Parenting Measurement, Normativeness, and Associations with Child Outcomes: Comparing Evidence from Four Non-Western Cultures

Research Highlights

This is the first study to use a measurement invariant instrument for examining commonality and specificity principles of parenting across multiple non-Western cultures.

Measurement invariances were achieved across cultures and parent gender for different parenting constructs including: authoritative and authoritarian parenting, group harmony socialization, intrusive control, and their sub-dimensions.

Cross-cultural differences in parenting normativeness did not follow the pattern of economic development but yielded culture-specific patterns, which supported the specificity principle.

Both commonalities and specificities were manifested in associations between parenting and child outcomes across cultures.

Abstract

This study compared parenting across four non-Western cultures to test cross-cultural commonality and specificity principles in three aspects: measurement properties, parenting normativeness, and their associations with child outcomes. Both mothers and fathers (*N*=1509 dyads) with preschool-aged children (*M*=5.00 years; 48% girls) from urban areas of four countries (Malaysia, *N*=372; China, *N*=441; Turkey, *N*=402; and Japan, *N*=294) reported on four parenting constructs (authoritative, authoritarian, group harmony socialization, and intrusive control) and their sub-dimensions using modified culturally relevant measures. Teachers reported on children's internalizing, externalizing, and prosocial behaviors. The commonality principle was supported by two sets of findings: (1) full measurement invariance was established for most parenting constructs and sub-dimensions, except that intrusive control only reached partial scalar invariance, and (2) no variations were found in associations between parenting and any child outcomes across cultures or parent gender at the construct level for all four parenting constructs and at the sub-dimensional level for authoritarian and intrusive control sub-dimensions. The specificity principle was supported by the other two sets of findings: (1) cross-cultural differences in parenting normativeness did not follow the pattern of economic development but yielded culture-specific patterns, and (2) at the sub-dimensional level, the authoritative parenting and group harmony socialization sub-dimensions were differently associated with child outcomes across cultures and/or parent gender. The findings suggested that examining specific dimensions rather than broad parenting constructs is necessary to reflect cultural specificities and nuances. Our study provided a culturally-invariant instrument and a three-step guide for future parenting research to examine cross-cultural commonalities/specificities.

Keywords: parenting, cross-cultural comparisons, commonality, specificity

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Most parenting constructs were initially developed employing middle-class European American families but have more recently been expanded to include parents from diverse backgrounds (e.g., Sahithya et al., 2019; Tulviste, 2019). Cross-cultural parenting research has focused on furthering an understanding of parenting commonalities and specificities (Bornstein, 2017; Lansford, 2022). In these endeavors, however, researchers have tended to use measures based on Western conceptualizations of parenting (e.g., Lansford et al., 2018; Rothenberg et al., 2021). Accounting for culturally shared and specific socialization practices is important for understanding the ways parenting influences children's social and emotional development (Malti & Cheah, 2021). Accordingly, efforts have also been made to tap into indigenous parenting practices by designing scales that capture culturally relevant socialization constructs (e.g., Zulkefly et al., 2021). Despite these fruitful efforts, additional work allowing for further comparisons of parenting constructs across cultures is needed.

Thus, the aim of this study was to develop parenting measures that capture an array of parenting practices relevant to four non-Western cultures and to compare their measurement properties, normativeness (i.e., how frequently parents use specific parenting practices within a specific culture), and linkages to child outcomes across these four cultures. Specifically, we selected two western-derived parenting constructs, authoritative and authoritarian, which have been found to capture important parenting behaviors across many cultural contexts (Olivari et al., 2013). Additionally, we included group harmony socialization and intrusive control, which are important aspects of parenting that facilitate children’s interdependence emphasized in Asian cultural contexts (Nelson et al., 2006; Xu et al., 2014).

Socio-Cultural Factors Related to Parenting in Four Non-Western Cultures

This study examined parenting in major urban cities in four countries (Malaysia, China, Turkey, and Japan) due to their cultural, economic, and societal similarities and differences. This comparative approach allowed us to examine mechanisms underlying commonalities and specificities in parenting across cultures. The promotion of interdependence, filial piety, and group harmony stemming from Buddhist and Confucian influences are reflected in childrearing practices across many regions of Asia. These ideologies are also valued across Muslim religious populations (including Turkish and Malay families) based on their collectivistic cultural orientations (e.g., Hossain, 2014; Sen et al., 2014). This is often contrasted with Western independence-oriented cultures that emphasize the fostering of individuality and autonomy. However, important heterogeneities in how collectivism and interdependence are practiced exist across the four cultures, particularly regarding their emphasis on vertical (i.e., hierarchy over interdependence) or horizontal (i.e., interdependence over hierarchy) collectivism (Fatehi et al., 2020), which may result in nuances and differences in childrearing practices.

The collectivistic culture in China emphasizes both interdependence and hierarchy as well as a balance between the two orientations. As such, Chinese parents convey interdependence, group harmony, and filial piety messages using restrictive, punitive, and controlling childrearing strategies, accompanied by a caring, responsive, and supportive approach to fostering children's well-being and attunement to group harmony (Chao & Tseng, 2002; Xu et al., 2014).

Similar collectivistic parenting orientations have been identified in Malay Muslims, Malaysian Chinese, and Indian Hindu populations (Hossain, 2014; Raj & Raval, 2013; Zulkefly et al. 2021). However, due to influences of Islamic and indigenous tribal childrearing values, Malaysian parents emphasize showing warmth and affection towards their children while also endorsing maintenance of social hierarchy (Hossain, 2014). This

may lead to Malaysian parents' use of more authoritative parenting than Mainland Chinese parents in addition to their shared endorsement of group-harmony-oriented socialization and controlling parenting practices.

Interestingly, Japanese parenting is often characterized somewhat differently from Chinese and Malaysian parenting in how interdependence and social hierarchy are socialized. Japanese culture seeks to foster individuals' internal drive and willingness to immerse themselves into a group, connect with others, and obey authority figures (Dien, 1999). Therefore, Japanese parents may socialize their children to connect and obey naturally and willingly without grudges by encouraging interdependence and group harmony in less strict, punitive, and controlling ways. Indirect socialization strategies that promote autonomous learning through children experiencing the consequences of their actions are highly valued (Holloway, 2010). Japanese parents also value explaining and reasoning to stimulate children's sense of empathy towards preparing them to skillfully interact with others in kind, humble, and socially sensitive ways (Holloway & Nagase, 2014; Rothbaum et al., 2000).

Socioeconomic differences among these cultures may also have a bearing on parenting. China and Malaysia share a similar level of economic development (based on GDP per capita; The World Bank, 2022). However, Japan is more economically developed than China and Malaysia (The World Bank, 2022) but shares more cultural similarities with China than Malaysia due to broad Confucian and Buddhist influences on childrearing that co-exist with Shinto beliefs (Holloway & Nagase, 2014). Comparing parenting across these three countries can potentially allow for some disentangling of the roles of culture and economic development.

Turkey is ranked halfway between countries on dimensions of individualism and collectivism (Hofstede et al., 2010). Economic development in Turkey is comparable with China and Malaysia (The World Bank, 2022), but its cultural distinction from East and

Southeast Asian cultures may allow for testing to what extent Asian-emphasized parenting is applicable and measurable in another non-Western but interdependent-focused culture (Sen et al., 2014). Further, due to historical and geographical factors, the Muslim-based Turkish culture may be more influenced by European cultures than the other three Asian cultures (Poyraz, 2010). Specifically, Turkish culture endorses a more horizontal form of collectivism than East and South Asian cultures, with an emphasis on interdependence and equality among social members instead of hierarchy (Cukur et al., 2004). Past research also suggests that both interdependent and autonomy-supportive aspects of parenting are endorsed by urban Turkish parents as they value interdependence but also strive to foster children's autonomy rather than obedience (Durgel et al., 2013; Kağıtçıbaşı & Ataca, 2005). Therefore, an important aim of this study is to clarify how much commonality and specificity in parenting practices exist across these four cultural settings given their shared and nuanced differences in collectivistic orientations and economic development.

Cross-Cultural Commonalities and Specificities in Parenting across the Four Cultures

The commonality and specificity principles have been widely used to understand parenting and child development from a cross-cultural perspective (Bornstein, 2017). The commonality principle proposes that specific parenting practices in different cultures may lead to similar child outcomes due to children's similar, fundamental developmental needs. In contrast, the specificity principle proposes that associations between parenting and child development are specific to cultural settings and domains of child development (Lerner & Bornstein, 2021). Previous studies often adopt commonality and specificity principles to explain cross-cultural similarities and differences between parenting and child outcomes (e.g., Rothenberg et al., 2020, 2021), but neglect its mechanisms for explaining measurement properties and normativeness of parenting. We organize different lines of theoretical and empirical findings around the commonality and specificity principle frameworks to

understand three layers of cross-cultural similarities/differences in parenting constructs: first, the frame of variance versus invariance in parenting measurement; second, economic versus cultural factors underlying differences in parenting normativeness; and third, cross-cultural consistencies versus inconsistencies between parenting and child outcomes.

Commonalities and Specificities in Parenting Measurement

Following the commonality principle, we expect parenting constructs, either Western-emphasized or Asian-emphasized, to be universally applicable and measurable across cultures. This view posits that the definition of Western versus Asian parenting is artificial and that parents across cultural contexts engage in similar parenting practices (Bornstein et al., 2021). Specifically, fundamental dimensions of parenting (e.g., control, intrusiveness) can describe parenting in many cultural contexts, and cross-cultural parenting differences are primarily manifest in the normativeness of these parenting practices within specific cultures (Grolnick & Pomerantz, 2009). The commonality principle is supported by cross-cultural research demonstrating measurement invariance across different ethnic and cultural backgrounds (e.g., Gomez & Rohner, 2011; Senese et al., 2016). However, it is notable that this view is often supported when broad, overarching parenting constructs (e.g., acceptance, rejection) are measured.

In contrast, the specificity principle proposes that parenting differs fundamentally in both forms and functions across cultures (Bornstein, 2017), such that parents use different parenting behaviors (i.e., different forms) to deliver the same message such as love (i.e., same function) or engage in similar parenting practices (i.e., same form) to achieve divergent socialization goals (i.e., different functions). As such, comparing parenting across different cultures would inevitably fail as parenting behaviors within cultures are unique to complex individual, cultural, and social factors. Empirical evidence supporting the specificity principle is often obtained within a specific culture with an emphasis on its unique parenting behaviors,

values, and environments (e.g., Cheah et al., 2015; Weber et al., 2017). Researchers advocating for the specificity principle also tend to use an emic, within-culture approach to study parenting and culture (e.g., Weber et al., 2017). As noted above, we differ with a rigid expression of the specificity principle, but our statistical analysis will nonetheless allow for tests of both commonality and specificity.

Commonalities and Specificities in Parenting Normativeness

There has been a consensus that parenting normativeness varies across cultures (Lansford, 2022). Therefore, the discussion on commonalities and specificities in parenting normativeness focuses not on whether the variation exists but on whether the variation primarily results from economic, social structural factors (e.g., urbanization) or from cultural factors. The commonality principle views parenting normativeness as a function of societal and family structure and argues that parents endorse parenting practices that cultivate child characteristics that fit the needs of a society (Park et al., 2014). For example, parents in more industrialized societies may value more independence and individualism as autonomy and competence are increasingly emphasized in the process of industrialization (Kağıtçıbaşı, 2013; Keller & Lamm, 2005).

Greenfield's (2009) Gemeinschaft ("community") versus Gesellschaft ("society") framework suggests that changes associated with industrialization processes (e.g., movement from rural environments with informal education to urban environments with formal schooling) may shift cultural values towards individualism and independence. Kağıtçıbaşı's (2005) autonomy and relatedness model proposes that family members increasingly value autonomy over relatedness as family structures shift from large households with multi-generational members and a clear hierarchy to small households with only nuclear family members. Similarly, researchers found that historical and social changes in East Asia have led parents to increasingly value independence as a socialization goal for their children (Park

et al., 2014). Intergenerational research has also found that newer generations tend to endorse more warmth, grant more autonomy, and exhibit less coercion compared to older generations (Garcia et al., 2020).

In summary, the commonality principle highlights the role of historical change in parenting and proposes that parents may increasingly value autonomy, individualism, and independence as a society becomes more industrialized and urbanized. Following this view, economic development and structural differences between societies may be a key driving force for differences in parenting normativeness in the urban samples of the current study.

Conversely, the specificity principle highlights culture as a key element in explaining cross-cultural variations in parenting normativeness. Important evidence supporting this view is that multiple regions in East Asia (e.g., Hong Kong, Japan) continue to emphasize interpersonal connection and interdependence despite their relatively high levels of urbanization and economic development (Chan et al., 2009). Parental ethnotheory suggests that different cultural groups hold a set of childrearing beliefs and ideas that are highly stable and resistant to historical and economic influences (Harkness & Super, 1992; 2006). Indeed, it may be argued that many current societies resemble each other in basic structures following decades of globalization (Jensen et al., 2011) and cultural variations might be more influential than social-structural factors in explaining cross-cultural variations in parenting.

Commonalities and Specificities in Associations between Parenting and Child Outcomes

The commonality principle combined with Rohner and Lansford's (2017) Interpersonal Acceptance-Rejection Theory (IPARTheory) may explain similar patterns between parenting and child outcomes across cultures. IPARTheory emphasizes children's shared needs for warmth, intimacy, and acceptance from caregivers (Rohner & Lansford, 2017). Therefore, positive parenting behaviors that meet these needs can promote child flourishing, whereas negative parenting behaviors that violate these needs can undermine

children's development regardless of cultural contexts. Supporting this, several studies have demonstrated consistencies between parenting constructs (e.g., warmth, rejection) and child well-being across cultures (e.g., Rothenberg, 2021; Su et al., 2022). Additional reviews suggest that the mechanisms underlying the effects of parental warmth and psychological control on child internalizing and externalizing are consistent across cultures (e.g., Rothenberg, 2019; Scharf & Goldner, 2018). This view is also supported by meta-analyses showing consistencies in associations between parenting dimensions and child internalizing, externalizing, and well-being across cultures (e.g., Pinquart & Gerke, 2019; Rohner & Lansford, 2017). Employing the commonality principle, we suspect that the associations between parenting and child outcomes will be mostly consistent across the four cultures.

In contrast, the specificity principle emphasizes that the associations between parenting and child development are likely moderated by sociocultural factors, and therefore may be context-specific and variant across cultures (Bornstein, 2017). Lansford (2022) discussed that cultural normativeness can be an important moderator between parenting and child development. Parents' behaviors are situated in a specific context, and parents and children may interpret parenting behaviors based on their normativeness within a culture (Lansford et al., 2018). Parenting behaviors viewed as negative and unfavorable within one culture may be normative and interpreted as more acceptable and favorable in another (Camras et al., 2012; Cheah et al., 2019). Cross-cultural research shows that cultural normativeness moderates links between parenting and child adjustment, and that associations between parenting behaviors and child adjustment are stronger in societies where a particular parenting behavior is more normative (Lansford et al., 2018). However, additional research (e.g., Rothenberg et al., 2020; 2021) shows that links between parenting and child outcomes may be moderated by cultural normativeness for some specific parenting dimensions (e.g.,

parental warmth) but not for broad parenting constructs (e.g., hostility, rejection), suggesting that the specificity principle may depend on the particular parenting constructs under study.

Together, these studies suggested that the specificity principle in parenting and child development may or may not apply based on the level of broadness/specificities of the parenting construct/dimension in question. Following the specificity principle, we anticipate inconsistencies in the associations between parenting and child outcomes across the four cultures, particularly for the parenting sub-dimensions that are more specific and culturally relevant (i.e., authoritative and group harmony socialization sub-dimensions).

The Present Study

Using items from existing measures and items derived from within-culture focus group interviews (described in Supplement), we developed a parenting measure with four parenting constructs, which include (1) Authoritative parenting: comprised of warmth, reasoning-oriented regulation, and autonomy-granting; (2) Authoritarian parenting: comprised of physical coercion, verbal hostility, and non-reasoning/punitive; (3) Group Harmony Socialization: comprised of modesty encouragement, emotion maintenance, and filial piety; and (4) Intrusive Control: comprised of psychological control and intrusive overprotection. Cross-cultural commonality and specificity principles in parenting were tested in urban mothers and fathers of preschool-aged children from Malaysia, China, Turkey, and Japan on three aspects: measurement invariance of parenting constructs and dimensions, their normativeness in each culture, and their associations with teacher-reported child internalizing, externalizing, and prosocial behaviors.

Following the commonality principle, we would expect that: (1) many parenting constructs and dimensions can be measured and compared across the four cultures without significant measurement biases; (2) economic development differences across countries should correspond with the common historical change trends cited above. In our case,

Japanese parents should endorse more warm, regulatory, and autonomy-supporting practices and less coercive, intrusive, and controlling parenting, consistent with higher economic development of Japan (compared to the other three cultures); and (3) there would primarily be consistencies in associations between broad parenting constructs and child outcomes across cultures.

Following the specificity principle, we would expect that: (1) measurement invariance can not be established for culture-specific parenting practices (i.e., sub-dimensions of authoritative parenting and group harmony socialization); (2) Turkish parents, due to their proximity to Europe, may uniquely endorse more Western-emphasized parenting practices and fewer Asian-emphasized parenting practices than the other three cultures, and the specificity principle may be least applicable to Chinese and Japanese parents (who may share some similarities due to their shared cultural roots); and (3) there may be inconsistencies in associations between parenting sub-dimensions and child outcomes across cultures.

Methods

Participants

Participants included 1509 preschool-age children (*M*=5.00 years, *SD*=0.59 , range=2.70 to 6.96 years; 48% girls), their mothers (*N*=1509, *M*=36.01 years, *SD*=4.19, range=23.75 to 50.11 years) and their fathers (*N*=1509, *M*=38.11 years, *SD*=5.17, range=25.76 to 65.22 years). The samples were drawn from preschool and kindergarten classrooms in urban regions of: Kuala Lumpur, Petaling Jaya, Subang Jaya, Shah Alam, and Serdang, Malaysia (*N*=372); Beijing and Dalian, China (*N*=441); Istanbul and Mugla, Turkey (*N*=402); and Chiba, Japan (*N*=294). Participating families were recruited through letters and recruitment meetings at preschools.

Most parents (97%) were married. Nearly all were biological parents, with less than 1% being grandparents, stepparents, or other adult caregivers. Family socio-economic status

(SES) was coded using the Hollingshead Four Factor Index (Hollingshead, 1979). Sampling procedures focused on families from the majority ethnic group (e.g., families of Han ethnicity in mainland China) in each country, except for Malaysia where the two largest ethnic groups were included (52% ethnic Chinese and 48% ethnic Malay families). Chinese Malaysian parents were older, more educated, and reported higher SES compared to ethnic Malay parents, but the parenting measures were psychometrically comparable between the two groups, which were examined together as Malaysian parents. Most demographic variables (e.g., parent and child age, household SES) except for child gender varied significantly across cultures and were controlled for in subsequent analyses (Table S1).

Procedures

Mothers completed the demographic questionnaire. Mothers and fathers separately completed the parenting measure. Teachers in participating children's preschool/kindergarten classrooms rated child behavior. All measures were administered in participants' preferred language(s) with rigorous forward- and back-translation processes to clarify translation ambiguities and address potential culturally insensitive or age-inappropriate concerns (Peña, 2007). Procedures were approved by local Institutional Review Boards at universities in each participating country and the coordinating university. Mothers, fathers, and teachers provided written consent for themselves and children, and children provided assent. Teachers and parents were compensated for their participation in a manner consistent with cultural norms. Focus group interviews (see Supplement Part 1) were conducted to inform measurement development.

Measures

Parenting Styles and Dimensions. A 40-item modified version of the 62-item Parenting Styles and Dimensions Questionnaire (PSDQ; Robinson et al., 1995; 2001) for capturing authoritative, authoritarian, and permissive parenting styles and their sub-

dimensions (Hart et al., 2003) was used. The PSDQ and its adaptations have been successfully used in multiple cultures (Olivari et al., 2013), including Asian cultures (e.g., Fu et al. 2013). The modified cultural version of the PSDQ used in this study consists of three scales. Mothers and fathers rated their parenting practices from 1=*never* to 5=*always*.

Authoritative and Authoritarian Parenting Scale. As seen in Table S2, 20 PSDQ authoritative and authoritarian items were deemed to match themes that arose from focus group interviews, along with 10 new items that were developed to better capture additional themes for a total of 30 items. Sample authoritative warmth, regulation, and autonomy-supporting sub-dimension items include, "Give praise when our child is good," "Give our child reasons why rules should be obeyed," and "Show respect for our child's opinions by encouraging him/her to express them." Sample authoritarian physical coercion, verbal hostility, and punitive sub-dimension items include, "Spank when our child is disobedient," "Yell or shout when our child misbehaves," and "Punish by taking away privileges with little if any explanations." The permissive construct was dropped from further analyses due to its low reliability, consistent with past research in Asian and Turkish cultures (e.g., Önder & Gülay, 2009; Ren & Edwards, 2015).

Group Harmony Socialization Scale. A 14-item scale was developed to assess interdependent child-rearing ideologies in east Asian cultures that promote group harmony and respect for elders (Chao & Tseng, 2002) across three sub-dimensions: encouragement of modest behavior, promoting emotional maintenance, and filial piety. These parenting dimensions have been previously assessed primarily in Chinese samples (Balkaya et al., 2018; Wu et al., 2002), with some empirical evidence from Turkey (Sen et al., 2014). As shown in Table S2, four modesty encouragement items from Nelson et al. (2006) and Wu et al. (2002) were reflected in focus group themes, with one additional item developed for this subscale, "Discourage our child from bragging or boasting about his/her accomplishments."

Four emotion maintenance items (e.g., “Teach our child to maintain control of his/her feelings in public settings,”) and five filial piety scale items (e.g., “Teach our child the importance of showing proper respect for his/her elders”) were derived from focus group interview themes.

Parental Intrusive Control Scale. A 15-item scale was utilized to measure parental psychological control and intrusive overprotection. Although not systematically measured in non-Western settings, guilt induction, love withdrawal, and shaming have been identified as psychologically controlling dimensions that are emphasized in Chinese parenting and other east Asian cultures (e.g., Chen, et al., 2017; Furukawa et al., 2012; Yu, et al., 2018). Similarly, intrusiveness/overprotection reflects exaggerated parenting practices to restrict their children’s exploratory behavior and risk-taking in a highly directive and overprotective fashion (e.g., Hastings et al., 2019). As shown in Table S2, seven psychological control items (e.g., “Tell our child he/she is not as good as other children”) and five items reflecting intrusive overprotection (e.g., “I am overly protective with our child”) from Nelson et al. (2006) and Wu et al. (2002) were evident in focus group interview themes, with three additional items developed for these subscales.

Child outcomes. Teachers rated children’s internalizing, externalizing, and prosocial behaviors using the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). Sample items include: “Rather solitary, tends to play alone” (internalizing; McDonald’s Omega=.84), “Often fights with other children or bullies them” (externalizing; McDonald’s Omega=.87), and “Shares readily with other children” (prosocial behaviors; McDonald’s Omega=.80). Responses ranged from 0=*not true* to 2=*often true*. There is extensive evidence of both reliability and validity of this measure across cultures for preschool-aged children, including the cultures tested in this study (Stone et al., 2010). Measurement invariance across cultures

was established for each child variable before testing their associations with parenting variables.

Statistical Analyses

Data were screened for missing values before the analyses. Participants who missed over 50% of items were excluded in subsequent analyses based on an original sample size of 1580 families (4% eliminated). After eliminating the missing cases, missing data in the analyzed sample were not missing completely at random, Little's (1988) test, $\chi 2(21980, N=1509)=23494.75$, $p < .001$. Multiple imputation using the regression method was used to impute the missing numbers (iteration=10). Four sets of analyses were conducted using the Mplus 8 (Muthén & Muthén, 2017) to address our research questions. No cross-loadings were specified in the models below.

First, a set of multi-group confirmatory factor analyses (MGCFA) were conducted to identify configural models that fit the data adequately for all groups. Factor loadings and intercepts were freely estimated. Items were dropped if they had low loadings in all groups (<.40) or a very low loading in two or more groups (<.30). We tested configural invariance for the four parenting constructs across cultures in four models after retaining items with good measurement properties.

Second, based on items retained from step one, a full measurement invariance model was tested for each parenting construct. The measurement property of each item was also compared between mothers and fathers to test the measurement invariance across parent gender. Model fit indices from each model were examined to test the full measurement invariances of the four parenting constructs across cultures and parent gender. Because chi-square statistics were overly sensitive for CFA models with medium to large sample sizes, fit indices were used as criteria to decide whether metric and scalar invariances can be established (Cheung & Rensvold, 2002).

Third, Multi-group Confirmatory Factor Analysis with Covariates (MIMIC; Muthén & Muthén, 2017) was conducted to compare the latent mean of the parenting constructs and dimensions if the full measurement invariance was reached. Weighted effect coding was conducted so that the group means can be compared with the sample grand mean. Family SES, parent age and education, and child age and gender were controlled as covariates when comparing the latent means.

Finally, structural equation modeling (SEM) was used to examine the relations between parenting constructs/dimensions and child outcomes. Both parenting and child outcome variables were created as latent constructs with full measurement invariances across cultures prior to the SEM analyses. For each pair of parenting and child outcome variables, we analyzed a baseline model in which the path from the parenting variable to the child outcome was fixed across cultures and parent gender. Next, in three models, we allowed the path to vary across parent gender but not across culture (Model 1), to vary across culture but not across parent gender (Model 2), or to vary across both parent gender and culture (Model 3). Scaled chi-square difference tests were conducted to compare the baseline models and models with free estimates (Satorra & Bentler, 2001). Whichever of the three models that fit the data better than the baseline model was retained.

Results

Descriptive statistics on demographic information and variables of interest are presented in Table S1. Items and item abbreviations for parenting measures are presented in Table S2.

Configural Models

We dropped items based on the rule described previously and dropping each of them significantly increased the model fit in corresponding models (Table S2). Configural models for all four parenting constructs yield adequate model fit (CFIs>.90, RMSEAs<.06), and most

items were significantly loaded on their respective parenting dimensions at the .001 level with factor loadings larger than .40 (see Tables S3-S6 for details), demonstrating good configural invariances for each of the four parenting constructs and their subscales across the four cultures. Though some items had low factor loadings in certain cultures, they were retained because the relatively low loadings were only found in one or two mother or father groups, and removing any of these items did not improve the model fit for the corresponding configural model.

Measurement Invariance across Parent Gender and Cultures

As shown in Tables S3-S6, measurement invariances between mothers and fathers were achieved for all items except three of four items in the autonomy-granting subscale for the authoritative parenting construct. There may be important parent gender differences in interpreting items for autonomy-granting parenting dimensions. We kept this dimension when comparing the associations between parenting and child outcomes. However, due to this potential measurement difference, results related to the associations between autonomy-granting parenting and child outcomes across parent gender need to be treated cautiously.

The results for the tests of metric and scalar invariances are summarized in Table 1. Most metric and scalar models yielded acceptable fits across the four cultural groups (CFIs>.90, RMSEAs<.08). Full invariance was achieved for authoritative parenting, authoritarian parenting, and group harmony socialization constructs as full invariance models for the three constructs yielded acceptable model fits. For the intrusive control construct, metric invariance was established, whereas the scalar model yielded unacceptable model fits (CFI=.85, RMSEA=.08). Partial scalar invariance was achieved after intercepts for Items IC-PC1 and IC-PC8 were freely estimated across cultures. Because full invariance is required for the cross-cultural comparisons, Items IC-PC1 and IC-PC8 were not included in later MIMIC or SEM analyses.

Latent Mean Comparisons

Figure 1 presents the latent mean differences of the four overarching parenting constructs across cultures from the MIMIC models. Malaysian parents were the highest on authoritarian parenting, group harmony socialization, and intrusive control. Malaysian mothers were higher than average in authoritative parenting but Malaysian fathers were at an average level. Chinese parents reported average levels of authoritarian parenting and intrusive control, and above-average levels of group harmony socialization. Chinese mothers were lower than average in authoritative parenting but Chinese fathers were at the average level. Turkish parents were the highest on authoritative parenting and the lowest on authoritarian parenting, and had an average level of group harmony socialization. Turkish mothers were the lowest on intrusive control but Turkish fathers were at an average level. Japanese parents reported the lowest levels of authoritative parenting and group harmony socialization, average levels of authoritarian parenting, and lower than average levels of intrusive control.

Figures 2 and 3 present the latent mean differences of the parenting sub-dimensions between the four cultures from the MIMIC models, and results are presented for mothers and fathers, respectively. The latent mean comparison patterns for individual parenting dimensions were similar to the patterns for parenting constructs in general, with a few interesting exceptions. Specifically, Malaysian parents were lower than average on autonomy granting whereas they were average or above average on warmth and reasoning-oriented regulation. Chinese parents were higher than average on psychological control and lower than average on intrusive overprotection. In contrast, Turkish parents were lower than average on psychological control and higher than average on intrusive overprotection. Japanese parents reported the most inconsistencies in authoritarian sub-dimensions, with average levels of

physical coercion, higher than average verbal hostility, and lower than average punitive parenting practices.

Cross-Cultural Comparisons of the Relations between Parenting and Child Outcomes

Model comparisons and statistical details for the consistencies/inconsistencies of the relation between parenting variables and child outcomes across parent gender and cultures are presented in Table 2 and Table S7. No variations were found for the associations between the four overarching parenting constructs and the three child outcomes across cultures or parent gender. Authoritative parenting was not significantly associated with any child outcomes. Authoritarian parenting and intrusive control were positively associated with child externalizing and negatively associated with child prosocial behaviors. Group harmony socialization was negatively associated with child internalizing.

Looking at parenting sub-dimensions, no variations across cultures or parent gender were found for the associations between three authoritarian and two intrusive control sub-dimensions and the three child outcomes. Consistent with the authoritarian and intrusive control constructs, these sub-dimensions were positively associated with child externalizing and negatively associated with child prosocial behaviors, except for two associations between punitive and child prosocial behaviors and between intrusive overprotection and child internalizing.

Variations across cultures and/or parent gender were found for authoritative and group harmony socialization sub-dimensions (Table 3). For authoritative sub-dimensions, parent warmth contributed to more child internalizing only in Malaysia and Japan and more child prosocial behaviors only in Turkey and Japan. Only Turkish fathers' reasoning-oriented regulation contributed to less internalizing and only Turkish mothers' reasoning-oriented regulation contributed to more prosocial behaviors in their children. Only Malaysian mothers' autonomy-granting parenting was related to more child prosocial behaviors. For

group harmony socialization sub-dimensions, parental modesty encouragement contributed to less child externalizing only in Japan. Chinese mothers' filial piety was associated with higher child internalizing but related to lower internalizing for fathers. Filial piety reported by mothers but not fathers was associated with higher child prosocial behaviors across all cultures. Modesty encouragement and emotion maintenance both contributed to lower child internalizing, consistently across cultures and parent gender.

Discussion

Support for both commonality and specificity principles in relation to cross-cultural parenting was found following a three-step examination in this study: Step 1, testing the configural, metric, and scalar invariance of parenting constructs; Step 2, exploring parenting normativeness across cultures if full measurement invariance can be established; and Step 3, examining relations between parenting and child development across cultures.

Measurement Invariances Supported the Commonality Principle

We used parenting measures comprised of established items and new items generated using a bottom-up approach. The commonality principle was supported by the psychometric equivalence of all parenting measures across these non-Western cultures (except two intrusive control items). Our findings are similar to previous studies showing measurement invariance in parental warmth, acceptance, and rejection across multiple cultures (e.g., Gomez & Rohner, 2011; Senese et al., 2016). Further, findings support the notion that independence-focused (e.g., supporting children's autonomy) and interdependence-focused (e.g., filial piety) parenting practices can be measured consistently across cultures (Wu et al., 2002). Indeed, parenting practices that were first noted and thought to be unique in a specific culture likely exist in other cultures with similar notions (Schwartz et al., 2010). For example, the term "filial piety" originated from Confucian Chinese values and is commonly viewed as a "Chinese parenting practice" (Ho, 1996). As such, measures focusing only on specific filial

piety socializations may not be widely applicable in other cultures. However, parents across cultures appear to socialize their children to show respect for their elders and to value family traditions (Bedford & Yeh, 2021). Thus, cross-cultural consistency in measuring filial piety may be possible when items are organized around broader themes of parenting that focus on adult respect and importance of family traditions (Wu et al., 2002). Another factor that may account for the commonality in measurement is that all parents in our study are from urban settings, which may homogenize their experiences and contribute to shared, common notions in childrearing (Lansford, 2022). The present study provided an instrument that captures important parenting constructs and dimensions with psychometric equivalence across various non-Western cultures using an approach that combines both emic and etic perspectives in measure development.

Parenting Normativeness Supported the Specificity Principle

Parenting normativeness in the four cultures did not align with varying levels of economic development across cultures, and findings may therefore reflect complex historical, religious, and cultural factors (supporting the specificity rather than the commonality principle). We interpret the parenting differences across cultures primarily through socio-cultural lenses, but readers should be mindful that within-culture variations are salient and our urban samples do not fully reflect the potential range of parenting characteristics in each culture.

Malaysian parents were the highest on authoritarian parenting, group harmony socialization, and intrusive control. Parenting in Malaysia is primarily influenced by both cultural (e.g., Confucian, indigenous Malay, Chinese, and Indian) and religious (e.g., Islamic, Buddhism, Hinduism, and Christianity to a lesser extent) parenting values and traditions, which all generally emphasize humility, social harmony, respect for adults, and family hierarchy and loyalty (Hei, 2011; Rao et al., 2003). As such, children areviewed as highly

interdependent with their parents, and using coercive discipline and intrusive control is viewed as acceptable (Hossain, 2014). Despite the rapid urbanization process and economic growth in Malaysia since the 1980s, parenting behaviors still revolve around traditional values, and public campaigns have been launched to preserve traditional childrearing values, parenting practices, and family character (Stivens, 2006). These factors may be reflected in Malaysian parents' high authoritarian parenting, group harmony socialization, and intrusive control.

Despite similar levels of economic growth in China and Malaysia, urban Chinese parents reported distinct patterns of parenting behaviors compared to their Malaysian counterparts. Chinese parents were higher than average on group harmony socialization and were around average on authoritative parenting, authoritarian parenting, and intrusive control. In contrast with the effort to preserve traditional parenting practices and values in Malaysia, urban Chinese parents appear to have started to abandon some traditional childrearing beliefs and practices such as restrictiveness, harsh punishment, and intrusive control, corresponding with the dramatic economic development of China since the 1990s (Xu et al., 2005; 2006). Coercive punishment and control may have become less common and tolerance towards children's inappropriate behaviors may have increased in urban China due to the decades-long implementation of the one-child policy (Xu et al., 2014). However, the Chinese collectivistic culture emphasizes a balance between interdependence and social hierarchy. Therefore, traditional values that centered around social harmony have been retained and promoted through parenting practices that encouraged humility, emotional control, and filial piety (Cai et al., 2011). Further, due to less exposure to Western cultures (compared with Malaysia and Turkey), Chinese parents may not fully endorse authoritative parenting. Chinese parents' lower levels of authoritative parenting, authoritarian parenting, and intrusive

control than Malaysian parents but high levels of group harmony socialization may reflect all these factors.

Turkish parents in this study were high on authoritative parenting, low on authoritarian parenting and intrusive control, and in the middle on group harmony socialization. Turkish culture is described as influenced by Western and Eastern cultures and is found halfway between individualism and collectivism (Hofstede et al., 2010), reflecting autonomous-relatedness socialization (Kağıtçıbaşı, 2013). Although the collectivistic culture in Turkey is characterized as more horizontal than East Asian cultures, equality along with interdependence is emphasized (Cukur et al., 2004). Therefore, Turkish parents may be more inclined to socialize children with warmth and intimacy instead of power-based approaches such as authoritarian parenting or intrusive control (Nacak et al., 2011), which may explain their high levels of authoritative parenting. However, Turkish parents' previously reported employment of punishment-oriented discipline and intrusive parenting (Akcinar & Baydar, 2011; Kağıtçıbaşı, 1989) were not reflected here, possibly due to two reasons. First, there are large rural-urban differences and important effects of SES on parenting in Turkey due to social changes in the past two decades (Kağıtçıbaşı & Ataca, 2015). The urban Turkish samples in our study may have increased their value of children's psychological needs and utilized parenting behaviors that are similar to Western European parents. Second, Turkish parents' low levels of authoritarian parenting and intrusive control may be because Malaysia and China (as cultural reference points in this study) have traditionally emphasized these parenting practices more strongly.

Japanese parents were at low levels in almost all parenting constructs and sub-dimensions despite Japan's pronounced economic advances and strong Confucian and Buddhist roots (emphasizing humility, emotional control, and social harmony). We considered a few factors in explaining these findings. First, Japanese participants tend to

choose middle options while avoiding extreme responses in surveys (Wang et al., 2008) and exhibit a disposition for modesty and self-derogation in self-ratings (Yoshida et al., 2004). Second, due to recent social challenges, particularly the low birth rate, contemporary Japanese childrearing values have become more easygoing. Japanese parents have been found to deemphasize children's academic and social achievements compared to other Asian parents (Benesse Educational Research Institute, 2010). Additionally, Japanese culture emphasizes socializing individuals to immerse themselves into a group and follow social rules naturally and willingly rather than forcing them (Dien, 1999). Accordingly, Japanese parents value an indirect socialization strategy called "mimamoru" (Holloway, 2010), especially when interacting with young children (Holloway & Nagase, 2014), which allows children to learn through the consequences of their own behaviors rather than from parents' interventions. These factors may have accounted for the low levels of endorsement of most parenting dimensions in our Japanese sample.

Some nuances have been revealed at the sub-dimensional level. Malaysian parents endorsed less autonomy-granting compared to warmth and reasoning, perhaps due to Malaysian cultural valuing of parental nurturance and interdependence over child autonomy (Hossain, 2014). Turkish parents were the lowest on psychological control potentially due to the focus on child autonomy but were the highest on overprotection, which may result from the ongoing threatening socio-political unrest present in surrounding countries over several decades (Eltanamly et al., 2021). Together, these findings suggested that examining parenting normativeness in specific parenting dimensions in addition to broad parenting constructs is necessary to reflect detailed cultural nuances.

Commonalities and Specificities in Associations between Parenting and Child Outcomes

Consistent with previous research, there were many commonalities in the associations between broad parenting constructs and child outcomes across cultures.

Authoritarian parenting and intrusive control contributed to more externalizing problems and fewer prosocial behaviors, as they threaten children's need for secure, intimate attachment with their parents and intrude on children's mental self (Olsen et al., 2002). Group harmony socialization contributed to fewer internalizing problems in school, as these children may exhibit better social skills and receive greater acceptance among peers (Balkaya et al., 2018). The authoritative construct was not associated with any child outcomes. This may be because (1) the effect size of authoritative parenting on child outcomes is often smaller than authoritarian and intrusive parenting (Pinquart, 2017a; 2017b) and (2) our use of a non-family member reporter of child outcomes may have further attenuated this small effect (Pinquart & Gerke, 2019).

Importantly, for the four parenting constructs as well as authoritarian and intrusive control sub-dimensions, no variations were found for their associations with any child outcomes across cultures or parent gender, which supports the commonality principle. Similarly, previous studies found that overarching parenting constructs such as acceptance, rejection, and intrusive control tend to have culturally consistent relations with child adjustment (e.g., Olsen et al., 2002; Su et al., 2022). Indeed, the latent parenting constructs generated from parenting sub-dimensions may represent parents' overall emotional climate, socialization goals, and parenting styles when interacting with their children rather than specific parenting behaviors and socialization contents (Darling & Steinberg, 1993). For example, the group harmony socialization construct may represent how much parents prioritize socializing their children to adhere to interdependence-focused social norms and maintain social harmony, whereas its sub-dimensions may represent how much parents endorse specific socialization practices that meet the goal. The overarching, construct-level parenting styles, emotional climate, and socialization goals may be critical in deciding the

quality of parent-child relationships and children's openness to parents' socialization (Kapetanovic & Skoog, 2021), and therefore may be highly consistent across cultures.

Further, authoritarian and intrusive control sub-dimensions have consistent relations with child outcomes across cultures likely because these sub-dimensions consistently reflect parents' harsh, coercive, and intrusive practices that violate children's basic needs (Rohner & Lansford, 2017), which are fundamental for positive child development regardless of culture (Lansford, 2022; Grolnick & Pomerantz, 2009). Therefore, child well-being and adjustment may be undermined when parents use practices like physical punishment and psychological control, even if they are more normative in specific cultures (Wang et al., 2007; Scharf & Goldner, 2018).

In contrast, the specificity principle was supported by the inconsistencies in relations with child outcomes across cultures and/or parent gender for sub-dimensions of authoritative and group harmony socialization. Cross-cultural inconsistencies are more likely to be revealed when researchers compared the roles of specific parenting practices and positive parenting rather than broad parenting styles or negative parenting (e.g., Lansford et al., 2018; Rothenberg et al., 2020; 2021). In any case, children may benefit more from positive parenting when it fosters child characteristics and is engaged in ways that are valued by social norms (Lansford et al., 2018). For example, we found that warmth and regulation, which were high in Turkey, were linked to positive child outcomes in Turkey, and filial piety, which was high in China, was associated with positive child outcomes in China.

The concurrent nature of our data may also account for some findings. For example, parental warmth was associated with more child internalizing in Malaysia and Japan, possibly because Malaysian and Japanese parents are warmer with their children who display internalizing behaviors (Coplan et al., 2020). However, some other findings were unexpected (e.g., Chinese mothers' filial piety was associated with more internalizing but Chinese

fathers' filial piety was associated with less internalizing in children), which may suggest other cultural-nuanced linkages within specific cultures that warrant further investigation. Another caveat is that although we achieved statistical measurement invariance and utilized rigorous model comparison criteria, we have an increased risk of committing Type-I error as we conducted model comparisons with multiple sets of parenting constructs and child outcomes. Therefore, the results should be interpreted cautiously and replicated further.

Furthermore, gender differences in associations between parenting and child outcomes were found in all cultures for regulation, autonomy-granting, and filial piety, which may reflect the persistence of traditional gender roles in childrearing. Indeed, even after a shift towards more gender egalitarianism, most mothers remain the primary caregivers, potentially contributing to gender-specific parenting roles in all four cultures (Hossain, 2014; Xu et al., 2014). Thus, children may experience different levels of interdependence, connectedness, and power dynamic when interacting with mothers versus fathers, leading to parent-specific socialization patterns related to interdependence (e.g., children's autonomy) or power dynamic (e.g., filial piety).

Theoretical and Practical Implications

This study set a foundation for future research by comparing parenting in four non-Western cultures using a measurement-invariant instrument. Together, our findings echoed the "universalism without uniformity" perspective (Shweder & Sullivan, 1993) and supported the utility of both commonality and specificity principles (Malti & Cheah, 2021). The consistency in parenting measurement and associations between parenting and child outcomes at the construct level implies that parenting theory may focus more on the commonality and its underlying mechanism across cultures when studying broader parenting styles and climates. Practitioners working with parents from different cultural backgrounds may consider increasing parents' awareness of and reflection on the pros and cons of broad

parenting constructs given their cultural invariance. However, this may only apply to urban samples as the commonality revealed in this study may result from their lives in the proximal urban environments, which are highly homogenized due to globalization (Gerhards et al., 2017) and urbanization (e.g., education, nuclear family structure, exposure to contemporary parenting ideology via shared media sources like the internet; Sim, 2003). Indeed, including rural parent samples may result in more nuances and differences even at the broad parenting construct level as the basic family structure (e.g., living with extended families) and social needs (e.g., helping families instead of focusing on academic success) may differ fundamentally in rural settings across cultures (Kagitcibasi & Ataca, 2015).

In contrast, the specificity principle applies better to parenting sub-dimensions that capture specific parenting practices. That is, even in highly homogenized urban settings, cultural nuances are salient when we consider the role of specific types of parenting behaviors. Future research should continue to examine specific parenting dimensions in addition to broad parenting constructs to reveal cross-cultural nuances in parenting and inform theory development. Practitioners should be careful about interpreting specific parenting behaviors and show sensitivity towards the cultural meaning of specific parenting behaviors, in contrast with broad parenting constructs.

Limitations

This study has several limitations. Similar to previous cross-cultural studies (e.g., Lansford et al., 2018; Rothenberg et al., 2021), we selected major cities that were comparable across cultures and sampled participants that were representative in each city to maximize comparability. However, this approach leads to three limitations. First, our samples were not representative of the full spectrum of parenting within each culture and underrepresented parents from rural areas, suburban households, and additional minority groups. While this study establishes a wide cross-cultural comparison with a measurement-invariant instrument,

future studies may wish to extend these findings by examining different subgroups within these cultures to explore cultural nuances. Second, the samples significantly differed on certain key demographic characteristics (e.g., SES), which may be important confounding factors accounting for some cross-cultural differences. However, socio-economic differences and cultural differences are closely entangled with each other in influencing parenting (Kağıtçıbaşı & Bilge, 2015) and cannot easily be teased out by statistically controlling for relevant demographic variables. Third, although cities are embedded in countries, variations in economic development at the city level may influence local social structures, values, and parenting, which are not easily parsed from country-level economic development.

Further, the cultural values that we proposed as mechanisms underlying the differences across groups were not measured directly but were informed by previous research. Most cultures are heterogeneous and not all individual parents endorse the most prevalent values of the culture (Lansford, 2022). Thus, future studies should directly measure cultural influence at the individual family level. Finally, relations between parenting variables and child outcomes were examined cross-sectionally, which precluded our ability to infer directionality or to understand the reciprocity between parenting and child characteristics across cultures.

Conclusions

This is the first study that used a measurement-invariant parenting instrument to examine commonality and specificity principles for parenting constructs and dimensions across multiple non-Western cultures. The commonality principle was supported by two sets of findings: (1) the measurement invariance was successfully established for all parenting constructs and dimensions, and (2) for the four parenting constructs and authoritarian and intrusive control sub-dimensions, no variations were found in their associations with any child outcomes across cultures or parent gender. In contrast, the specificity principle was

supported by the other two sets of findings: (1) the cross-cultural differences in parenting normativeness did not follow the pattern of economic development but yielded culture-specific patterns, and (2) the authoritative and group harmony socialization parenting sub-dimensions were differently associated with specific child outcomes across cultures and/or parent gender. Overall, these findings suggest that examining specific dimensions rather than broad parenting constructs is necessary to reveal cultural specificities and nuances. Our study provided a constructive, culturally-invariant instrument and a three-step guide for future parenting research to examine cross-cultural commonalities and specificities.

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Table 1

Fit Indices for Configural, Metric, and Scalar Invariances Models of the Four Parenting Constructs across Cultures

Model	χ^2	Δdf	CFI	RMSEA
Authoritative				
Configural	4369.57	-	.93	.04
Metric	4435.32	42	.92	.04
Scalar	4530.03	42	.90	.06
Authoritarian				
Configural	3332.70	-	.93	.05
Metric	3363.87	27	.93	.05
Scalar	3401.61	27	.92	.05
Group harmony socialization				
Configural	2619.37	-	.92	.04
Metric	2667.50	27	.91	.05
Scalar	2705.49	27	.91	.05
Intrusive overprotection				
Configural	2700.03	-	.92	.04
Metric	2731.64	30	.92	.04
Scalar	2909.88	30	.85	.07
Partial scalar[a]	2793.45	24	.90	.05

Note.

[a] The intercepts of Items IC-PC1 and IC-PC8 were freely estimated across the four cultures.

The metric models were compared with the configural models. The scalar models were compared with the metric models. The partial scalar model was compared with the metric model rather than the scalar model.

Table 2

Associations between Parenting and Child Outcomes and Their Variations across Parent Gender and Culture

	Child Outcomes *B* (*SE*)		
	Child Internalizing	Child Externalizing	Child Prosocial
Authoritative	-.03 (.02)	-.01 (.02)	.02 (.02)
Warmth	.02 (.02) [C]	.01 (.02)	.02 (.02) [C]
Regulation	-.03* (.01) [C&G]	.01 (.01)	.01 (.02) [C&G]
Autonomy	-.02 (.02)	-.03 (.02)	.04* (.02) [C&G]
Authoritarian	.03 (.02)	.09*** (.02)	-.05* (.02)
Physical coercion	.02 (.01)	.05*** (.01)	-.03* (.01)
Verbal hostility	.003 (.02)	.08*** (.02)	-.04* (.02)
Punitive	.04 (.02)	.04* (.02)	-.01 (.02)
Group harmony socialization	-.05** (.02)	.02 (.02)	-.00 (.02)
Modesty encouragement	-.03* (.01)	-.01 (.01) [C]	.01 (.01)
Emotion maintenance	-.02* (.01)	.03 (.02)	-.01 (.01)
Filial piety	-.02 (.01) [C&G]	.02 (.01)	.01 (.01) [G]
Intrusive control	-.01 (.02)	.03* (.01)	-.03* (.01)
Psychological control	-.001 (.01)	.05*** (.01)	-.03* (.02)
Intrusive overprotection	-.01 (.01)	-.01 (.01)	-.03* (.01)

Note. *p<.05, **p<.01, ***p<.001
[C]: the association between the parenting construct/dimension and the child outcome varied significantly across culture but not across parent gender;
[G]: the association between the parenting construct/dimension and the child outcome varied significantly across parent gender but not across culture;
[C&G]: the association between the parenting construct/dimension and the child outcome varied significantly across parent gender and across culture.

Parenting dimensions	Child outcomes	Cultures *B* (*SE*)							
		Malaysia		China		Turkey		Japan	
		Mother	Father	Mother	Father	Mother	Father	Mother	Father
Warmth	Internalizing	.06* (.03)		-.03 (.04)		-.06 (.06)		.20* (.08)	
	Prosocial	-.05 (.04)		-.003 (.04)		.13* (.06)		.18* (.09)	
Regulation	Internalizing	-.05 (.06)	-.04 (.04)	.07 (.04)	-.06 (.04)	-.02 (.08)	-.15** (.05)	.06 (.08)	-.01 (.07)
	Prosocial	-.05 (.08)	-.04 (.05)	.03 (.05)	-.05 (.04)	.18* (.09)	.06 (.05)	.16 (.10)	-.11 (.09)
Autonomy	Prosocial	.34** (.13)	-.20 (.12)	.09 (.06)	-.09 (.07)	.11 (.11)	.19 (.13)	.24 (.19)	-.32 (.19)
Modesty encouragement	Externalizing	.02 (.02)		.01 (.02)		-.02 (.02)		-.13* (.05)	
Filial piety	Internalizing	-.12 (.08)	.02 (.06)	.14* (.06)	-.12* (.05)	.05 (.06)	-.12* (.05)	.02 (.03)	.01 (.04)
	Prosocial	.06* (.03)	-.04 (.03)	.06* (.03)	-.04 (.03)	.06* (.03)	-.04 (.03)	.06* (.03)	-.04 (.03)

Table 3

Results for Probing Associations between Specific Parenting Dimensions and Child Outcomes for Each Culture or Parent Gender

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

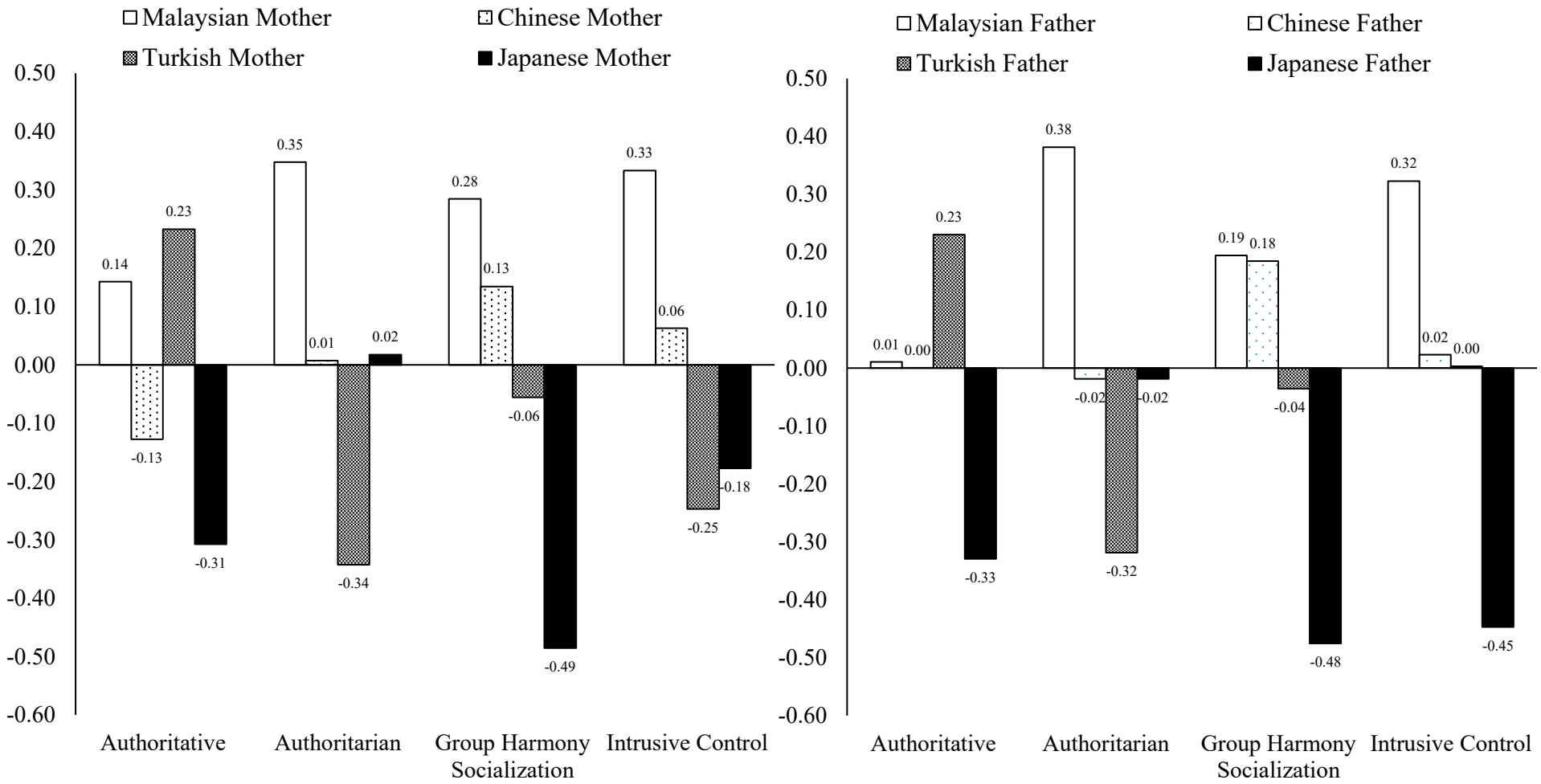

Figure 1. Latent mean differences of the four parenting constructs for mothers and fathers (combined) across the four cultures. Grand means of the mother/father samples were used as the zero references. Any difference larger than 0.07 was statistically significant.

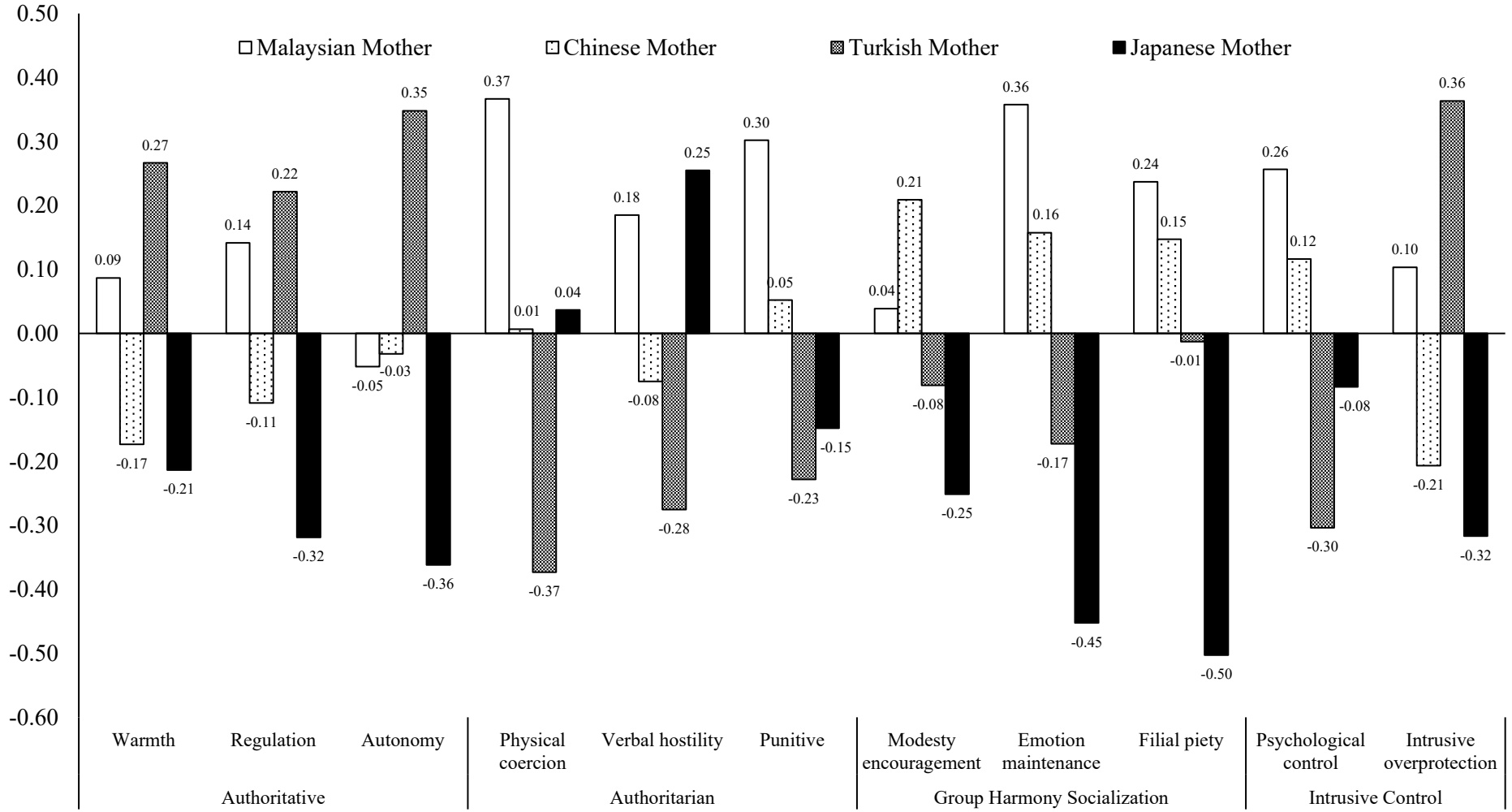

Figure 2. Latent mean differences of the eleven parenting sub-dimensions for mothers across the four cultures. Grand means of the mother sample were used as the zero references. Any difference larger than 0.07 was statistically significant.

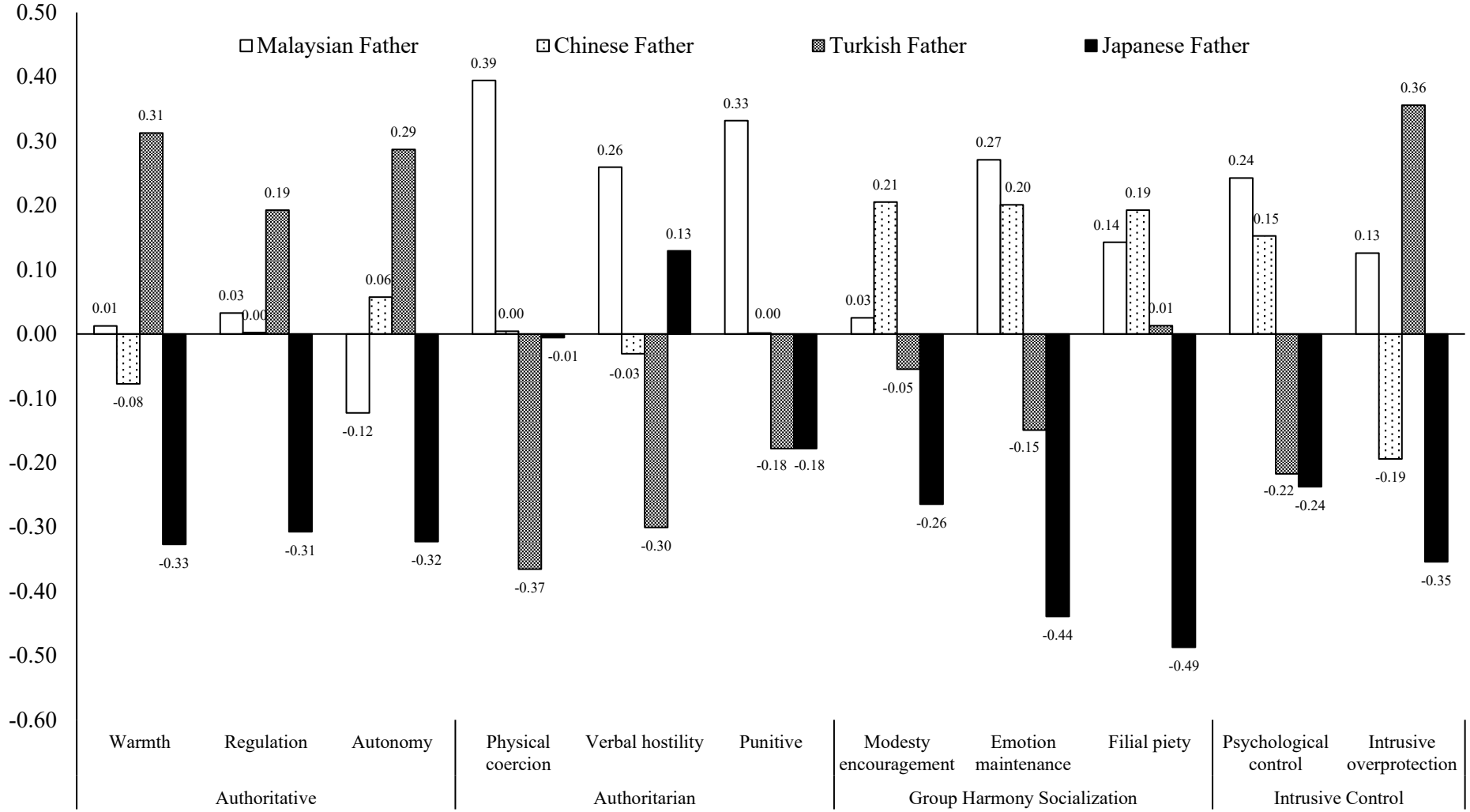

Figure 3. Latent mean differences of the eleven parenting sub-dimensions for fathers across the four cultures. Grand means of the father sample were used as the zero references. Any difference larger than 0.07 was statistically significant.