



<b>Title</b>	<b>Mothers' beliefs about children's learning in Hong Kong and the United States: Implications for mothers' child-based worth</b>
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<b>Citation</b>	<b>International Journal of behavioral Development, 2013, v. 37 n. 5, p. 387-394</b>
<b>Issued Date</b>	<b>2013</b>
<b>URL</b>	<b><a href="http://hdl.handle.net/10722/201624">http://hdl.handle.net/10722/201624</a></b>
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Mothers' Beliefs about Children's Learning in Hong Kong and the United States:  
Implications for Mothers' Child-based Worth

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**Abstract**

Chinese and American mothers' beliefs about children's learning and parents' role in it were examined using notions salient in Chinese culture. Mothers from Hong Kong ( $n = 66$ ) and the United States ( $n = 69$ ) indicated their agreement with the ideas that children's learning reflects children's morality and parents' support of children's learning reflects parents' love and duty. Mothers also reported on the extent to which their worth is based on children's performance. Chinese (vs. American) mothers believed more that children's learning reflects morality and parents' support of children's learning reflects love; these differences accounted for their feelings of worth being more dependent on children's performance. Chinese (vs. American) mothers believed less that parents' support is a duty.

*Keywords:* China; contingent self-worth; culture; learning; parental beliefs

**Mothers' Beliefs about Children's Learning in Hong Kong and the United States:  
Implications for Mothers' Child-based Worth**

A wealth of research, mostly conducted in the United States, has documented the important role of parents' beliefs in children's development (for reviews, see Bornstein, 2006; Bugental & Johnston, 2000). One arena of children's development receiving much attention is the academic arena (for reviews, see Pomerantz, Moorman, & Cheung, 2012; Wigfield, Eccles, Schiefele, Roeser, & Davis-Kean, 2006). Investigators concerned with differences in East Asian and American parenting have been particularly interested in parents' beliefs in this arena (e.g., Hess, Chih-Mei, & McDevitt, 1987; Holloway & Hess, 1985; Stevenson, Chen, & Lee, 1993). Because East Asia and the United States have historically been characterized by distinct ideas about learning, presumably due to the different cultural ideologies prevalent in the two regions, East Asian and American parents may hold different beliefs about children's learning, which they may transmit to children.

Focusing on Chinese and European American mothers, the current research was designed to examine whether there are differences in their beliefs about children's learning and parents' role in it, with emphasis on two ideas that are particularly salient in Chinese culture: (1) The idea that children's learning reflects their morality and (2) the idea that parents' support of children's learning is indicative of parents' love and duty. The implications of such beliefs for mothers' views of themselves was also evaluated. We investigated whether the heightened tendency for Chinese (vs. American) mothers to see children's learning as reflecting morality and parents' support of children's learning as indicative of their love and duty would account for Chinese (vs. American) mothers' heightened tendency to base their worth on children's performance, which appears to contribute to differences in Chinese and American parenting (Ng, Pomerantz, & Deng, in press).

### **Parents' Beliefs about Learning**

**Children's learning as reflecting morality.** Confucian and Greek philosophies have historically influenced China and the United States, respectively. There are substantial differences in how the Confucian and Greek philosophers approached learning (see Tweed & Lehman, 2002). Confucius emphasized the cultivation of one's character through learning, whereas Socrates focused on pursuing the truth and gaining knowledge (Tweed & Lehman, 2002). To Confucius, learning was essentially a moral endeavor, the purpose being to develop virtuous qualities such that one could attain self-perfection and be a noble person (Li, 2005). As Li (2002) documented by asking college students in mainland China about their beliefs regarding learning, learning and morality are embedded in each other in Chinese culture: Individuals engaged in learning are expected to become more virtuous; conversely, virtuous individuals are expected to value learning, thereby seeking to learn more.

Integral to the Confucian view of learning is the high value placed on effort (Ho, 1994). Given that it is practically impossible to attain perfection of the self, what matters is continually making the effort toward such perfection; diligence in learning is thus considered a virtue (Li, 2003). Research suggests that this idea about learning may be socialized at an early age. For example, when Chinese and American preschoolers are presented with stories of protagonists that are persistent versus give up in their learning, Chinese (vs. American) children are more likely to favor the persistent protagonist over the one that gives up, believing that the persistent one is more virtuous (Li, 2004; see also Tao & Hong, 2000). In line with research showing that Chinese attribute performance to effort (e.g., Chen & Stevenson, 1995; Hess et al., 1987), not only is diligence imbued with moral meaning, it is also believed to be instrumental for achievement (Ho, 1994). As such, achievement can be indicative of one's morality as it is assumed to reflect one's diligence in pursuing self-perfection through learning.

**Parents' role in children's learning.** Given that children's education is intertwined with their moral development in Chinese culture, it is not surprising that Chinese parents believe they should play a central role in children's academic pursuit. Chao (1994) proposed that Chinese parenting can be understood through the indigenous notion of *guan*. According to Chao, *guan*, translated as "to govern," "to care for," and "to love," is considered parents' responsibility in Chinese culture and is manifested in parents' *chiao shun* (training) of children – that is, the continual monitoring and correcting of children's behavior to ensure that children are not falling short of societal standards. Because of the emphasis on learning in China, such training often involves making sure children exert the effort necessary to do well in school (Chao, 1994).

Consistent with the idea that Chinese parents have a culturally prescribed role to support children's learning, Chao (1996) reported that Chinese immigrant mothers believe they need to invest in and make sacrifices for children's achievement. Such beliefs appear to be translated into actual practice: Parents of Chinese (vs. European) descent show heightened involvement in children's learning (e.g., Chen & Stevenson, 1989; Cheung & Pomerantz, 2011; Ng, Pomerantz, & Lam, 2007). Such involvement on the part of Chinese parents is likely to be guided by *guan*. Chao (1994, p. 1116) reported that immigrant Chinese mothers were more likely than European American mothers to endorse that "mothers primarily express love by helping children succeed, especially in school." Thus, it is possible that parents' support of children's learning is seen as motivated by parents' love for children in Chinese culture.

### **Implications of Parents' Beliefs about Learning for their Child-based Worth**

Crocker and colleagues (Crocker & Knight, 2005; Crocker & Wolfe, 2001) maintain that individuals often base their feelings of worth on particularly significant areas of their lives; these areas regulate their behavior, leading to efforts to minimize failure and maximize success in them (see also Kernis, 2003). One area on which parents base their feelings of worth is children's

performance, with meaningful variation among European American mothers (Grolnick et al., 2007). Moreover, mothers' tendency to base their worth on children's performance is stronger in China than the United States, with such a difference accounting for the well-documented (for reviews, see Ng et al., in press; Pomerantz, Ng, & Wang, 2008) tendency for Chinese (vs. American) parents to be more psychologically controlling – that is, attempting to regulate children's psychological and emotional lives (Ng et al., in press).

Chinese parents may base their worth on children's performance more than do American parents in part because they believe more strongly that children's learning reflects morality and parents' support of children's learning reflects love and duty. In both countries, the more parents believe children's learning reflects morality, the more they may see children's performance in school as indicating that parents have raised children to be morally upright members of society. Similarly, if parents believe the support they provide for children's learning reflects love and duty, children's performance in school may attest to their love for children as well as their fulfillment of their parental duties. Given the importance of morality as well as love and duty in China and the United States, when parents view children's learning as reflecting morality and parents' support of children's learning as reflecting love and duty, they may base their worth on children's performance in school in both countries.

### **Overview of the Current Research**

The current research was designed to investigate the idea that parents in China and the United States have different beliefs about children's learning and parents' role in it, with attention to beliefs that may be particularly salient in Chinese culture – that is, children's learning reflects children's morality and parents' support of children's learning is indicative of parents' love and duty. Empirical evidence in regards to such beliefs is scarce, despite the widely shared conjecture that such notions influence parents (e.g., Cheung & Pomerantz, 2011;

Huntsinger, Jose, Larson, Krieg, & Shaligram, 2000; Ng et al., 2007). Two specific aims guided the research. The first was to evaluate if Chinese and American parents differ in their beliefs about children's learning and parents' role in it. It was anticipated that Chinese (vs. American) parents would be more likely to view children's learning as reflecting children's morality and parents' support of children's learning as indicative of parents' love and duty.

The second aim was to examine if such differences in parents' beliefs underlie the difference in the extent to which their feelings of worth are dependent on children's performance. Based on prior research, it was expected that Chinese parents' would base their worth on children's performance more than would their American counterparts because of their beliefs about children's learning. Mothers of elementary school children in Hong Kong and the United States reported on their endorsement of the two beliefs about learning (i.e. children's learning as reflecting morality and parents' support of children's learning as reflecting love and duty) as well as the extent to which their worth is based on children's performance.

## **Method**

### **Participants**

Participants were 135 mothers of fourth- and fifth-grade children (see Ng et al., 2007). Sixty-six mothers resided in Hong Kong (mother mean age = 40.55 years; child mean age = 9.97 years; 45% girls) and 69 resided in the Midwestern United States (mother mean age = 39.41 years; child mean age = 9.76 years; 39% girls). American mothers were all of European descent, except for one of Hispanic descent. Chinese mothers were generally less educated than their American counterparts, reflecting the fact that college degrees were less common in Hong Kong when mothers were of college age. Five percent of Chinese mothers and 22% of American mothers had an advanced degree (e.g., MA or PhD), 8% of Chinese mothers and 40% of American mothers had a college degree, and 73% of Chinese mothers and 38% of American



mothers had a high school diploma. Household incomes in the two countries were generally reflective of the middle class at the time – 2004 to 2005 – the research was conducted. According to mothers, in Hong Kong, household annual incomes ranged from HK\$240,000 or below to HK\$1,200,000 to HK\$1,440,000, with a modal income of HK\$240,000 to HK\$480,000. In the United States, the range was \$20,000 or below to \$160,000 or above, with a modal income of \$80,000 to \$100,000. Most mothers worked outside the home at least part-time (71% in China and 68% in the United States) and were married (91% in China and 87% in the United States). Although the two samples differed in terms of mothers' educational attainment, they were similar in terms of representing the middle class of each country, with similar rates of employment and divorce. Notably, mothers' educational attainment was not associated with any of the central constructs when adjusting for country,  $|r|s < .09$ , *ns*; thus, not surprisingly, when it was included as a covariate in the central analyses, it did not account for any of the findings.

### **Procedure and Measures**

Mothers received a set of questionnaires in the mail, which they returned when they visited the lab for another study (see Ng et al., 2007). The measures were originally in English. To generate the Chinese versions, standard translation and back-translation procedures (Brislin, 1980) were followed by a team of native English and Chinese speakers, with repeated discussion to modify the wording of items to ensure the equivalence of the measures across the two countries (Erkut, 2010). The means and standard deviations of the measures are presented in Table 1.

**Beliefs about learning.** Although there has been much attention to the beliefs about learning studied in the current research, the scarce empirical work to date has not relied on multi-item scales that can be practically administered to parents (Chao, 1994; Tao & Hong, 2000). Thus, new measures of beliefs about learning were developed for this study by a team of Chinese

and European Americans who were familiar with both cultural backgrounds as well as the constructs. In a study of Chinese and American mothers ( $N = 215$ ), examination of a subset of the items (with minor wording adjustments) for each measure of mothers' beliefs about learning used in the current study indicated that in addition to being internally reliable as reported below, the measures are stable over a year ( $r_s = .42$  to  $.70$ ,  $p_s < .001$ ; Ng & Pomerantz, 2012). Their validity is evident in the fact that, adjusting for country, mothers' belief about the morality of children's learning was not associated with their involvement in children's learning ( $r_s = .05$  and  $.03$ ,  $ns$ ), but beliefs about parents' support of children's learning as love and duty were ( $r_s = .19$  to  $.30$ ,  $p_s < .01$ ); all three beliefs were associated with mothers' heightened investment in children doing well in school ( $r_s = .20$  to  $.32$ ,  $p_s < .01$ ), with the exception of one time point for viewing parents' support of children's learning as indicating love ( $r = .13$ ,  $ns$ ; Ng & Pomerantz, 2012).

*Mothers' beliefs about the morality of children's learning* were assessed with eight statements about children's effort and performance in school as reflective of whether children were good or bad children (e.g. "If kids don't try their hardest in school, they are probably bad kids;" for the full list of items, see Table A1 in the Appendix). Mothers rated their agreement with each statement (1 = *Very much disagree* to 7 = *Very much agree*). The mean was taken, with higher numbers indicating greater endorsement of the idea that children's learning reflects their morality ( $\alpha_s = .70$  in Hong Kong and  $.83$  in the United States).

*Mothers' beliefs about parents' support of children's learning as love* were examined with seven statements describing how parents' assistance with and concern about children's learning reflect parents' love for children (e.g., "If parents love their children, they should try their best to help their children to do well in school;" for the full list of items, see Table A2 in the Appendix). Mothers rated their agreement with each statement (1 = *Very much disagree* to 7 = *Very much agree*). The mean was taken, with higher numbers indicating a greater endorsement of the idea

that parents' support of children's learning reflects parents' love for children ( $\alpha = .63$  in Hong Kong and  $.79$  in the United States).

*Mothers' beliefs about parents' support of children's learning as duty* were assessed with 12 statements describing parents' assistance with and concern about children's learning as the duty of parents (e.g., "It is parents' duty to teach children how to do their homework;" for the full list of items, see Table A3 in the Appendix). Mothers rated their agreement with each statement (1 = *Very much disagree* to 7 = *Very much agree*). The mean was taken, with higher numbers indicating greater endorsement of the idea that parents' support of children's learning is parents' duty ( $\alpha = .82$  in Hong Kong and  $.85$  in the United States).

**Child-based worth.** The extent to which mothers based their feelings of worth on children's performance was examined using items from the Eaton and Pomerantz's (2004) scale. Mothers rated (1 = *Very much disagree* to 7 = *Very much agree*) 10 statements about whether their feelings of worth depend on children's success and failure (e.g., "When my daughter succeeds, I feel good about myself;" for the full set of items, see Ng et al., in press). The mean was taken, with higher numbers indicating greater child-based worth ( $\alpha = .82$  and  $.93$  in Hong Kong and the US, respectively). Prior research using these items indicates that in addition to being internally reliable, they are temporally reliable; moreover, the items possess discriminant and convergent validity (e.g., they are moderately associated with mothers' endorsement of performance goals) as well as predictive validity (i.e., they predict psychologically controlling parenting concurrently and longitudinally; Ng et al., in press).<sup>1</sup>

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<sup>1</sup> The measure used by Ng and colleagues (in press) included an additional five items that did not specifically ask about success or failure, but rather performance in general (e.g., "How my child does in school tells me something about my value as a person."). However, when the analyses were conducted excluding these additional items, the pattern of results was the same.

## Results

Following a preliminary set of analyses in which we evaluated the equivalence of the measures between China and the United States, we conducted two sets of analyses to test the main hypotheses. In the first, we examined whether Chinese mothers' beliefs about learning differed from those of their European American counterparts; we also tested whether there were differences, as in prior research, in their tendency to base their worth on children's performance. In the second set, we evaluated whether the differences between Chinese and European American mothers' beliefs about learning mediated the differences in their child-based worth.

### Measurement Equivalence

Two-group Confirmatory Factor Analysis (CFA) in the context of Structural Equation Modeling (SEM) was conducted to assess the metric and intercept invariance of the measures between China and the United States. For each measure, the latent construct was based on four parcels; these parcels comprised two to three items determined randomly, except for one parcel for the parental support as love measure that contained only one item. A set of nested models was examined for each measure with comparisons between unconstrained and constrained models. These models were identical, except that the parameters of the unconstrained model were freely estimated, whereas the factor loadings and intercepts of the constrained model were forced to be equal between countries. The models all fit the data well,  $\chi^2(N = 135) < 10.35$ , CFIs  $> .99$ , RMSEAs  $< .02$ . Moreover, the fit of each unconstrained model did not differ significantly from that of the corresponding constrained model, as indicated by the chi-square difference tests,  $\Delta\chi^2 < 7.70$ , *ns*. Thus, the measures possess metric and intercept invariance across China and the United States, allowing for valid comparisons of the means and associations between the two countries.

### Differences between Chinese and American Mothers

**Beliefs about learning.** In a set of preliminary analyses, we explored the associations among the beliefs about learning. As shown in Table 2, the more mothers viewed children's learning as reflective of morality, the more they saw parents' support of children's learning as reflective of love; although this trend was significant among American but not Chinese mothers, the difference between the two did not reach significance,  $Z = 1.90$ , *ns*. In both countries, mothers' beliefs about the morality of learning were not associated with their beliefs about parents' support of children's learning as their duty. Chinese mothers who viewed such support as love also viewed it as duty, but this was not the case for American mothers, with the association differing significantly in the two countries,  $Z = 2.30$ ,  $p < .05$ .

A Multivariate Analysis of Variance (MANOVA) was conducted on the beliefs about the morality of children's learning, parental support of children's learning as love, and parental support of children's learning as duty. The MANOVA yielded a multivariate effect of country, Wilks' lambda = .78,  $F(3, 130) = 12.10$ ,  $p < .001$ . As anticipated, the univariate tests revealed that Chinese mothers believed more than did American mothers that children's learning reflects their morality (see Table 1),  $F(1, 132) = 14.81$ ,  $p < .001$ . Also consistent with expectations, Chinese (vs. American) mothers viewed parents' support of children's learning as indicative of parents' love for children,  $F(1, 132) = 9.22$ ,  $p < .01$ . Surprisingly, Chinese mothers were *less* likely than their American counterparts to report that such support is parents' duty,  $F(1, 132) = 12.77$ ,  $p < .001$ . An examination of the findings within each country showed that although mothers in both countries indicated that parents' support of children's learning is more an act of duty than love,  $t_s > 11.40$ ,  $p_s < .001$ , this was particularly true of American mothers, given that they were more likely than their Chinese counterparts to report that such support is a duty.

**Child-based worth.** It was anticipated that, as in prior research, Chinese (vs. American) mothers' feelings of worth would be more dependent on children's performance. An Analysis of

Variance (ANOVA) yielded a main effect of country,  $F(1, 134) = 7.82, p < .01$ : Chinese mothers based their worth on children's performance more than did American mothers (see Table 1).

### **Mediation Processes**

To examine if the differences in Chinese and American mothers' beliefs about the morality of children's learning and parents' support of children's learning as love underlie the difference in their child-based worth, Baron and Kenny's (1986; see also Kenny, Kashy, & Bolger, 1998) guidelines for detecting mediation were followed. These guidelines require that the mediator (i.e., mothers' beliefs) and the dependent variable (i.e., child-based worth) are associated when adjusting for the independent variable (i.e., country), and that the association between the independent variable and the dependent variable is reduced when adjusting for the mediator. Although the Sobel test has been widely used to test the significance of the indirect effect (Baron & Kenny, 1986), the nonparametric resampling procedure of bootstrapping is recommended, especially when the sample size is not large as in the current case (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; see also Preacher & Hayes, 2008). Bootstrap analyses were conducted with 5000 samples to test the significance of the indirect effect (i.e., from country to beliefs about learning to child-based worth). There were no differences between China and the United States in the associations between each of the beliefs about learning and child-based worth (see Table 2),  $Z_s < 1.23, ns$ .

As shown in Figure 1, mothers' belief about the morality of children's learning contributed to the country difference in mothers' child-based worth. Such a belief was positively associated with mothers' child-based worth when analyses adjusted for country. When adjusting for this belief, the difference in Chinese and American mothers' child-based worth was reduced such that it was no longer significant, with the ratio of the indirect effect to the total effect being .58. Bootstrapping indicated that the indirect effect was significant, 95% (bias-corrected

and accelerated) CI = .15 to .60. Mothers' belief about parents' support of children's learning as indicating love also appeared to contribute to the difference in Chinese and American mothers' child-based worth (see Figure 2). Such a belief was positively associated with mothers' child-based worth when analyses adjusted for country. Once analyses adjusted for this belief, the country difference in mothers' child-based worth was no longer significant; the ratio of the indirect effect to the total effect was .26, with the bootstrap analysis indicating a significant indirect effect, 95% (bias-corrected and accelerated) CI = .04 to .35.

Given that both mothers' beliefs about the morality of learning and parents' support of children's learning as reflecting love contributed to the difference in Chinese and American mothers' child-based worth, an additional mediation model was tested with the two beliefs entered simultaneously as mediators. Results indicated an indirect effect via mothers' belief about the morality of children's learning,  $\beta(130) = .38, p < .001$ , 95% (bias-corrected and accelerated) CI = .12 to .58. However, the indirect effect via mothers' belief about parents' support as reflecting love just failed to reach significance, 95% (bias-corrected and accelerated) CI = .00 to .26, given that such a belief no longer predicted mothers' child-based worth,  $\beta(130) = .14, ns$ . Notably, bootstrap analyses comparing the two indirect effects did not reveal a significant difference, 95% CI = -.02 to .51, suggesting that the two did not differ sizably.

### Discussion

Although differences in Chinese and American parenting practices related to children's learning have been attributed to cultural beliefs about learning and parents' role in it (e.g., Cheung & Pomerantz, 2011; Huntsinger et al., 2000; Ng et al., 2007), there has been little empirical examination of such beliefs. The current research demonstrated that Chinese and American mothers differed in their beliefs about learning and parents' role in it. Chinese mothers saw learning as a moral endeavor that parents support out of love more than did American

mothers, who surprisingly viewed such support as a duty more than did Chinese mothers. Notably, in both China and the United States, the more mothers believed children's learning reflects morality and parents' support of children's learning indicates love, the more they felt their worth depended on children's performance, with no evidence that this relation differed in the two countries. Thus, such beliefs, although particularly salient in Chinese culture, have similar implications for mothers' view of themselves in China and the United States. Moreover, Chinese (vs. American) mothers' stronger tendency to hold such beliefs accounted, at least partially, for their tendency to base their worth on children's performance more.

The current research provided empirical evidence that two Chinese ideas about learning – children's learning as reflecting morality and parents' support of children's learning as indicating love – are indeed held more by Chinese (vs. American) parents, contributing to their tendency to base their worth on children's performance more. These beliefs appeared to be meaningful for American mothers as well, given that they were similarly associated with mothers' child-based worth. These results illustrate two important points about going beyond the Western ideas that consistently guide psychological research, which is largely conducted exclusively in the West (Arnett, 2008; Henrich, Heine, & Norenzayan, 2010). First, such an approach can reveal important concepts that may be overlooked using a mainstream approach, but that are relevant. Indeed, Allwood and Berry (2006) have argued that Western psychology is essentially an indigenous psychology, in the sense that it is “culture-bound” (p.263) and thus limited in its ability to explain the psychology of individuals in non-Western societies. Focusing on research on parenting, Bornstein (2006) also points out that there has been a focus on constructs that “accord with ideals mostly or exclusively appropriate to middle-class, industrialized and developed, Western countries” (p.899), thereby neglecting cultural diversity in parenting.



Second, stepping outside of a Western framework can also contribute to a fuller understanding of individuals' behavior in the West by revealing important psychological constructs that have been overlooked but exist nonetheless in Western culture (Leung, 2007). For example, the Chinese notion of *guan* (Chao, 1994) has been found to be relevant in the West, with American students reporting better psychological functioning the more they perceive their parents as using practices related to *guan* (Stewart, Bond, Kennard, Ho, & Zaman, 2002). The applicability of Chinese cultural concepts in the West is not surprising given growing evidence that seemingly opposing values often coexist in parenting (Raeff, 2010; Tamis-LeMonda et al., 2008). Many American mothers in the current research believed that children's learning reflects morality and parental support of children's learning reflects love, albeit to a lesser extent than did Chinese mothers. Moreover, mothers' beliefs were meaningfully related to their feelings about themselves in the United States, as was also the case in China.

Notwithstanding Greek philosophies that depict learning as a pursuit of truth and knowledge (Tweed & Lehman, 2002), American parents may associate children's learning with morality due to influence of the protestant work ethic (Weber, 1959): Because each individual is expected to fulfill their God-given responsibility by utilizing their endowed abilities through hard work, hard work is imbued with moral significance (Furnham, 1987; Heine, 2007). Moreover, American parents may view their support of children's learning as a duty, because childrearing is considered a God-given responsibility in Protestantism (Rigby, 2004). This may explain why American mothers reported parental support of children's learning as a duty more than did Chinese mothers. It is also consistent with Hsu's (1953, p.80) description of American and Chinese parents' sense of obligation to children in his pioneering work: "The important thing to Americans is what parents should do for their children; to Chinese, what children should do for their parents."

Notably, cultural beliefs are not likely to be static despite their typically long historical roots. Rather, they are likely to be challenged as conflicting values arise with societal development (Greenfield, 2010; Kagitcibasi, 2011). In the case of China, its modernization, rapid societal changes, and increasing contact with Western learning beliefs are likely to influence parents' beliefs about learning. Although children's learning may be seen as a moral endeavor in Chinese culture, Chinese parents also heavily focus on the instrumental value of children's schoolwork (Fong, 2004). Many Chinese children, whether in the mainland, Taiwan, or Hong Kong, are under insurmountable pressure to achieve in school, which is viewed as a determinant of their future success. Under the One Child Policy, Mainland Chinese parents have been reported to increasingly view their only child's schoolwork as a financial investment that serves to guarantee their future living standard (Fong, 2004). On one hand, it is possible that such an instrumental view of children's learning may undermine the tendency for parents to view learning as virtuous in itself. On the other, such a view may not conflict with the traditional view of learning as a moral endeavor: In ancient China, although learning was considered a path to self-perfection, performing well in the imperial examination was a major path to upward mobility (Tweed & Lehman, 2002).

Several limitations of the current research warrant interpreting the results with caution and point to directions for future research. First, because of the limited sample recruited from just one site in each country, additional research is needed to generalize the current findings to larger populations of Chinese and American parents, particularly those not of European descent. Second, we obtained mothers' reports, but not informants' reports, of mothers' beliefs about learning and their child-based worth given that such beliefs and feelings might not be readily observed by others. There are tradeoffs, however, associated with the use of self-reports (e.g., mothers may underreport the extent to which they base their worth on children's performance).

Third, causal conclusions are precluded due to the concurrent design of the study. Future research designed to identify causal direction is needed. Fourth, this research did not assess mothers' practices. Prior research has linked Chinese and American mothers' child-based worth to their heightened psychological control (Ng et al., in press), it would be fruitful to identify the role of mothers' learning beliefs in such parenting as well. Despite these caveats, the current research suggests that mothers' beliefs about children's learning and parents' role in it contribute to the tendency for Chinese mothers to base their worth on children's performance to a greater extent than do American mothers, which appears to contribute to differences in parenting in China and the United States.

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Table 1

*Chinese and American Mothers' Beliefs about Learning and Their Child-Based Worth*

	Chinese		American		<i>d</i>	95% Confidence Interval
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Morality of children's learning	4.04 <sub>a</sub>	0.88	3.40 <sub>b</sub>	1.00	0.67	0.33, 1.02
Parents' support of children's learning as love	3.58 <sub>a</sub>	0.83	3.14 <sub>b</sub>	0.85	0.52	0.18, 0.87
Parents' support of children's learning as duty	4.97 <sub>a</sub>	0.89	5.48 <sub>b</sub>	0.77	-0.61	-0.96, -0.26
Child-based worth	3.68 <sub>a</sub>	1.04	3.10 <sub>b</sub>	1.35	0.48	0.13, 0.82

*Note.* An effect size (*d*) of .20 is small, .50 is medium, and .80 is large (Cohen, 1992). Means with different subscripts are significantly ( $p < .01$ ) different between countries.

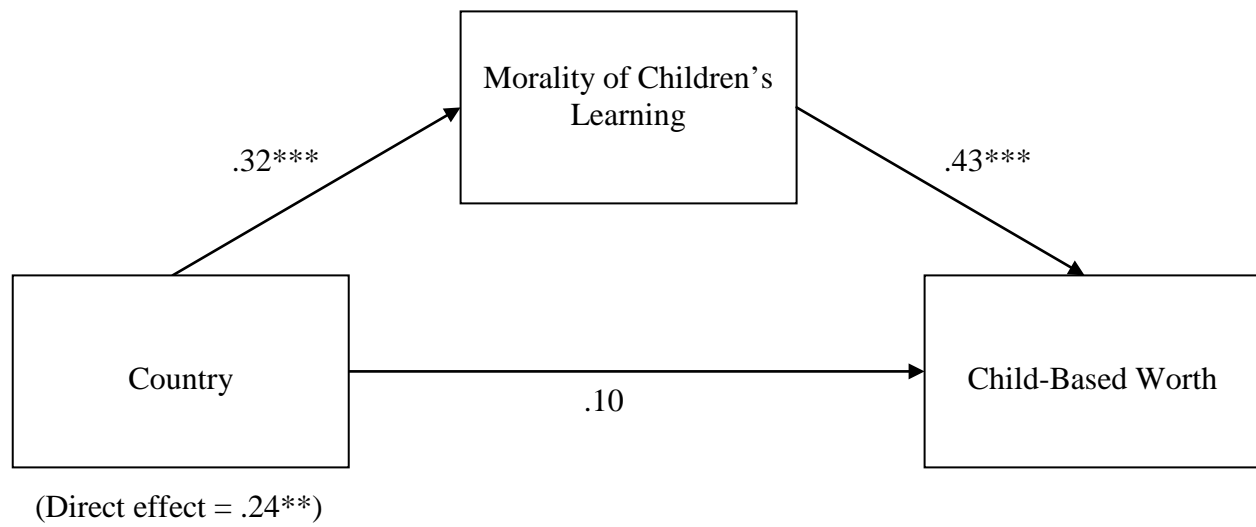
Table 2

*Correlations among Mothers' Beliefs and Child-Based Worth*

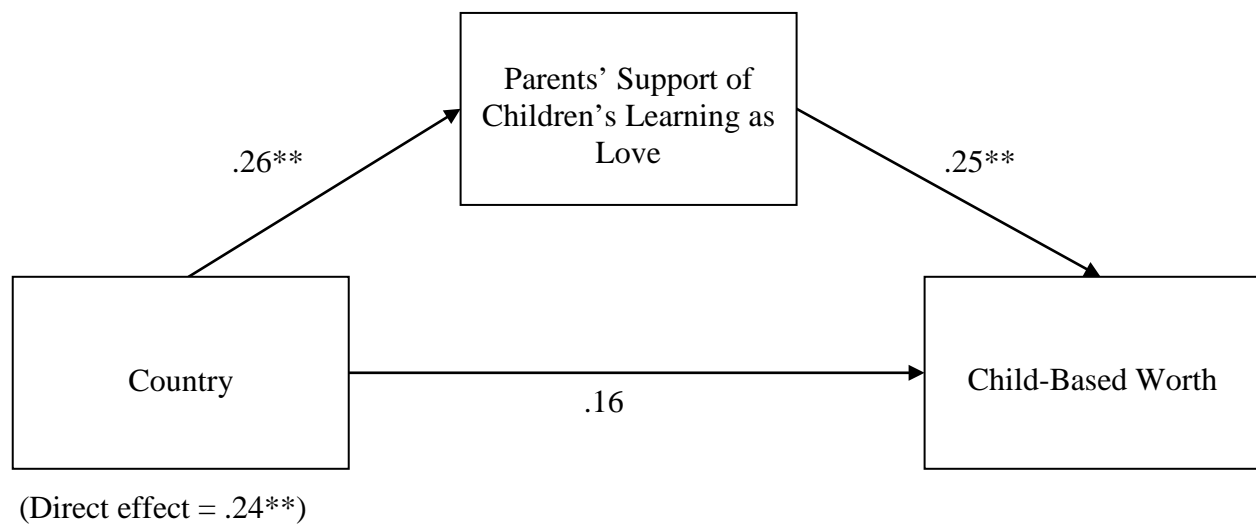
	1	2	3	4
1. Morality of children's learning	--	.44***	.08	.46***
2. Parents' support of children's learning as love	.13	--	-.04	.33**
3. Parents' support of children's learning as duty	.11	.35**	--	-.06
4. Child-based worth	.35**	.13	.14	--

*Note.* Correlations for the Chinese sample are presented below the diagonal; those for the American sample are presented above the diagonal.

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



*Figure 1.* Mothers' belief about the morality of children's learning as a mediator of the country difference in mothers' child-based worth. *Note.* China = 1; United States = 0. \*\* $p < .01$  \*\*\* $p < .001$



*Figure 2.* Mothers' belief about parents' support of children's learning as love as a mediator of the country difference in mothers' child-based worth. *Note.* China = 1; United States = 0 \*\* $p < .01$

*Appendix*

Table A1

*Mothers' Beliefs about the Morality of Children's Learning*

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1. If kids don't try their hardest in school, they are probably bad kids.
  2. Kids who try their best in school are generally the kind of kids who are good deep down.
  3. How much effort kids put into school can show whether they are good kids or not.
  4. Working hard in school is part of being a good kid.
  5. An important characteristic of a good kid is diligence.
  6. If a kid is not doing well in school, it suggests that the kid is not a good kid.
  7. Kids that do well in school tend to be good kids.
  8. Doing well in school is part of being a good kid.
-

Table A2

*Mothers' Beliefs about Parents' Support of Children's Learning as Love*

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1. If parents love their children, they should try their best to help their children to do well in school.
  2. When parents do not encourage their children to do well in school, it means they do not love their children.
  3. It is hard to imagine that parents love their children if they do not give them the help they need with schoolwork.
  4. Just because parents do not help children with their homework does not mean they do not love their children. (reverse-scored)
  5. One cannot judge parents' love for their children from how much they provide their children with assistance to do well in school. (reverse-scored)
  6. If parents really love their children, they will do everything they can to help children do their best in school.
  7. Parents who are not highly concerned about their children's schoolwork probably do not care very much about their children.
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Table A3

*Mothers' Beliefs about Parents' Support of Children's Learning as Duty*

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1. It is parents' duty to teach children how to do their homework.
  2. Parents have no obligation to help children to do well in school. (reverse-scored)
  3. When children struggle with their schoolwork, parents are at fault if they have not provided children with some form of assistance (e.g., helping them or hiring a tutor).
  4. It is a parent's duty to sacrifice time and energy to help children with their schoolwork.
  5. Although it would be nice if parents took responsibility for their children's performance in school, it is not necessary. (reverse-scored)
  6. Parents can provide children with assistance with their schoolwork but it is not their responsibility to do so. (reverse-scored)
  7. It is often important that parents make sacrifices to motivate their children to try their hardest in school.
  8. Parents are responsible for motivating children to work hard in school.
  9. It is the duty of the parent to make sure that children work their hardest in school.
  10. Parents are responsible for helping children to value school.
  11. Parents can encourage children to try their best in school, but it is not their responsibility. (reverse-scored)
  12. It is not the responsibility of parents to make sure children work hard when it comes to school. (reverse-scored)
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