely to find PT acceptable due to the nature of their coercive contact with CPS. Families referred to CPS for questionable parenting practices generally undergo intrusive in-home investigations that are perceived as threatening to their family integrity. Further, parents who come to the attention of CPS are more likely to have parenting styles characterized by harsh or coercive parenting practices with lower levels of monitoring and consistency (Rogosch, Cicchetti, Shields, & Toth, 1995), which may make them less amenable to the goals and techniques central to PT.

To date, no studies have examined attitudes toward PT among Chinese immigrant parents in the United States. Following Mexico, China is the leading country of birth among the nation's immigrants (U.S. Census, 2008). Although Asian American youth are as likely as youth from other groups to experience adverse parenting and associated behavior problems (Lau, 2006), they are far less likely to receive either CPS or MH services (Lau et al., 2003; McCabe et al., 1999). The relevance and efficacy of PT for Asian immigrant families in the United States has received some support from recent trials showing that among those families successfully recruited and retained in care, outcomes are favorable (e.g., Kim, Cain, & Webster-Stratton, 2008; Lau, Fung, Ho, Liu, & Gudiño, 2011). However, it is unclear how representative these samples might be, as it is possible that families that enter and stay in care may hold attitudes that differ from their co-ethnics in the community. In their recent community survey, Mah and Johnston (2011) compared PT acceptability between Euro-Canadian and Chinese immigrant mothers residing in Canada. The researchers found no ethnic differences between mothers' attitudes toward reward or withdrawal of positive reinforcement, but Chinese immigrant mothers were more accepting of punishment techniques than Euro-Canadian mothers. This cross-group comparison suggests that, at an aggregate level, Chinese immigrant parents may be amenable to PT. However, studying within-group variation would be instructive to identify cultural dimensions that predict in-treatment attitudes among immigrant families.

Adding to the impetus to examine perceptions of PT for Chinese immigrant families are concerns that

traditional values about child rearing may run counter to tenets of PT. Traditional Chinese parenting emphasizes principles of Confucianism, wherein parental authority and control are central within a hierarchical parent-child relationship (Lin & Fu, 1990). Within a system of filial obligation, parents are tasked with governing their children toward the valued outcomes of obedience and respect for elders, and toward sensitivity to social and moral rules. The cultivation of a sense of shame is instrumental to achieving this goal (Fung, Lieber, & Leung, 2003). *Shaming*, which involves the deliberate use of negative affect to shape child behavior, often through the use of reprimands, upward social comparison, and other expressions of parental disappointment (Fung, 1999), is instrumental to achieving these goals.

In contrast to this child-rearing orientation are PT strategies that encourage desired behaviors through praise and social rewards. These strategies may prioritize different socialization goals: nurturing self-esteem, encouraging autonomous self-expression, and recognizing both parent and child rights. International trials of PT with Chinese families suggest that PT can be efficacious (e.g., Ho et al., 1999; Leung, Tsang, Heung, & Yiu, 2009), yet observations of specific barriers to engagement highlight concerns about cultural fit. For example, praise has been described as problematic in trials with Chinese parents in Australia and Hong Kong who felt that praise leads children to feel self-satisfied and complacent, thereby undermining persistence, achievement, and humility (Ho et al., 1999; Leung, Sanders, Leung, Mak, & Lau, 2003). Another cultural priority related to shaming is concern about losing face. Chinese parents in Hong Kong reported that the practice of ignoring misbehavior (differential reinforcement) is a violation of social rules that would engender parental face loss, especially in public or in the presence of family (Lieh-Mak, Lee, & Luk, 1984).

However, other cultural child-rearing orientations may be quite consistent with aspects of PT (Leung et al., 2003). Chao (1994) described the Chinese parenting concept of *training*, which involves parents as key agents of child behavior change, using clearly stated expectations, continual monitoring, intensive support of child learning, and exposure of the child to explicit examples of valued behaviors. Thus, although shaming and training represent traditional child-rearing values, and child-rearing belief systems salient in Chinese cultures, they may have distinct associations with attitudes toward PT. Cultural values are not monolithic, and it is important to determine how values may be distinctly related to treatment

attitudes even within a cultural group. For example, some Chinese parents may value shaming, whereas others may place less weight on this concept. Research is required to clarify relevance and efficacy of PT Chinese immigrant families in the United States, and understanding the perceived acceptability of PT and contributing cultural and clinical correlates to these attitudes may be one important step in meeting the needs of underserved Chinese and Asian communities.

The current study takes a within-group approach to assess the correlates of perceived acceptability of core PT strategies among Chinese immigrant parents. Group comparisons typically cannot illuminate cultural explanations for observed group differences and given cultural differences in the interpretation of questionnaire items, cross-cultural comparisons of self-reports can be difficult to interpret (Heine, Lehman, Peng, & Greenholtz, 2002). These problematic reference group effects may potentially confound cross-cultural comparisons, as individuals of one culture compare themselves with different standards than do those in another culture. Thus, we directly examined cultural dimensions including specific value orientations and acculturation as predictors of treatment acceptability, rather than examining ethnic or cross-national differences. Furthermore, we measured potentially important clinical correlates of treatment attitudes including severity of child behavior problems, level of parenting distress, and previous contact with CPS and MH treatment. Finally, we took a multidimensional approach to examining acceptability, assessing parents' individual attitudes toward elements of PT, their perceptions of how family and friends would view their use of the skills, and potential barriers to uptake.

We propose three hypotheses related to cultural factors, and three hypotheses related to clinical correlates of PT acceptability. First, based on previous empirical findings we predicted that positive reinforcement strategies would be rated as less acceptable than punishment-based strategies among immigrant Chinese. Second, we hypothesized that endorsement of shaming values would be negatively related to PT acceptability, whereas child-rearing values more aligned with PT principles (i.e., training, promoting autonomy, and authoritative parenting) would be positively related to acceptability. Third, we predicted that immigrant parents who are more acculturated to American culture would rate PT as more acceptable. Fourth, we predicted that prior CPS involvement would be negatively associated with PT acceptability. Fifth, we hypothesized that parents who endorse previous utilization of youth MH services would rate PT techniques as more acceptable

than parents without prior services. Finally, we hypothesized that parents reporting greater levels of perceived need (i.e., youth behavior problems and parenting stress) would view PT interventions as more relevant and acceptable than parents with fewer indications for PT.

### Method

#### PARTICIPANTS

Participants were a community sample of 145 Chinese immigrant parents (84% mothers) between the ages of 32 and 65 years ( $M=43.3$  years,  $SD=6.2$ ) and their children (84 boys, 59 girls) between the ages of 4 and 17 years ( $M=10.7$  years,  $SD=3.6$ ) who were residing in the United States. Seventy-four percent of children were U.S. born, whereas all parents were foreign born; 51% in China, 25% in Taiwan, 7% in Vietnam, 9% in Hong Kong, and 8% in other Asian countries. Forty-five of these families had contact with CPS, and 60 had prior MH service contact. Forty-four percent of parents had education past the equivalent of a high school graduate, and 73% of parents were married. See Table 1 for sample characteristics. There are slight variabilities in  $n$  across analyses due to missing data on particular measures, and this information is listed alongside the specific analytic models.

Families were recruited from CPS, community MH centers, public social service agencies, and community schools in the greater Los Angeles area. Recruitment was facilitated by staff at referring agencies and school sites. Flyers were distributed to clients receiving services at agencies and to parents in community schools serving the same neighborhoods. The flyers instructed the parents to provide identified agency or school staff with their contact information if they were interested in being contacted by research staff to learn more about the project. In this manner, 203 parents provided either verbal or written consent to be contacted by research staff for this study. Research assistants then telephoned prospective participants to provide them with more detailed information about the study and arrange for their interview in the event they agreed to participate. Of the parents who provided consent to be contacted: 71.4% ( $n=145$ ) completed the interview, 15.3% ( $n=31$ ) declined to participate, 6.9% ( $n=14$ ) were ineligible, and 6.4% ( $n=13$ ) couldn't be reached.

After informed consent was obtained, parents completed the study measures. All measures underwent translation, backtranslation, and consensus reconciliation for conceptual equivalence. All but one parent chose to complete measures in Mandarin or Cantonese Chinese. Study procedures were

Table 1  
Sample Characteristics ( $n=145$ )

	$n$ or ( $M$ )	% or ( $SD$ )
Male parent participants	23	16%
Age of parent	(43.3)	(6.2)
Children of participants		
Male index child	84	59%
Age of child	(10.7)	(3.6)
Parent's Marital Status		
Married	104	73%
Divorced/Separated	33	23%
Widowed	4	3%
Single/Never Married	1	1%
Parent Education Level		
High School Diploma or less than	78	56%
High School education		
Annual Household Income		
<\$10,000	17	13%
\$10,000-\$29,999	48	40%
\$30,000-49,999	31	23%
>\$50,000	19	14%
Parent Birthplace		
China	73	51%
Taiwan	36	25%
Hong Kong	12	9%
Vietnam	10	7%
Other Asia	11	8%
Number of Years in U. S.	(14.3)	(7.6)
Services History		
Child Protective Services Involvement	45	31%
Prior Mental Health Services	60	59%
Child Behavior Problems		
Externalizing T-Score >60	18	18%
Externalizing T-Score	(46.1)	(10.6)

approved by the Institutional Review Board at an academic institution, the County Departments of Mental Health, Children and Family Services, Public Social Services, and the dependency court.

#### MEASURES

##### *Demographics Questionnaire*

Demographic variables utilized in this study include parent's age, gender, income, marital status, education level, place of birth, and child's age and gender.

##### *Child Behavior Problems*

The Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001) contains 118 descriptions of behavioral/emotional problems where the informant rates the extent to which each item was true in the previous 6 months (0 = not at all true, 1 = somewhat or sometimes true, 2 = true or often true). Items were summed to create two broadband factor scores for internalizing (anxious/depressed, withdrawn, and somatic complaints) and externalizing (aggressive and destructive) problems. Internal consistency estimates of the Chinese version of the

CBCL are satisfactory with  $\alpha = .80$  and  $\alpha = .83$  for the internalizing and externalizing subscales, respectively (Yang, Soong, Chiang, & Chen, 2000). Test-retest reliability estimates also fell in the .80 range across the CBCL subscales when used in a Chinese sample (Leung et al., 2006). In this study, we utilized the externalizing subscale as it assesses the types of problem behavior targeted in PT.

#### *Parenting Stress*

The Parenting Stress Index–Short Form (PSI-SF; Abidin, 1995) is a valid and reliable 36-item scale for measuring parenting distress (Haskett, Ahern, Ward, & Allaire, 2006; Reitman, Currier, & Stickle, 2002). The PSI-SF yields three subscales: (a) parental distress, (b) parent-child dysfunctional interaction, and (c) difficult child. The 36-item short form of the Chinese version of the PSI was validated in research in parent samples in Hong Kong (Chan, 1994; Tam, Chan, & Wong, 1994). The 12-item parent-child dysfunctional interaction summary score was used to examine parenting stress that may be proximal to potential benefit from PT while not being entirely redundant with child behavior problems. The overall scale showed good internal consistency ( $\alpha = .89$ ) and the parent-child dysfunctional interaction subscale showed adequate internal consistency ( $\alpha = .66$ ) in the present sample.

#### *Parent Acculturation*

The General Ethnicity Questionnaire (GEQ; Tsai, Ying, & Lee, 2000) is a 38-item measure used to assess parents' acculturation toward the dominant American culture and their enculturation toward their heritage Chinese culture. The GEQ scales have high internal consistency and adequate 1-month test-retest reliability (Tsai et al., 2000) and scales converge in expected ways with other indices of acculturation (age of arrival, generational status, length of U.S. residence). We examined two subscales related to American acculturation: language use (e.g., "How fluently do you read English?") and social affiliation (e.g., "My friends are American"), and the parallel subscales tapping Chinese enculturation: language use (e.g., "How much do you speak Chinese at home?") and social affiliation (e.g., "I would prefer to live in a Chinese community"). We selected the language and social affiliation subscales as these indicators account for the most variance in acculturation and enculturation, and are consistently related to immigration history among Chinese Americans, which is not the case for the subscales of activities, attitude, food, exposure, and media (Tsai et al., 2000). The English language use and American social affiliation subscales demonstrated good internal reliability in this sample ( $\alpha = .84$  and  $.82$ , respectively). Similarly, the Chinese

language use and Chinese social affiliation subscales demonstrated adequate reliability in this sample ( $\alpha = .85$  and  $.67$ , respectively).

#### *Child-Rearing Values*

The Chinese Child-Rearing Beliefs Questionnaire (CCRB; Lieber, Fung, & Leung, 2006) is a 42-item, reliable and valid measure of child-rearing beliefs, some of which are indigenous to Chinese culture. It includes four subscales: training was assessed with nine items that ask about parental involvement, concern for achievement, and teaching to cultivate proper character (e.g., "In order for a child to learn, parents should continuously monitor and correct his or her behavior"); shaming was measured with eight items related to evoking shame or other negative affect to control child behavior (e.g., "Children should be made to feel ashamed when they disobey a rule"); autonomy, measured with 12 items that emphasize the need to encourage and support children's exploration, personal expression, and decision making (e.g., "Parents should stimulate exploring and learning"); and authoritative parenting, assessed with 13 items focused on respect for children's ideas and emotions, open communication, and consistent enforcement of behavior standards (e.g., "Children should be encouraged and assisted to openly express or articulate a full range of emotions"). The factor structure, scale internal consistency, and intersample stability across Chinese samples provides psychometric support for construct validity and the substantive coherence for the Chinese child-rearing dimensions measured in the scale (Lieber et al., 2006). The subscales (autonomy  $\alpha = .78$ , training  $\alpha = .88$ , shaming  $\alpha = .76$ , and authoritative  $\alpha = .73$ ) had good internal consistency in the current study.

#### *Child Protective Services Contact*

Contact with CPS was ascertained by review of the county CPS registry database. This dichotomous variable identified families who had any lifetime contact with CPS concerning alleged child abuse or neglect. Trained research assistants systematically matched unique child, parent, or family identifiers from study participants through the CPS registry system to identify records of contact with CPS at any time in the past. Unique participant identifiers consisted of social security numbers supplied by family, but when that was not available we used mother and child names and birthdates, as well as participants' physical address, to reliably match their records through the CPS registry system.

#### *Prior Mental Health Services*

Prior experience with MH services was coded into a binary variable using information from two data

sources, which included family referral source as well as parental endorsement of past MH services contact. Prior MH services were coded as present if the family was referred from a MH agency or if parents endorsed the survey question, "Have you ever taken your child to see anyone for help with behavior, emotional, or school problems?" In our sample, 44 parents were referred to the study by virtue of being a client at a local MH agency, 35 parents self-reported past MH service use for child problems, and 19 participants were both referred from a MH agency and self-reported prior contact. Thus, 60 parents were classified as having received prior MH service.

#### *Acceptability of Parent Training Strategies*

Parents were presented with a written hypothetical vignette depicting a female 8-year-old child with externalizing behavior problems. The problems included refusing to comply with parent requests, throwing temper tantrums, being argumentative, and aggression toward a younger sibling. Parents were told that the child's mother sought the counsel of a behavior therapist who presented six behavior management strategies involving positive reinforcement (praise, rewards, effective commands), or negative punishment (response cost, time-out, ignore). For each strategy, parents were asked to rate their agreement with eight statements (1=*strongly disagree* to 5=*strongly agree*) that corresponded to three topical categorizations of attitudes/beliefs toward behavior management strategies: parental endorsement of the acceptability of strategies (three statements), barriers to utilizing strategies (two statements), and perceived social support for the use of strategies (three statements).

To provide a within-subject reference point, parents also rated a control strategy (i.e., tolerate the misbehavior until the child grows out of it). Difference scores were calculated by subtracting parents' ratings of the control condition (i.e., tolerate) from their ratings for a given PT strategy (e.g., praise). Thus, each of the six PT strategies had a total of eight rating difference scores, where positive difference scores indicated that parents viewed the strategy more favorably than doing nothing to address the problem. Our rationale for using difference scores for each PT strategy is twofold: (a) contrasting participants' approval of the specific parenting strategy with participants' approval of "doing nothing" to alleviate the hypothetical behavioral problem aids in understanding whether participants would pursue a specific parenting technique in favor of the status quo, and (b) using difference scores helps to

benchmark participants' rating score to a within-subjects anchor against which to compare the degree of approval of specific strategies to one another. The use of raw scores may be subject to individual differences in response styles, such as an acquiescent response set.

Principal component analysis was conducted on the eight items using a varimax rotation to maximize the differentiation of original variables by extracted factors. We utilized the Kaiser criterion, dropping components with eigenvalues under 1.0, and examined component loadings to determine whether the specified set of questions are represented by a hypothesized component. We used the rule of thumb that loadings should be 0.7 or higher to confirm that items represent a particular factor. The results supported a three-factor solution, with scales pertaining to acceptability (three items; e.g., "I would be willing to use this method"), barriers (two items; e.g., "This method would be difficult to do"), and perceived support for PT strategies (three items; e.g., "My family would criticize me for using this method," reverse coded). Three composite scores indicated mean difference scores for acceptability, barriers, and support, and these composites were computed for each of the six PT strategies and for PT overall. As would be expected, overall acceptability and support were positively correlated ( $r = .71, p < .001$ ) but they were each negatively correlated with overall perceived barriers, ( $r = -.47, p < .01$  and  $r = -.47, p < .01$ , respectively). Internal consistency of these composites was strong (acceptability  $\alpha = .92$ , barriers  $\alpha = .90$ , support  $\alpha = .89$ ).

## Results

### PRELIMINARY ANALYSES

Bivariate correlations between study variables are displayed in Table 2. We explored a number of demographic variables as possible correlates of acceptability ratings. Family income, parent age and sex, and child age and sex were not significantly associated with perceived acceptability, barriers, and support for PT. Only parental education was significantly associated with positive attitudes toward PT strategies; as such, it was included as a covariate in subsequent analyses.

### ACCEPTABILITY, BARRIERS, AND SUPPORT FOR PT STRATEGIES

The average acceptability scores reported for the six PT strategies are as follows (on a scale of 1=*strongly disagree* to 5=*strongly agree*): effective commands, 4; praise, 3.9; token economy, 3.9; response cost, 3.7; time-out, 3.4; and differential attention, 3.2. These results suggest that on

Table 2  
Intercorrelations Between Study Variables

Item/Scale	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1.Parent Education	1																
2. Child Gender	-.01	1															
3.P-C Difficult Interaction	.19*	.00	1														
4.CPS History	-.11	-.07	.05	1													
5.Mental Health Services	-.17*	-.13	-.23**	.11	1												
6.CBCL Externalizing	-.12	-.19*	-.37**	.15	.36**	1											
7.Authoritative Parenting	.30**	-.02	.35**	-.03	-.15	-.24**	1										
8.Training	-.02	.09	.16	-.07	-.19*	-.30**	.54**	1									
9.Shaming	-.22*	.06	-.15	-.06	-.11	-.17	.1	.42**	1								
10.Autonomy	-.33**	.07	-.27**	-.01	-.07	-.03	-.14	.28**	.62**	1							
11.American Language Use	.49**	-.07	.18*	.10	-.23**	.07	.21*	-.04	-.14	-.14	1						
12.American Social Affiliation	-.03	.05	-.04	.02	-.16	.06	.11	-.05	.08	.1	.17*	1					
13.Chinese Language Use	.13	.04	.19*	-.11	-.08	-.13	.28**	.20*	.09	.06	-.20*	-.14	1				
14.Chinese Social Affiliation	.07	-.05	-.01	.01	.02	-.01	.16	.15	.19*	.15	-.12	-.20*	.39**	1			
15.Overall Acceptability	.37**	.04	.26**	-.21*	.04	-.03	.30**	.05	-.23*	-.23*	.20*	-.18*	.15	.05	1		
16.Overall Barriers Rating	-.12	-.07	-.12	.10	.10	.09	-.20	-.13	.13	.08	-.04	.06	-.20*	-.15	-.47**	1	
17.Overall Support Rating	.30**	.01	.25**	-.14	-.05	-.06	.21*	-.01	-.18	-.16	.12	-.13	.01	.05	.71**	-.47**	1

Note. Demographic variables not significantly correlated with the Acceptability Ratings were excluded from this table.

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

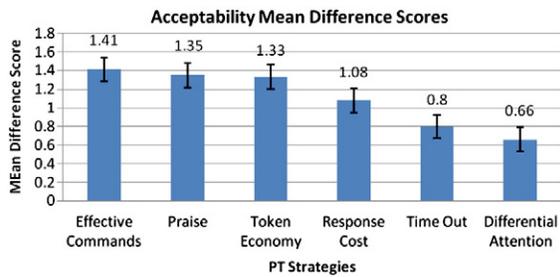


FIGURE 1 Acceptability mean difference scores for PT strategies. Note. PT = parent training.

average, parents found all PT strategies relatively acceptable. Figure 1 displays acceptability mean difference scores (subtracting acceptability ratings for each technique from the ratings for the “tolerate” strategy), Figure 2a displays barriers mean difference scores, and Figure 2b displays mean difference support scores. Mean difference scores were used as dependent variables in the multivariate analyses. To test the study hypotheses regarding the within-subjects effect of strategy on acceptability, a mixed model analysis was conducted. There are a total of six behavioral management strategies, and an a priori contrast was specified to examine how the three positive reinforcement-based strategies were rated relative to the three punishment-based based strategies. Parental education (high school graduate) was entered as a covariate to control for any effects it might have on perceived acceptability. Fixed effects were entered for the between-subjects factors of MH services, CPS history, and the six-level within-subjects factor

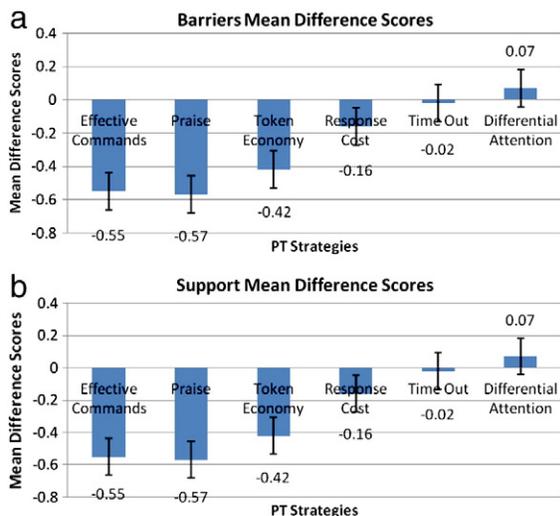


FIGURE 2 a. Barriers mean difference scores for PT strategies. Note. PT = parent training. b. Support mean difference scores for PT strategies. Note. PT = parent training.

of PT strategy. Two-way interactions between these terms were also examined, but were trimmed from the model if they did not reach significance.

Table 3 displays results from the mixed-models Type III tests that indicated that parents with MH services history,  $F(1, 129)=8.25, p<.01, d=.51$ , and greater than high school education,  $F(1, 129)=20.47, p<.001, d=.80$ , rated PT strategies as more acceptable than those without prior MH service use or those with lower than high school education. In addition, a significant fixed-effect interaction was found for CPS History×MH Services,  $F(1, 129)=10.47, p<.01, d=.57$ . Figure 3a plots the significant interaction between CPS history and MH services in predicting acceptability ratings. Examining the within-subjects factor of PT strategy revealed a significant fixed effect,  $F(5, 664)=26.74, p<.001, d=.90$ . Estimates of associated fixed effects are listed in Table 3 contrasting each strategy to the lowest-rated strategy of ignore/differential reinforcement. Results suggested that parents rated the three positive reinforcement-based techniques (praise, rewards, effective commands) significantly higher than the three punishment-based based techniques (response cost, time-out, ignore),  $t(5, 664)=-9.61, p<.001$ .

We employed the same mixed-model analyses to examine factors related to perceived barriers and support. For barriers, results revealed a significant fixed effect of PT strategy,  $F(5, 664)=29.10, p<.001, d=.94$ , and the planned contrast revealed lower ratings of barriers to using positive reinforcement strategies as compared to punishment-based strategies,  $t(5, 664)=-35.26, p<.001$ . No other significant fixed effects were found for parental education, CPS history and MH services, but there was a marginally significant interaction between MH service use and CPS history,  $F(1, 129)=3.85, p=.052, d=.35$ . For perceived support, significant fixed effects indicated that parents with more than high school education,  $F(1, 129)=11.10, p<.01, d=.59$ , perceived higher support for using PT strategies. A significant fixed-effect interaction was found for CPS History×MH Services,  $F(1, 129)=4.98, p<.05, d=.39$ . Figure 3b depicts the nature of this interaction in predicting support ratings. Results also revealed a significant fixed effect of PT strategy,  $F(5, 664)=17.93, p<.001, d=.73$ , and a significant planned contrast of reinforcement- versus punishment-based strategies,  $t(5, 664)=-13.20, p<.001$ .

FACTORS ASSOCIATED WITH OVERALL PARENT TRAINING ACCEPTABILITY

As displayed in Table 4, three multiple regression models examined predictors of mean ratings of

Table 3  
Summary of Mixed Model Analyses

	Acceptability			Barriers			Support		
	$\beta$	SE	F	$\beta$	SE	F	$\beta$	SE	F
Intercept	1.23	.30	122.52***	-.14	.24	11.66**	.55	.25	52.00***
Fixed Effects									
Parent Education	.75	.17	20.47***	-.14	.13	1.05	.47	.14	11.10**
DCFS History <sup>a</sup>	-.56	.34	.19	.32	.27	.00	-.35	.29	.02
MH Service Use <sup>b</sup>	-1.23	.34	8.25**	.42	.27	.52	-.61	.29	1.87
DCFS History X MH Services History	1.30	.40	10.47**	-.63	.32	3.85	.76	.34	4.98*
Random Effects									
PT Strategies			26.74***			29.10***			17.93***
Effective Commands <sup>c</sup>	.78	.09	t=9.00***	-.62	.07	-8.59***	.62	.08	7.64***
Praise <sup>c</sup>	.68	.09	t=7.84***	-.64	.07	-8.85***	.54	.08	6.55***
Rewards <sup>c</sup>	.67	.09	t=7.71***	-.49	.07	-6.77***	.47	.08	5.72***
Response Cost <sup>c</sup>	.41	.09	t=4.78***	-.23	.07	-3.19**	.37	.08	4.57***
Time Out <sup>c</sup>	.15	.09	t=1.76	-.09	.07	-1.27	.12	.08	1.46
Planned Contrast <sup>d</sup>	.52	.05	t=-9.61***	-.48	.04	-35.26***	.38	.05	-13.20***

Note: \* p<.05, \*\* p<.01, \*\*\* p<.001.

Reference groups: a=no DCFS history, b=no prior mental health services, c=Ignore/Differential attention.

Planned contrast d: Commands+Praise+Rewards - Response Cost – Time out – Ignore/Differential attention.

acceptability averaged across the six PT strategies. In the first step of each model, parental education and child gender were entered as control variables. Parental education was significantly associated with increased acceptance of child management strategies overall ( $b=.74, p<.001$ ), while no significant effect was found for child gender. In

the first model, the independent variables examined were clinical correlates, including parent report of child externalizing problems, dysfunctional parent-child interactions, prior MH service use, CPS

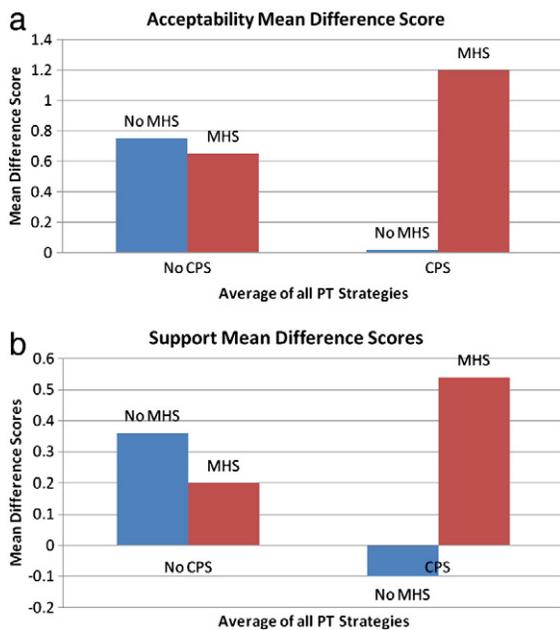


FIGURE 3 a. Acceptability mean difference scores by previous CPS/DCFS involvement and mental health services. Note. MHS = Prior youth mental health services; CPS = Prior Child Protective Services contact. b. Support mean difference scores by previous CPS/DCFS involvement and mental health services.

Table 4  
Summary of Multiple Regression Analysis for Variables Predicting Overall Acceptability

	Variable	B	SE B	Beta
Step 1	<i>Control</i>			
	Parental Education	.74***	.17	.36***
	Child's Gender	.18	.17	.09
Step 2 (n = 130)	<i>Clinical Factors</i>			
	Parent-Child Difficult Interaction	.51**	.19	.22**
	Externalizing T Score	.02	.01	.16
	DCFS History	-.77***	.20	-.34***
	MH Service Use	.12	.21	.05
Step 2 (n = 114)	<i>Child Rearing Beliefs</i>			
	DCFS History X MH Service Use	1.01*	.39	.26*
	Autonomy	.26	.20	.14
	Training	.09	.21	.05
	Shaming	-.37*	.17	-.26*
Step 2 (n = 124)	<i>Acculturation and Enculturation</i>			
	Authoritarian	.03	.18	.02
	American Language Use	.16	.17	.10
	American Social Affiliation	-.40*	.18	-.19*
	Chinese Language Use	.18	.17	.10
Chinese Social Affiliation	-.14	.18	-.07	

Note. R<sup>2</sup> = .36 (p<.001) for Step 1; R<sup>2</sup> = .50 (p<.01) for Step 2 – Clinical; R<sup>2</sup> = .47 for Step 2 – Child Rearing; R<sup>2</sup> = .18 for Step 2 – Acculturation.

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

involvement, and prior MH service use and CPS involvement interaction. Consistent with the mixed-model analyses, families that had prior CPS contact were significantly less likely to find PT strategies acceptable ( $b = -.77, p < .001$ ), and there was a significant interaction between CPS involvement and previous MH service use ( $b = 1.01, p < .01$ ), after controlling for parental education. As predicted, higher parent-child dysfunctional interaction scores were significantly associated with increased acceptance of PT strategies overall ( $b = .51, p < .01$ ). However, parent-reported child externalizing problems were not significantly associated with overall PT acceptability.

In the second regression model, the independent variables examined were *child rearing values* including values usually associated with traditional Chinese child rearing (training and shame) and values usually associated with European American child-rearing traditions (autonomy and authoritarian). As predicted, higher shaming scores were significantly associated with lower ratings of PT acceptability ( $b = -.37, p < .05$ ), even after controlling for parent education. However, no significant associations were found between ratings of PT acceptability and training, autonomy, or authoritative child-rearing values. The third regression model examined indices of acculturation to American culture and enculturation toward Chinese culture as predictors of PT acceptability. Contrary to hypotheses, higher American social affiliation was associated with decreased PT acceptability ( $b = -.40, p < .05$ ). No significant associations were noted among acceptability ratings and English language use, Chinese social affiliation, and Chinese language use subscales.

### Discussion

This study sought to contribute to the literature by examining the acceptability of elements of common PT interventions to at-risk Chinese immigrant parents, as well as various clinical and cultural factors that may predict ratings of acceptability. We found that Chinese immigrant parents viewed positive reinforcement-based strategies designed to increase desired behaviors (i.e., praise, rewards, effective commands) as the most acceptable interventions for managing behavior problems. This ran contrary to our expectations that Chinese-origin parents would have more reservations about praise and reinforcement due to the valued socialization goals of parental authority, familial hierarchy, and cultivation of humility. Our findings suggest that perhaps concerns about Chinese parents' culturally based resistance to the use of praise and other social rewards may be overstated

in the clinical literature. In fact, Mah and Johnston (2011) found no significant differences between Euro-Canadian and Chinese-immigrant mothers' attitudes toward reward-based parenting strategies, and a diverse sample of parents in Australia that included a significant proportion of Asian parents (31.3%) demonstrated positive parental attitudes toward the use of behavioral strategies (Morawska et al., 2010). Reports of difficulty in teaching praise in PT trials may be better attributed to Chinese parents' lack of familiarity with the effective use of PT techniques rather than overt resistance grounded in cultural misgivings (Lau, Fung, & Yung, 2010). On the other hand, Chinese immigrant parents viewed time-out and ignoring misbehavior as the least acceptable options presented. In the Chinese context, ignoring misbehavior may be tantamount to shirking parental duty to correct a child immediately and publicly (Lieh-Mak et al., 1984). Similarly, ignoring and time-out have also been rated as less acceptable than positive reinforcement strategies by NHW parents in clinical trials, with receptivity to these techniques increased by formal training in social learning principles (McMahon, Tiedemann, Forehand, & Griest, 1984).

We found some support for the hypothesis that specific child-rearing values are associated with parents' appraisals of PT strategies. As predicted, when Chinese immigrant parents endorsed shaming as a valuable parenting practice they were less likely to find PT acceptable. This is consistent with the concern that socialization goals prioritizing hierarchical relations and the evocation of child negative affect to modify behavior runs counter to PT strategies. Operant techniques that increase positive parental attention for desired behaviors and decrease negative parental attention for misbehavior may be incompatible with beliefs that parents should heighten negative attention for failure to meet standards and withhold praise to promote humility.

However, it is not the case that all traditional Chinese child-rearing values run counter to tenets of PT. Training, another indigenous Chinese parenting concept, was not significantly related to PT acceptability. The edict of training calls for close parental monitoring and high levels of involvement and sacrifice. However, these values may not be very proximal to the specific content of the PT strategies evaluated here. There was a positive correlation between perceived acceptability of PT and endorsement of authoritative parenting values, a prototypically European American parenting style that emphasizes high levels of parental warmth and control. However, this relationship did not persist after controlling for parental education and

the other value dimensions. Together these findings suggest that within-group variability in treatment attitudes may be partially accounted for by culturally relevant values. Cultural barriers to engagement in PT may more pronounced among Chinese immigrant parents for whom the use of shame for behavioral control is central.

In contrast, less proximal predictors of cultural orientation did not conform to our predictions about variation in attitudes toward PT. We found no association between enculturation toward Chinese culture and ratings of the acceptability of PT. We hypothesized that immigrant parents who were more highly acculturated to American culture would be more accepting of PT strategies. Although there was a significant positive correlation between English language use and perceived acceptability of PT, this finding did not persist after controlling for parental education. Further, contrary to our predictions, greater acculturation in terms of contact and affiliation with mainstream American culture was associated with lower perceptions of PT acceptability. In our sample, English language use and American social affiliation were positively associated as expected, yet they had opposite bivariate associations with treatment attitudes. Greater contact with families that may be more highly affiliated with mainstream American culture may not lead to acculturation in child-rearing attitudes among Chinese immigrant parents. On the contrary, it is possible that firsthand observations of Western styles of parenting may have led immigrant parents to reaffirm their own heritage's cultural approaches to parenting, resulting in polarization ("I would never talk to *my* children that way!"). Of course, this interpretation is speculative and further study is needed to investigate the role of intergroup contact in the formation of parenting and treatment attitudes.

In terms of clinical factors associated with perceived acceptability of PT, our hypotheses were partially supported. The significant correlation and the regression results suggested that families with a CPS history of reported allegations of maltreatment were less likely to view PT strategies as acceptable overall compared to families that did not have previous contact with CPS. It is possible that their contact with the child welfare system and any intrusion in matters of child rearing may be perceived as coercive, such that related interventions are viewed with some suspicion or distrust. Alternately, parents who have a history of allegations of suspected maltreatment may have more punitive parenting approaches that are less compatible with PT approaches. This triangulates to some extent with findings that parents who self-

report problems with child discipline are less likely to follow through with child MH services in general (Harrison, McKay, & Bannon, 2004).

Our findings also indicated a significant interaction between prior CPS involvement and MH service use for both acceptability and perceived support for PT strategies. This finding was not predicted a priori but was robust across analyses. Across models, there appeared to be little effect of prior MH services among those families with no prior CPS contact. However, among CPS-involved families, those who had previous MH treatment were much more likely to find PT strategies acceptable. Perhaps parents who have been reported to CPS for suspected maltreatment may, on average, be predisposed to having negative attitudes toward PT. Yet, in those instances when CPS provides a gateway into MH services with supportive exposure to behavior modification, CPS-referred parents may indeed be responsive to PT. Ratings of treatment acceptability tend to increase following receipt of treatment (Hobbs, 1984), and most CPS-involved parents are likely directed to MH services specifically for PT (Barth et al., 2005). Indeed, the group of parents with a history of both CPS and MH intervention had higher acceptability ratings than among parents with past MH treatment and no CPS involvement. It is unknown whether this group may have been more likely to have specific experience with PT; if that were the case, our findings may reflect a familiarity effect. Alternately, the subset of parents with a CPS history and past MH services may represent a group of parents with high levels of need and distress and a concomitant openness to intervention, whereas those CPS-involved families that have not made it into treatment may represent those families with the highest levels of resistance and more intractable problems with parenting.

Parent-reported difficulties in parent-child relations were associated with increased acceptability of PT. This suggests that those parents who are most likely to need PT may view the interventions as personally relevant and potentially helpful. Parents who struggle to deal with their child may perceive the PT strategies as a promising way to improve their child's functioning and ameliorate stressful interactions. However, we did not find a significant relationship between parent ratings of child externalizing problems and ratings of PT acceptability. This was unexpected given prior literature that shows that behavior problem severity is associated with parents' ratings of treatment acceptability in a clinical sample (Miller & Kelley, 1992). It is possible that the level of child externalizing symptoms is less pertinent to a sense

of urgency of seeking care or learning new parenting strategies than parents' perceived difficulty of relations with their child in our sample. In addition, levels of externalizing problems in the sample were low, with only 12% of parents placing their child more than one standard deviation above the population mean on the CBCL. Restricted range on this variable may have precluded finding the expected association.

This study adds to the literature on the social validity of behavioral interventions with culturally diverse populations by examining links between treatment attitudes and theoretically driven cultural factors as well as clinical factors. Several study hypotheses were supported offering insight into potential barriers to engagement in PT in a large and growing immigrant group. However, this study has several limitations that should be considered in interpreting results. First, this study relied on the use of hypothetical vignettes, and although these vignettes have face validity in describing externalizing problems, they may not have been viewed as genuine or credible. The subject in the vignette was a female child, and we did not include within- or between-subject factors examining the effects of child gender (or other characteristics) that may affect treatment attitudes. It is possible that child gender expectations may be salient among Chinese immigrants, moderating views on acceptability of interventions. As only one case vignette was used, there is a potential stimulus-sampling concern that could have influenced and restricted interpretation of our findings; in future studies, multiple vignettes depicting both boys and girls of various ages should be used to directly evaluate the contribution of stimulus characteristics.

In general, reliance upon analogue methods is limiting. It will be important to study perceptions of the relevance and appropriateness of interventions in clinical samples of ethnic-minority parents with children evincing behavior problems. Also, the index children of the parents in our sample have a wide age range; it would have been desirable to limit the sample to include parents of children in the range typically treated with PT. However, we anticipated that parents could rate the acceptability of PT strategies as applied to the hypothetical 8-year-old child in the vignette. This analogue approach may, however, not yield results that are generalizable to parents who present at MH clinics for treatment of disruptive children. We were unable to examine possible differences between mothers and fathers in treatment attitudes for the present sample due to the smaller proportion of father participants; much of PT research lacks adequate representation of fathers, and more effort

should be made toward recruiting fathers in future investigations (Phares, Fields, & Binitie, 2006). Surveying social validity among treatment-seeking samples can reveal how perceptions of evidence-based interventions may change with exposure over the course of treatment. Finally, because our sample was comprised of Chinese-speaking immigrants, the range in acculturation may have been restricted and our sample may not be representative of Chinese parents in the United States at large. Different patterns of acculturation-related associations with treatment attitudes may be observed within samples with more heterogeneity in immigration history.

Notwithstanding these limitations, our results suggested that there may indeed be variability in parental treatment attitudes that can be explained by cultural and clinical variables. Among Chinese immigrant parents there was a wide range of views on PT acceptability. Likelihood of problems with engagement in PT should vary accordingly on an individual basis, from family to family, with some of that variance explained by cultural and clinical factors. Overall, however, it appeared that mean acceptability ratings were in the positive range indicating that, on average, Chinese immigrant families felt that PT strategies were better than using no behavioral strategy and waiting for externalizing problems to remit spontaneously. Mean ratings for the least acceptable strategy of ignoring misbehavior suggested that even this was viewed more positively than doing nothing to address disruptive behavior problems. Therapists should not assume that Chinese immigrant families will find PT unacceptable. Instead, the data suggest an openness to PT, particularly to positive reinforcement strategies, that previous clinical reports have suggested may be problematic for this group. There are implications of our findings for understanding cultural influences on seeking PT, remaining in PT, and profiting from PT. These important questions merit focused research efforts, but at the current time, data on the efficacy of PT for Chinese immigrants is only just emerging (Lau, Fung, Ho, Liu, & Gudiño, 2011). So far, these data reveal no detectable differences in PT response by acculturation, but theoretically driven studies of the possible influences of culture on engagement and outcomes in PT are warranted.

Our research has implications for addressing potential barriers to engagement when they do arise. A detailed assessment of attitudes toward strategies before and during PT may signify a collaborative and respectful approach to behavior modification that may itself be an engagement tool (McCabe, Yeh, Garland, Lau, & Chavez, 2005).

Behavior therapists should take stock of factors that may predict the need for such a collaborative approach. For example, if immigrant parents do not find their parent-child interactions subjectively problematic, yet they find themselves under scrutiny by CPS, a structured exploration of treatment attitudes may be an important initial step. Immigrant families may stand to gain the most from specific engagement strategies, including increased orientation and discussion of treatment rationale and expectations (McMahon et al., 1984) and attention to ongoing concerns that PT strategies are irrelevant or difficult (Nock & Kazdin, 2005).

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