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## Parenting culture(s)

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# Parenting Culture(s): Ideal-Parent Beliefs Across 37 Countries 

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## Author Contribution

Isabelle Roskam (I.R.) and Moïra Mikolajczak (M.M.) designed the study and initiated the International Investigation of Parental Burnout (IIPB) consortium, from which the current data were drawn. Gao-Xian Lin (G.-X.L.) suggested performing semantic network analysis on the patterns of good-parent beliefs and performed the data analyses. G.-X.L., I.R., M.M and Heidi Keller (H.K.) interpreted the results. G.-X.L., I.R., and M.M. drafted the first version of the manuscript and H.K. provided critical revisions. All other authors are members of the International Investigation of Parental Burnout (IIPB) Consortium; they collected the data in their own country and performed or supervised the translation process of the material into French or English. All authors approved the final version of the manuscript for submission.

## Protections of Research Participants

The study was carried out in accordance with the World Medical Association Declaration of Helsinki. The original study program was approved by the Ethics Committee of the Psychological Sciences Research Institute at UCLouvain in Belgium (Reference 201724; January 25, 2018). All collaborated countries submitted the study to the local Ethics committee for approval except where ethics approval was not mandatory. Information regarding ethical approval is available in https://doi.org/10.1007/s42761-020-00028-4

## Open Practices Statement

This study was not formally preregistered. However, the database of study variables and the supplementary material have been made available on a permanent third-party archive, Open Science Framework: https://osf.io/y9e2u/?view_only=c94f6d223365442e9167605384b873ac

## Declaration of Conflict of Interest

M.M. and I.R. founded the Training Institute for Parental Burnout (TIPB) which delivers training on parental burnout to professionals. The TIPB did not participate in the funding of this study nor did it influence the process, the results, or their interpretation in any manner.

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#### Abstract

What is it to be "an ideal parent"? Does the answer differ across countries and social classes? To answer these questions in a way that minimizes bias and ethnocentrism, we used open-ended questions to explore ideal-parent beliefs among 8,357 mothers and 3,517 fathers from 37 countries. Leximancer Semantic Network Analysis was utilized to first determine parenting culture zones (i.e., countries with shared ideal-parent beliefs) and then extract the predominant themes and concepts in each culture zone. The results yielded specific types of ideal-parent beliefs in five parenting culture zones: being "responsible and children/family-focused" for Asian parents, being "responsible and proper demeanor-focused" for African parents, and being "loving and responsible" for Hispanic-Italian parents. Although the most important themes and concepts were the same in the final two zones - being "loving and patient", there were subtle differences: English-speaking, EU, and Russian parents emphasized "being caring," while French-speaking parents valued "listening" or being "present." Ideal-parent beliefs also differed by education levels within culture zones, but no general pattern was discerned across culture zones. These findings suggest that the country in which parents were born cannot fully explain their differences in ideal-parent beliefs, and that differences arising from social class or education level cannot be dismissed. Future research should consider how these differences affect the validity of the measurements in question and how they can be


incorporated into parenting intervention research within and across cultures.

Keywords: parental beliefs, automated content analysis, positive parenting, qualitative and quantitative methods, semantic network analysis

## Parenting Culture(s): Ideal-Parent Beliefs Across 37 Countries

Parenting is a flourishing topic in the field of developmental psychology, and with good reason: the survival of the human species depends on it. Yet, despite several pioneering studies (Keller et al., 2006; Super \& Harkness, 1986), many psychological studies published in English-language journals devoted to parenting concern predominantly white, middle-class parents in the USA (see Arnett, 2008; Bornstein, 2013; Keller, 2018; Lansford, 2021; Mistry \& Dutta, 2015). Besides, many psychological studies that have included non-Western (i.e., non-Euro-American) cultures have merely imposed a framework established in Western (i.e., Euro-American) cultures, preventing the discovery of concepts from the non-Western world (Harkness \& Super, 2020; Lansford et al., 2016; Segall et al., 1998). As a result, how humans parent in the non-Western cultural space, as opposed to the well-examined Western cultural space, remains less clear. In this study, we aimed to examine ideal-parent beliefs-a crucial characteristic of parenting culture-in an exploratory (without setting specific hypotheses), bottom-up (from the perspective of the principal actors-mothers and fathers) manner across 37 countries.

## The Notion of Culture

Culture consists of ideas, beliefs, values, conventions, representations, and meanings widely shared within a community (Triandis, 1996). It can vary according to environmental conditions or contexts, including race and ethnicity, urban and rural contexts, religion, and
many other dimensions (Keller, 2020). The intersection between these conditions, for instance, the country in which parents are born and their social class (Keller, 2020; Lansford et al., 2016), creates distinct cultural settings for parenting and child development (Super \& Harkness, 1986, 2020b). Individuals in countries may share distinct cultures in terms of values, ideologies, norms, and beliefs (Yang, 2018). Nevertheless, different social classes have distinct subcultures and, in most cases, it is the country's dominant group that shapes its culture (Keller, 2018). By setting the standards and defining the competencies that are valued (Markus \& Hamedani, 2020), cultures and subcultures provide benchmarks for what to do and what not to do, what attitudes to adopt and what not to adopt, and even what content is relevant to the construction of self and identity (Harkness \& Super, 2021; Super \& Harkness, 2020a).

## Parenting Culture and Ideal-Parent Beliefs

What is true of culture in general also applies to parenting culture-ideas, beliefs, values, conventions, representations, and meanings associated with parenting that are widely shared within a community (Harkness et al., 2015; Harkness \& Super, 2002; Keller et al., 2006). All parents hold ideas about what good parents should ideally do and be to promote their children's health, development, and well-being (Mayseless, 2006; Weaver et al., 2020). Those so-called "ideal-parent beliefs" are a universal phenomenon: all parents in all cultures rely on these beliefs to know how to fulfill their parental role (see Chao, 1995; Super \& Harkness, 2020b). However, although some of their components are considered universal, including the
belief that ideal parents must care for their children, the definition of the "ideal" parent seems to vary according to the cultural setting (Bornstein, 2012, 2013; Choate \& Engstrom, 2014; Lo Cricchio et al., 2019). What is considered good or even ideal in one cultural setting may be considered inappropriate in another ${ }^{1}$ (Choate \& Engstrom, 2014; Fontes, 2005; Li, 2012). The ideal-parent beliefs shared by a community of parents thus represent a crucial aspect of its parenting culture (Mistry \& Dutta, 2015; Super \& Harkness, 2020b).

Ideal-parent beliefs or good-parent beliefs-the features parents consider a good parent should ideally possess-play a crucial role in parents’ daily life (Super \& Harkness, 2020b). These beliefs act as a guide for parenting behavior (Hale et al., 2017), parental decision-making, and parental duties in daily and challenging situations (Lo Cricchio et al., 2019; Weaver et al., 2020). For instance, Zhong et al. (2020) found that if caregivers have a stronger ideal belief that engaging in specific stimulating parenting practices will benefit child development (e.g., reading stories to the child), they will actually adopt such strategies, which will, in turn, have an impact on child development (e.g., language and literacy outcomes; see Ece Demir-Lira et al., 2019). Moreover, ideal-parent beliefs help guide parenting decisions, especially at critical moments (Karlsson et al., 2013; Keller, 2012). For example, Feudtner and colleagues (2015) found that when parents have to make critical decisions about children with a serious illness, their ideal-parent beliefs have implications for their preferred decision-making style (i.e., their beliefs guide them about whether to decide
on their own or whether to leave the decision to doctors). Ideal-parent beliefs are so important that parents experience guilt, self-stigma, self-criticism, and sometimes even despair when they find themselves unable to meet their parenting ideal (Eaton et al., 2016).

## A Bottom-Up Exploratory Research Approach

Because ideal-parent beliefs are an important feature of parenting cultures, researchers have recently identified the examination of these beliefs as a potentially fertile direction in parenting science (Super \& Harkness, 2020b). In psychological research, one of the most common ways to describe cultural differences in parenting is to adopt an existing theoretical framework (e.g., the universal dimension of independence and interdependence; see Harkness \& Super, 2020; Huppert et al., 2019; Kağıţ̧ıbaşı, 1996, 2005; Tamis-LeMonda et al., 2008). Although adopting universal dimensions makes it possible to position communities or countries relative to each other, the direct imposition of this conceptual framework in specific cultures may exclude some relevant indigenous concepts or processes from consideration (see Greenfield, 2000; Greenfield et al., 2003; Keller, 2012; Lansford et al., 2016; Raeff, 2010; Yang, 2018). One way to overcome this limitation is by taking a bottom-up exploratory approach. By starting directly from culture insiders' understanding of ideal parenting and without making any assumptions, this approach uncovers the core concepts for the culture that might be overlooked by imposing an a priori framework. For this reason, this way of studying culture has been advocated by researchers in disciplines such as anthropology for
decades (Geertz, 1974) and more recently in psychology (Harkness \& Super, 2020; Lansford et al., 2016; Segall et al., 1998; Super \& Harkness, 2020b; Yang, 2018).

## The Present Study

The aim of the present study was to uncover parents' beliefs about ideal parenting and organize them into (sub)types based on their similarities and differences across countries and educational levels. To do so, we used a bottom-up exploratory approach. We collected and analyzed the beliefs of fathers and mothers (i.e., culture insiders) from 37 countries and different levels of education with the goal of exploring parenting (sub)cultures around the world.

## Method

## Participants and Procedure

A total of 8,357 mothers and 3,517 fathers from 37 countries participated in the study. Parents were eligible to participate if they were born in their current country of residence and met the inclusion criterion of still having at least one child living at home, regardless of their age. Tables S1 and S2 in the Online Supplemental Material present the sociodemographic characteristics of fathers and mothers in each country.

The data were collected during the period from January 2018 to November 2019 through the International Investigation of Parental Burnout (IIPB) Consortium. The IIPB Consortium
was set up by two Belgian principal investigators (PIs) in 2017. They aimed to include in the consortium as many countries as possible that differed from each other in terms of their geographical position and socioeconomic level. They started by contacting several researchers they personally knew and inviting them to participate in the project. Next, they contacted well-known experts in parenting psychology to supplement this initial pool of participating countries. Lastly, to further extend the number of countries included in the consortium, when researchers from non-participating countries wrote to the two IIPB PIs to inquire about parental burnout, they invited them to join the consortium.

The study was presented as a study designed to improve understanding of parental fulfilment and exhaustion around the world. All the countries utilized a standardized protocol provided by the IIPB PIs (the full protocol is available on Open Science Framework (OSF) at https://osf.io/94w7u/?view_only=a6cf12803887476cb5e7f17cfb8b5ca2). However, the recruitment procedure (e.g., newspaper advertisements, word of mouth, social networks, door-to-door) and the presentation of the survey (i.e., paper and pencil, or online) varied from country to country according to local practices. A summary of the recruitment procedure in each country as well as the ethics approvals are available in Roskam et al. (2021). In the end, 37 countries from the initial pool of 42 countries participating in the IIPB data collection provided the data for the current study. The sample size corresponds to the number of mothers and fathers who fully answered the questions relating to the variables of interest.

## Measures

Beyond demographic measures, the IIPB common protocol included measures designed to address different research goals (e.g., comparing the prevalence of parental burnout across countries; investigating the relations between parental burnout and gender roles). Because those questions are too diverse to be addressed in the same article, we describe below only the measures used in the current paper.

## Demographic Questions

The participants were asked about: their gender; their age; their educational level (number of successfully completed school years from the age of 6); their total number of biological children and the number of those living in the household; the age of the youngest and the oldest child; the number of hours spent with children per day (without taking the night into account); the number of women (e.g. co-wife, grandmother, etc.) living in the household/immediate area and caring for the children on a daily basis (including the respondent when applicable); the number of men (e.g. grandfathers, uncles etc.) living in the household/immediate area and caring for the children on a daily basis (including the respondent when applicable); their working status (paid professional activity); their ethnicity; their family type (two mixed-gender parents, two same-gender parents, single parent, step-family, multigenerational family, or polygamous family); and the neighborhood profile
(whether parents perceived their home resided in a relatively disadvantaged, prosperous, or average neighborhood). Note that for the item about family types, countries which so requested were allowed to remove the types that did not fit the culture (e.g., two same-gender parents or polygamous family).

## Ideal-Parent Beliefs

The participants were invited to state freely five features that they personally considered a good parent should ideally possess. For the mothers, the exact item was: "Indicate five features (each in one word) that an ideal mother should have in your opinion (e.g., caring)" (i.e., ideal-mother beliefs). For the fathers, the exact item was: "Indicate five features (each in one word) that an ideal father should have in your opinion (e.g., caring)" (i.e., ideal-father beliefs). The respondents were asked to answer in their mother tongue. In order to limit translation and interpretation bias in the data analyses, the instruction given to participating parents in the IIPB protocol was to produce single words (rather than phrases or sentences).

Except for English- and French-speaking countries, the dataset provided by each country, i.e., the collection of features reported by local participants, was translated into English by the IIPB local researchers for analysis purposes. The IIPB local researchers were both experts in psychological science and native speakers of the original language of the parents' raw responses. In the translation process, they were also asked to secure equivalence of meaning.

In particular, the translated features were not restricted to single words in English. The researchers were rather encouraged to look for approximations (e.g., a phrase or a sentence) to best convey the meaning of the raw responses. When the dataset was in French, the translation and meaning equivalence were handled by the two Belgian PIs. Finally, the first author, who was not involved in the translation process, conducted the data analysis using automated content analysis in order to reduce interpretation bias.

## Analysis Strategy

Inductive research like the present study affords the researcher some room for creativity, and subjective decisions and interpretations need to be made throughout the analysis process (Wagenmakers et al., 2018). To make the current study replicable, we will describe our decisions in detail and have made our dataset available in a public research repository (https://osf.io/y9e2u/?view_only=c94f6d223365442e9167605384b873ac). In order to analyze mothers' and fathers' ideal-parent beliefs around the globe, we performed Semantic Network Analyses (SNAs) with Leximancer (see Smith \& Humphreys, 2006 for the validity of the tool). This software performs quantitative content analysis using an unsupervised machine learning technique (https://info.leximancer.com/). As in exploratory factorial analysis of quantitative data, the SNA proceeds according to a principle of increasing abstraction, in which the responses provided by the respondents (i.e., the ideal-parent features provided by
the parents in the current study) are organized into concepts that in turn are organized into themes (i.e., clusters of concepts).

Before running the SNAs, we removed typical stop words in English (i.e., frequent words that are rather arbitrarily designated as having little semantic meaning) including articles, pronouns, prepositions, and conjunctions (e.g., "the", "I", "about", "and") as well as low semantic-content transitive verbs (e.g., "add"). Also, variants of words, including different parts of speech (e.g., "child" and "children", or "love" and "loving"), were merged into the form appearing most frequently in the texts.

In the following analyses, we ran SNAs separately on mothers' and fathers' ideal-parent beliefs. Two stages of analysis were implemented in a Leximancer SNA. In the first stage, concepts were extracted from the features. In Leximancer, concepts are defined as latent constructs indicated by collections of features that generally go together throughout the responses. In practice, the SNA first extracted from the raw responses provided by the parents a set of relevant features (as well as synonyms) that frequently co-occurred in the same responses and rarely occurred independently in separate responses. Learning the meaning of features by examining their occurrences and co-occurrences, Leximancer automatically extracted key messages that these features expressed and designated names for concepts accordingly. The features belonging to a specific concept were also weighted to indicate the
"evidence" of the concept's existence according to how frequently these features co-occurred in raw responses, compared to how frequently they occurred separately elsewhere. Finally, the SNA tested whether a parent's ideal-parent beliefs contained the concepts or not, based on whether the "evidence" was above the user-defined threshold (i.e., the summed weight of the features connected to a concept; in this study, we used the default threshold, 0.7 ).

In the second stage, Leximancer produced a co-occurrence network matrix, allowing us to examine all concepts extracted from the first stage and their co-occurrences. Based on their co-occurrences, the SNA also produced a semantic network map, in which a concept was denoted as a node; the size of the nodes imaged concept connectivity and their closeness imaged both the strength of the association (or co-occurrence) between concepts (direct association) and connections of similar frequency to other nodes (indirect association). Two concepts were connected by edges only when they had a strong association, taking account of both direct and indirect association between nodes and the degree of specificity in the concept hierarchy (i.e., whether two concepts had similar occurrences). Themes were represented as overlapping circles encompassing concepts that were close together on the map, and the number of themes was determined by users (in the current study, it was determined to be three for ease of interpretation). Each theme took its name directly from the most connected (i.e., most important) of the concepts it encompassed; thus, the themes enabled users to investigate the most connected concepts in a semantic network map. The frequency counts of
themes denoted the number of responses associated with the theme (cluster of the concepts).

We were aware of a wide variation in sample sizes across countries in our dataset, so we did not directly examine the content of ideal-parent beliefs across the world (as the content of ideal-parent beliefs would then be represented more by parents from countries with larger sample sizes). Instead, a sophisticated 2-step procedure was used to avoid over-representing any country's data in the results. First, because countries may have similar parenting cultures and thus ideal-parent beliefs, we used the country as a unit and examined the similarity between the ideal-parent beliefs reported by the parents in the countries. Leximancer SNA clustered countries that shared similar ideal-parent beliefs into culture zones. In our dataset, mothers and fathers were nested in a country so that Leximancer could organize the results according to this between-factor and reveal the countries as nodes on the map. The closeness between the country nodes reflected their similarity with regard to the ideal-parent beliefs shared by the parents in these countries. This step enabled us to delineate culture zones holding the same ideal-parent beliefs.

Second, we pooled the datasets from the countries belonging to the same parenting culture zone and then clustered all parents into three educational groups according to the number of successfully completed school years: (1) low-educated parents (with less than 9 years of education from the age of 6), (2) middle-educated parents (9-15 years), (3)
high-educated parents (at least 16 years). We ran new SNAs, i.e., one SNA in each parenting culture zone, considering the educational group as a between-factor. To demonstrate ideal-parent beliefs taking into account the intersection of education levels and parenting culture zones, we customized Leximancer to organize SNA results according to the educational groups in each culture zone. In such SNA results, educational level groups were displayed as nodes together with ideal-parent belief nodes. And the more characteristic concepts of the groups were those closer to the node of the group in proximity or even connected by edges.

## Results

We identified five parenting culture zones across the 37 countries. Figure 1 shows the semantic network map on which we have circled these five zones. Official language and/or geographical proximity were found to organize the boundaries of the zones. We labeled them (1) Asian, (2) African, (3) Hispanic-Italian, (4) Western I (mainly consisting of English-speaking and EU countries) and Russian, (5) Western II (mainly consisting of French-speaking countries). Their composition in terms of countries is presented in Figure 1a for mothers and in Figure 1b for fathers. The number of parents in each zone is given in Table 1.

Table 2 shows the three most frequent concepts and the three major themes (i.e., the
most connected concepts for the theme) of the ideal-mother/-father beliefs across the five parenting culture zones together with their frequency counts. In addition, the semantic network maps delineating the ideal-parent beliefs and their association with the educational level groups in the five parenting culture zones are shown in Figure 2. These maps were customized to show the educational groups as well as the concepts, edges, and three overlapping themes of the ideal-parent beliefs. In the following sections, we analyzed the frequency counts (i.e., the total number of occurrences) of both the most frequent concepts and the most frequent themes of ideal-parent beliefs across parenting culture zones. Then we examined and compared ${ }^{2}$ the ideal-parent beliefs according to educational levels within each parenting culture zone.

## Ideal-Parent Beliefs Around the Globe

The Three Most Frequent Ideal-Parent Belief Concepts Across Parenting Culture Zones

The results revealed both commonalities and differences between the predominant ideal-parent beliefs in the five parenting culture zones. With regard to the commonalities of beliefs, we found that the extracted concepts were highly similar across gender within each parenting culture zone (see Table 2). In addition, a similar set of extracted concepts (e.g., "loving," "responsible," and "patient") were also found across the five culture zones (see Figure 2). However, the importance (i.e., frequency count; see Table 2) of each concept was
different between culture zones, and this was what constituted the specificity of each culture. In particular, "responsible" ranked at the top of the list in both the Asian and African parenting culture zones. In the Asian parenting culture zone, the concepts of "family" and "children" were also found at the top of the list, whereas we found concepts such as "patient/patience" and "respected" at the top of the list in the African culture zone. In contrast to these two culture zones, "loving" consistently ranked at the top of the list of the other three culture zones. "Responsible" was the second most frequent concept in the Hispanic-Italian parenting culture zone; "patient" in both Western I and Russian (ranked second for mothers and third for fathers) and Western II culture zones. ${ }^{3}$

## The Three Major Themes Across Parenting Culture Zones

The thematic analysis further uncovered the most connected (i.e., central) concepts that attracted a community of concepts around them and were therefore considered to be themes. As for the concepts, commonalities and differences appeared for the themes across parenting cultures. In terms of commonalities, the extracted major themes and community of concepts around them, were highly similar between ideal-mother and ideal-father beliefs (see Table 2 and Figure 2).

The commonalities across parenting cultures did not end at gender issues, as we also found a similar number of themes across the five parenting culture zones. In particular,
compared with the first theme ("family" for Asian parents; "responsible" for African parents; "loving" for Hispanic-Italian, Western I and Russian, and Western II parents; see below), the frequency count of the two subsequent themes (these themes differed across zones; see Table 2) decreased drastically, suggesting that ideal-parent beliefs are organized around one main theme around the globe. However, the topics of the themes reflected cultural characteristics. The theme organized around "loving" (with concepts such as "happy," "caring," "supportive," and "funny" close to the concept "loving"; see Figure 2.c-e.) was found to be the most important in the Hispanic-Italian, Western I and Russian, and Western II parenting culture zones. In other words, "loving" was identified as the core of the ideal-parent beliefs in these three parenting culture zones. The two remaining parenting culture zones were characterized by very different ideal-parent beliefs. The most central theme was organized around "family" (with concepts such as "housework," "children," and "model" close to the concept "family"; see Figure 2.a.) in the Asian parenting culture zone and "responsible" (with concepts such as "sacrifice," "power," and "moral" close to the concept "responsible"; see Figure 2.b.) in the African parenting culture zone.

Taking the two levels of analysis together, we directly referred to the most important theme and two most frequently used concepts to characterize each culture for the sake of parsimony. Two parenting culture zones, the Asian and the African, mainly emphasized responsibility. In addition, Asian parents emphasized child/family, while African parents
valued being respectful, respected, and patient (together, these reflected the emphasis on "proper demeanor"). The three other parenting culture zones focused on being loving. In addition, Hispanic-Italian emphasized being responsible, and Western I and Russian as well as Western II parents cherished being patient. To further differentiate the Western I and Russian as well as Western II cultures, we took the third most frequent concept into consideration: English-speaking, EU, and Russian parents further emphasized "being caring", while French-speaking parents valued "listening" or being "present." In sum, specific types of ideal-parent beliefs ("responsible and children/family-focused", "responsible and proper demeanor-focused", "loving and responsible and caring", and "loving and patient and listening/present") were identified across five parenting culture zones.

## Ideal-Parent Belief Subtypes by Educational Level Within the Parenting Culture Zones

For highly educated parents in the Hispanic-Italian and Western I and Russian culture zones, ideal-parent beliefs were characterized by concepts like "patient" and "calm", or empathic concerns like "empathic", "available" and "affectionate." In contrast, for less educated (low- and middle-educated) parents, ideal-parent beliefs were characterized by concepts like "loving/love," "honest," and "caring" (see Figure 2.c and Figure 2.d).

The pattern displayed in Asian (see Figure 2.a) and African (see Figure 2.b) parenting culture zones was different from the above two culture zones. In the Asian culture zone,
concepts like "family" and "housework" featured among parents with low levels of education (the nodes of these concepts were closer to the low-educated node; see Figure 2.a), while "money" and "income" characterized highly educated parents (the nodes of these concepts were closer to the high-educated node; see Figure 2.a). In the African culture zone, mothers from different educational levels emphasized distinct concepts of ideal-mother beliefs. The concepts of "family" and "children" were typical of the highly educated mothers (the nodes of these concepts were closer to the high-educated node; see Figure 2.b), whereas the concepts of "respected," "responsible," and "courage" were more characteristic of mothers with less education (the nodes of these concepts were closer to the low-educated node; see Figure 2.b). In contrast to the mothers' results, the fathers' results suggest that the ideal-father beliefs do not vary with education level: almost all extracted concepts were at a similar distance from the education level groups.

Finally, in the Western II parenting culture zone (see Figure 2.e), the pattern of ideal-parent beliefs was very similar across educational levels for both mothers and fathers.

## Discussion

Even though recent globalization and modernization have started to blur the boundaries (Greenfield, 2009; Greenfield et al., 2003), cultural differences remain salient (Inglehart, 2018; Santos et al., 2017). Parenting culture and thus ideal-parent beliefs are no exception
(Harkness \& Super, 2021; Keller, 2020). Unlike much empirical research examining parenting culture in terms of differences in parenting behaviors or socialization goals, the current research breaks new ground in exploring another crux of parenting culture: ideal-parent beliefs. Ideal-parent beliefs are a set of beliefs that parents can refer to and follow in rearing their children (Super \& Harkness, 2020b). These beliefs are a higher-level construct-the meaning system and lens through which parents perceive, understand, and engage in their parenting practices (George \& Solomon, 2008; Harkness \& Super, 1996). Different parenting cultures were evident in our data, reflected in different types of ideal-parent beliefs across social classes and countries.

More specifically, in the reports of parents from 37 countries across the five main continents, we found five distinct parenting culture zones. These were a "responsible and children/family-focused" type for Asian parents, a "responsible and proper demeanor-focused" type for African parents, a "loving and responsible" type for Hispanic-Italian parents, a "loving and patient and caring" type for Western I (consisting mainly of English-speaking and EU countries) and Russian parents, and a "loving and patient and listening/present" type for Western II (consisting mainly of French-speaking countries) parents ${ }^{4}$. In addition, we found commonalities between ideal-mother and ideal-father beliefs, which may suggest the existence of "parenting" cultures around the world, rather than distinct

[^0]education level, but no general pattern could be drawn across cultures. As shown below, these results contribute to the current understanding of cultures and parenting as well as having implications for future research.

Examining the countries that constituted the five parenting culture zones identified by our bottom-up research approach, we found that the country composition of culture zones largely aligned with the latest finding of the World Value Survey (2020). In this cross-nationally representative survey, Inglehart and colleagues examined cultural differences in two general value dimensions (i.e., traditional versus secular-rational value and survival versus self-expression; see Inglehart, 2018; Inglehart \& Welzel, 2005) in almost 100 countries. They found that with these two dimensions, countries sharing similar value combinations could be divided into culture clusters (eight clusters in the seventh wave, which was conducted in 2017-2021). Although they did not situate culture in a specific context as we did by contextualizing culture in the parental sphere, the way countries formed clusters in the World Value Survey and the parenting zones highlighted in our research are comparable. Specifically, when countries are geographically close or share the same language, their cultures seem to form a homogeneous pattern. This similarity suggests that cultures, whether examined in a specific context (e.g., parenting) or not, are organized by geographic proximity ${ }^{5}$ and language.

The ideal-parent beliefs in each culture zone found in the current study echo previous literature on smaller samples of countries and facilitate a more comprehensive understanding of parenting. For example, we found that parents in the Western I and Russian, as well as the Western II culture zones, emphasized "loving," "caring," "patient," and "calm" as characteristics of ideal parents. This combination of concepts matched the parenting strategies encompassed in "positive parenting" ideologies prevailing in current Western cultures - the philosophy that parents should take care of their children with warmth and support (Larzelere et al., 2017; Lin et al., 2021). In contrast, Asian and African parents deemed "responsible parenting" (e.g., assuming responsibility; Gillies, 2008; being responsible for children's cues; Schuhmacher et al., 2017) as most important. Asian parents' ideal-parent beliefs were further based around family and children (i.e., doing things for their children and family; e.g., loving/teaching/guiding their children or family), reflecting the child/family focus nature of the culture (Keller et al., 2007; Ng et al., 2014). African parents found it crucial to be "patient" and emphasized the concept "respected." This specific combination of concepts echoes the literature highlighting the proper demeanor of obedience and respect that is common in African cultures (LeVine et al., 1994; Miller \& Harwood, 2002).

Like Keller (e.g., 2018, 2020), we found that the country as a unit cannot fully explain differences in parenting culture (i.e., the cultural differences of ideal-parent beliefs in this
case). Social class, which was organized here according to parental education levels, showed the existence of parenting subcultures. Our results indicated that ideal-parent beliefs differ by educational levels and that no general pattern of such differences could be drawn across culture zones. For example, in zones where a positive parenting ideology prevails (i.e., the Western I and Russian as well as the Western II zones), ideal-parent beliefs are rather homogeneous among parents with higher and lower levels of education. In contrast, Western I and Russian parents with a high level of education place special emphasis on concepts like being "patient" and "calm", whereas parents with lower or middle levels of education place emphasis on being "loving/love" and "honest".

## Limitations and Future Directions

Despite its contributions, the limitations of this study should be acknowledged. First, the fact that the raw responses were collected in the parents' native language is both a strength and a weakness. It allowed us to begin with the participants' beliefs in a bottom-up approach. However, it also possibly biased the interpretation of the results, because the material had to be translated into a common language, English, sometimes using approximations to secure the initial meaning given by the participants. Despite the precautions implemented in the present study (i.e. production of single words by the participants, involvement of native researchers in the process of translation and securing the meaning, automated content analysis by the first author) to limit the biases due to the language in which the raw data were
collected, we have to acknowledge that the meaning of the features (e.g., loving) may differ from one parent to another and from one culture to another. Our study was unable to determine the exact meaning of features for each participant. And given the large-scale, bottom-up research design of the current study, it would be an unrealistic goal to conduct a comprehensive comparison of meaning invariance across participants, as top-down studies typically do (e.g., imposing the existing framework) (Lansford et al., 2016). Therefore, future studies using a small-scale in-depth interview (e.g., Cheah et al., 2013) or a large-scale cross-country comparative study with a quantitative measure of "ideal-parent belief" (inspired by the result of our study) would be useful to supplement the current study.

Second, there was some subjectivity in the way we delineated parenting culture zones, an inherent feature of inductive research (Wagenmakers et al., 2018). In an effort to validate the relevance of our approach, we wanted to test the extent to which we might also have found interpretable results by grouping parents completely arbitrarily into five groups. After randomly assigning each participant to one of the five groups, we replicated exactly the same SNA analysis strategy as described in the method of the current research. The results across these random groups showed not only the same concepts across all "zones" (i.e., no "zone" specificity) but also a similar association between concepts (e.g., one predominant theme, i.e., loving; see Table S3) and a similar relation of educational groups to ideal-parent beliefs (e.g., the concepts of "patient" and "calm" were typical of the high-educated groups whereas
"family" and "children" were typical of the lower-educated; see Figure S1). The fact that this analysis based on random groups yielded no interpretable difference between groups strongly supports the validity of our research.

## Conclusion and Implication

Gathering parents from 37 countries across the five main continents, this study delineated specific types of ideal-parent beliefs. The generalization of any research finding from one culture to another should therefore be practiced with caution. These results highlight a need for more attention to cultural similarities and differences in parental beliefs. Further work should consider how these differences influence the validity of measurements and how they can be incorporated into parenting intervention research within and across cultures.

## Reference

Arnett, J. J. (2008). The neglected 95\%: Why American psychology needs to become less American. American Psychologist, 63(7), 602-614.
https://doi.org/10.1037/14805-008

Bornstein, M. H. (2012). Cultural Approaches to Parenting. Parenting, 12(2-3), 212-221. https://doi.org/10.1080/15295192.2012.683359

Bornstein, M. H. (2013). Parenting and child mental health: A cross-cultural perspective. World Psychiatry, 12(3), 258-265. https://doi.org/10.1002/wps. 20071

Chao, R. K. (1995). Chinese and European American Cultural Models of the Self Reflected in Mothers' Childrearing Beliefs. Ethos, 23(3), 328-354. JSTOR.

Cheah, C. S. L., Leung, C. Y. Y., \& Zhou, N. (2013). Understanding "Tiger Parenting" Through the Perceptions of Chinese Immigrant Mothers: Can Chinese and U.S.

Parenting Coexist? Asian American Journal of Psychology.
https://doi.org/10.1037/a0031217

Choate, P. W., \& Engstrom, S. (2014). The "Good Enough" Parent: Implications for Child Protection. Child Care in Practice, 20(4), 368-382.
https://doi.org/10.1080/13575279.2014.915794

Eaton, K., Ohan, J. L., Stritzke, W. G. K., \& Corrigan, P. W. (2016). Failing to Meet the Good Parent Ideal: Self-Stigma in Parents of Children with Mental Health Disorders.

Journal of Child and Family Studies, 25(10), 3109-3123.
https://doi.org/10.1007/s10826-016-0459-9

Ece Demir-Lira, Ö., Applebaum, L. R., Goldin-Meadow, S., \& Levine, S. C. (2019). Parents’ early book reading to children: Relation to children's later language and literacy outcomes controlling for other parent language input. Developmental Science, 22(3), e12764. https://doi.org/10.1111/desc. 12764

Feudtner, C., Walter, J. K., Faerber, J. A., Hill, D. L., Carroll, K. W., Mollen, C. J., Miller, V. A., Morrison, W. E., Munson, D., Kang, T. I., \& Hinds, P. S. (2015). Good-Parent Beliefs of Parents of Seriously Ill Children. JAMA Pediatrics, 169(1), 39-47. https://doi.org/10.1001/jamapediatrics.2014.2341

Fontes, L. A. (2005). Child abuse and culture: Working with diverse families. Guilford Press. Geertz, C. (1974). "From the Native's Point of View": On the Nature of Anthropological Understanding. Bulletin of the American Academy of Arts and Sciences, 28(1), 26-45. https://doi.org/10.2307/3822971

George, C., \& Solomon, J. (2008). The Caregiving System: A Behavioral Systems Approach to Parenting. In Handbook of Attachment: Theory, Research, and Clinical Application (2nd ed., pp. 833-856). Guilford Press.

Gillies, V. (2008). Perspectives on Parenting Responsibility: Contextualizing Values and Practices. Journal of Law and Society, 35(1), 95-112.
https://doi.org/10.1111/j.1467-6478.2008.00416.x

Greenfield, P. M. (2000). Three approaches to the psychology of culture: Where do they come from? Where can they go? Asian Journal of Social Psychology, 3(3), 223-240. https://doi.org/10.1111/1467-839X. 00066

Greenfield, P. M. (2009). Linking social change and developmental change: Shifting pathways of human development. Developmental Psychology, 45(2), 401-418. https://doi.org/10.1037/a0014726

Greenfield, P. M., Keller, H., Fuligni, A., \& Maynard, A. (2003). Cultural Pathways Through Universal Development. Annual Review of Psychology, 54(1), 461-490.
https://doi.org/10.1146/annurev.psych.54.101601.145221

Hale, R., Fox, C. L., \& Murray, M. (2017). "As a Parent You Become a Tiger": Parents Talking about Bullying at School. Journal of Child and Family Studies, 26(7), 2000-2015. https://doi.org/10.1007/s10826-017-0710-z

Harkness, S., Mavridis, C. J., Liu, J. J., \& Super, C. M. (2015). Parental ethnotheories and the development of family relationships in early and middle childhood. In The Oxford handbook of human development and culture: An interdisciplinary perspective (pp. 271-291). Oxford University Press.
https://doi.org/10.1093/oxfordhb/9780199948550.013.17

Harkness, S., \& Super, C. M. (Eds.). (1996). Parents'Cultural Belief Systems Their Origins,

Expressions, and Consequences. Guilford Press.

Harkness, S., \& Super, C. M. (2002). Culture and parenting. In Handbook of parenting:

Biology and ecology of parenting (2nd ed., Vol. 2, pp. 253-280). Lawrence Erlbaum Associates Publishers.

Harkness, S., \& Super, C. M. (2020). Culture and human development: Where did it go? And where is it going? New Directions for Child and Adolescent Development, 2020(173), 101-119. https://doi.org/10.1002/cad. 20378

Harkness, S., \& Super, C. M. (2021). Why understanding culture is essential for supporting children and families. Applied Developmental Science, 25(1), 14-25. https://doi.org/10.1080/10888691.2020.1789354

Huppert, E., Cowell, J. M., Cheng, Y., Contreras-Ibáñez, C., Gomez-Sicard, N., Gonzalez-Gadea, M. L., Huepe, D., Ibanez, A., Lee, K., Mahasneh, R., Malcolm-Smith, S., Salas, N., Selcuk, B., Tungodden, B., Wong, A., Zhou, X., \& Decety, J. (2019). The development of children's preferences for equality and equity across 13 individualistic and collectivist cultures. Developmental Science, 22(2), e12729. https://doi.org/10.1111/desc. 12729

Inglehart, R. (2018). Cultural Evolution: People's Motivations are Changing, and Reshaping the World. Cambridge University Press.

Inglehart, R., \& Welzel, C. (2005). Modernization, Cultural Change, and Democracy: The

Human Development Sequence. Cambridge University Press.

Kağıţ̧ıbaşı, Ç. (1996). The Autonomous-Relational Self. European Psychologist, l(3), 180-186. https://doi.org/10.1027/1016-9040.1.3.180

Kağıtçıbaşı, Ç. (2005). Autonomy and relatedness in cultural context: Implications for self and family. Journal of Cross-Cultural Psychology, 36(4), 403-422.

Karlsson, M., Löfdahl, A., \& Prieto, H. P. (2013). Morality in parents' stories of preschool choice: Narrating identity positions of good parenting. British Journal of Sociology of Education, 34(2), 208-224. https://doi.org/10.1080/01425692.2012.714248

Keller, H. (2012). Autonomy and Relatedness Revisited: Cultural Manifestations of Universal Human Needs. Child Development Perspectives, 6(1), 12-18. https://doi.org/10.1111/j.1750-8606.2011.00208.x

Keller, H. (2018). Parenting and socioemotional development in infancy and early childhood. Developmental Review, 50, 31-41. https://doi.org/10.1016/j.dr.2018.03.001

Keller, H. (2020). Children's Socioemotional Development Across Cultures. Annual Review of Developmental Psychology, 2, 27-46.

Keller, H., Abels, M., Borke, J., Lamm, B., Su, Y., Wang, Y., \& Lo, W. (2007). Socialization environments of Chinese and Euro-American middle-class babies: Parenting behaviors, verbal discourses and ethnotheories. International Journal of Behavioral Development, 31(3), 210-217. https://doi.org/10.1177/0165025407074633

Keller, H., Lamm, B., Abels, M., Yovsi, R., Borke, J., Jensen, H., Papaligoura, Z., Holub, C., Lo, W., \& Tomiyama, A. J. (2006). Cultural models, socialization goals, and parenting ethnotheories: A multicultural analysis. Journal of Cross-Cultural Psychology, 37(2), 155-172.

Lansford, J. E. (2021). Annual Research Review: Cross-cultural similarities and differences in parenting. Journal of Child Psychology and Psychiatry, n/a(n/a).
https://doi.org/10.1111/jcpp. 13539

Lansford, J. E., Bornstein, M. H., Deater-Deckard, K., Dodge, K. A., Al-Hassan, S. M., Bacchini, D., Bombi, A. S., Chang, L., Chen, B.-B., Giunta, L. D., Malone, P. S., Oburu, P., Pastorelli, C., Skinner, A. T., Sorbring, E., Steinberg, L., Tapanya, S., Alampay, L. P., Tirado, L. M. U., \& Zelli, A. (2016). How International Research on Parenting Advances Understanding of Child Development. Child Development Perspectives, 10(3), 202-207. https://doi.org/10.1111/cdep. 12186

Larzelere, R. E., Gunnoe, M. L., Roberts, M. W., \& Ferguson, C. J. (2017). Children and Parents Deserve Better Parental Discipline Research: Critiquing the Evidence for Exclusively "Positive" Parenting. Marriage \& Family Review, 53(1), 24-35.
https://doi.org/10.1080/01494929.2016.1145613

LeVine, R. A., Dixon, S., LeVine, S., Richman, A., Leiderman, P. H., Keefer, C. H., \&

Brazelton, T. B. (1994). Child care and culture: Lessons from Africa (pp. xx, 346).

Cambridge University Press. https://doi.org/10.1017/CBO9780511720321

Li, J. (2012). Cultural Foundations of Learning: East and West. Cambridge University Press.

Lin, G.-X., Hansotte, L., Szczygieł, D., Meeussen, L., Roskam, I., \& Mikolajczak, M. (2021). Parenting with a smile: Display rules, regulatory effort, and parental burnout. Journal of Social and Personal Relationships, 38(9), 2701-2721.
https://doi.org/10.1177/02654075211019124

Lo Cricchio, M. G., Lo Coco, A., Cheah, C. S. L., \& Liga, F. (2019). The Good Parent: Southern Italian Mothers' Conceptualization of Good Parenting and Parent-Child Relationships. Journal of Family Issues, 40(12), 1583-1603.
https://doi.org/10.1177/0192513X19842598

Markus, H. R., \& Hamedani, M. G. (2020). People are culturally shaped shapers: The psychological science of culture and culture change. In D. Cohen \& S. Kitayama (Eds.), Handbook of Cultural Psychology (2nd ed.). The Guilford Press.

Mayseless, O. (2006). Parenting Representations: Theory, Research, and Clinical Implications. Cambridge University Press.

Miller, A. M., \& Harwood, R. L. (2002). The Cultural Organization of Parenting: Change and Stability of Behavior Patterns During Feeding and Social Play Across the First Year of Life. Parenting, 2(3), 241-272. https://doi.org/10.1207/S15327922PAR0203_03

Mistry, J., \& Dutta, R. (2015). Human Development and Culture. In Handbook of Child

Psychology and Developmental Science (pp. 1-38). American Cancer Society. https://doi.org/10.1002/9781118963418.childpsy110

Ng, F. F.-Y., Pomerantz, E. M., \& Deng, C. (2014). Why are Chinese Mothers More Controlling than American Mothers? "My Child is My Report Card." Child Development, 85(1), 355-369. https://doi.org/10.1111/cdev. 12102

Raeff, C. (2010). Independence and Interdependence in Children's Developmental Experiences. Child Development Perspectives, 4(1), 31-36.
https://doi.org/10.1111/j.1750-8606.2009.00113.x

Roskam, I., Aguiar, J., Akgun, E., Arikan, G., Artavia, M., Avalosse, H., Aunola, K., Bader, M., Bahati, C., Barham, E. J., Besson, E., Beyers, W., Boujut, E., Brianda, M. E., Brytek-Matera, A., Carbonneau, N., César, F., Chen, B.-B., Dorard, G., ... Mikolajczak, M. (2021). Parental Burnout Around the Globe: A 42-Country Study. Affective Science, 2(1), 58-79. https://doi.org/10.1007/s42761-020-00028-4

Santos, H. C., Varnum, M. E. W., \& Grossmann, I. (2017). Global Increases in Individualism. Psychological Science, 28(9), 1228-1239. https://doi.org/10.1177/0956797617700622

Schuhmacher, N., Collard, J., \& Kärtner, J. (2017). The Differential role of parenting, peers, and temperament for explaining interindividual differences in 18-months-olds' comforting and helping. Infant Behavior and Development, 46, 124-134. https://doi.org/10.1016/j.infbeh.2017.01.002

Segall, M. H., Lonner, W. J., \& Berry, J. W. (1998). Cross-cultural psychology as a scholarly discipline: On the flowering of culture in behavioral research. American Psychologist, 53(10), 1101-1110. https://doi.org/10.1037/0003-066X.53.10.1101

Smith, A. E., \& Humphreys, M. S. (2006). Evaluation of unsupervised semantic mapping of natural language with Leximancer concept mapping. Behavior Research Methods, 38(2), 262-279. https://doi.org/10.3758/BF03192778

Super, C. M., \& Harkness, S. (1986). The Developmental Niche: A Conceptualization at the Interface of Child and Culture. International Journal of Behavioral Development, 9(4), 545-569. https://doi.org/10.1177/016502548600900409

Super, C. M., \& Harkness, S. (2020a). Culture and the perceived organization of newborn behavior: A comparative study in Kenya and the United States. New Directions for Child and Adolescent Development, 2020(172), 11-24.
https://doi.org/10.1002/cad. 20366

Super, C. M., \& Harkness, S. (2020b). Research on parental burnout across cultures: Steps toward global understanding. New Directions for Child and Adolescent Development, 2020(174), 185-192. https://doi.org/10.1002/cad. 20389

Tamis-LeMonda, C. S., Way, N., Hughes, D., Yoshikawa, H., Kalman, R. K., \& Niwa, E. Y. (2008). Parents' Goals for Children: The Dynamic Coexistence of Individualism and Collectivism in Cultures and Individuals. Social Development, 17(1), 183-209.
https://doi.org/10.1111/j.1467-9507.2007.00419.x

Triandis, H. C. (1996). The psychological measurement of cultural syndromes. American Psychologist, 51(4), 407-415. https://doi.org/10.1037/0003-066X.51.4.407

Wagenmakers, E.-J., Dutilh, G., \& Sarafoglou, A. (2018). The Creativity-Verification Cycle in Psychological Science: New Methods to Combat Old Idols. Perspectives on Psychological Science, 13(4), 418-427. https://doi.org/10.1177/1745691618771357

Weaver, M. S., October, T., Feudtner, C., \& Hinds, P. S. (2020). "Good-Parent Beliefs": Research, Concept, and Clinical Practice. Pediatrics, 145(6). https://doi.org/10.1542/peds.2019-4018

World Values Survey (WVS). (2020). Cultural map—WVS wave 7 (2017-2021) [Provisional version]. World Values Survey (WVS). https://www.worldvaluessurvey.org/WVSContents.jsp

Yang, K.-S. (2018). Indigenized research on Chinese psychology and behavior. National Taiwan University Press.

Zhong, J., Gao, J., Wang, T., He, Y., Liu, C., \& Luo, R. (2020). Interrelationships of parental belief, parental investments, and child development: A cross-sectional study in rural China. Children and Youth Services Review, 118, 105423. https://doi.org/10.1016/j.childyouth.2020.105423

## Table 1

The Frequency Counts of Educational Groups Across the Parenting Culture Zones

| 1. Asian |  |  |  | 2. African |  |  |  | 3. Hispanic-Italian |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mothers $(N=980)$ |  | Fathers$(N=697)$ |  | Mother$(N=477)$ |  | Father$(N=512)$ |  | Mother$(N=1814)$ |  | Father$(N=1016)$ |  |
| Educational Group | $N$ | Educational Group | $N$ | Educational Group | $N$ | Educational Group | $N$ | Educational Group | $N$ | Educational Group | $N$ |
| Low | 188 | Low | 130 | Low | 76 | Low | 80 | Low | 98 | Low | 80 |
| Middle | 559 | Middle | 349 | Middle | 252 | Middle | 226 | Middle | 588 | Middle | 479 |
| High | 226 | High | 212 | High | 149 | High | 205 | High | 1073 | High | 446 |
| 4. Western I and Russian |  |  |  | 5. Western II |  |  |  |  |  |  |  |
| Mother$(N=2921)$ |  | $\begin{aligned} & \text { Father } \\ & (N=835) \end{aligned}$ |  | Mother$(N=2165)$ |  | Father$(N=457)$ |  |  |  |  |  |
| Educational Group | $N$ | Educational Group | $N$ | Educational Group | $N$ | Educational Group | $N$ |  |  |  |  |
| Low | 71 | Low | 26 | Low | 10 | Low | 4 |  |  |  |  |
| Middle | 859 | Middle | 350 | Middle | 883 | Middle | 198 |  |  |  |  |
| High | 1972 | High | 453 | High | 1271 | High | 253 |  |  |  |  |

Note. Parents were categorized into three educational group including low-educated (having less than 9 years from the age of 6),
middle-educated (having 9-15 years), and high-educated (having at least 16 years) on the basis of number of successfully completed school

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years.

## Table 2

The Themes and the Three Most Frequently-Occurring Concepts of Ideal-Mother/Father Beliefs Across the Parenting Culture Zones

| 1. Asian |  |  |  | 2. African |  |  |  | 3. Hispanic-Italian |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ideal-Mother |  | Ideal-Father |  | Ideal-Mother |  | Ideal-Father |  | Ideal-Mother |  | Ideal-Father |  |
| Themes | $N$ | Themes | $N$ | Themes | $N$ | Themes | $N$ | Themes | $N$ | Themes | $N$ |
| family | 776 | family | 525 | responsible | 417 | responsible | 410 | loving | 1648 | loving | 884 |
| tolerant | 339 | strong | 240 | affection | 169 | affection | 153 | affectionate | 1055 | affectionate | 600 |
| faithful | 221 | active | 51 | worker | 90 | worker | 152 | nice | 49 | worker | 28 |
| Concepts | $N$ | Concepts | $N$ | Concepts | $N$ | Concepts | $N$ | Concepts | $N$ | Concepts | $N$ |
| responsible | 272 | family | 214 | responsible | 221 | responsible ${ }^{\text {a }}$ | 210 | loving | 897 | loving | 476 |
| family | 257 | responsible | 155 | respected | 148 | patience | 85 | responsible | 625 | responsible | 274 |
| children | 198 | children | 121 | affection | 95 | responsibility | 82 | affectionate | 551 | affectionate | 213 |


| Ideal-Mother |  | Ideal-Father |  | Ideal-Mother |  | Ideal-Father |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Themes | $N$ | Themes | $N$ | Themes | $N$ | Themes | $N$ |
| loving | 2363 | loving | 721 | loving | 2117 | loving | 434 |
| patient | 1903 | patience | 399 | caring | 874 | empathy | 55 |
| empathic | 1495 | strength | 95 | understanding | 71 | reliable | 14 |
| Concepts | $N$ | Concepts | $N$ | Concepts | $N$ | Concepts | $N$ |
| loving | 1,411 | loving | 436 | loving | 916 | loving | 219 |
| patient | 975 | caring | 309 | patient | 648 | patient | 141 |


| caring | 742 | patience | 185 | present | 496 | listen | 83 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Note. $N$ represents the frequency count (i.e., the total number of occurrences) of the themes and concepts. In Leximancer, each theme took its name directly from the most connected (i.e., most important) of the concepts it encompassed; thus, the names for the most connected concepts (usually, are the most frequently mentioned concepts) encompassed in a theme and the names of themes are identical. Besides, we requested Leximancer to merge all parts of speech for a word/word variants into a single word, and Leximancer automatically identified the potential stem words for variants, but we did not further transform all descriptors into a single consistent form (e.g., adjective form), in order to reduce subjective human interventions.
${ }^{\text {a }}$ Although we asked Leximancer to merge parts of speech for a word, "responsibility" and "responsible" were still separated because of the need to construct the network map.

## Figure 1

The Global Semantic Network Map: The Five Parenting Culture Zones and Their Country Composition


## Figure 2

The Semantic Network Maps of the Ideal-Parent Beliefs and the Educational Groups in the Five Parenting Culture Zones
a. Asian

b. African

c. Hispanic-Italian


Mothers


Fathers
d. Western I (mainly consisting of English-Speaking and EU countries) and Russian


Mothers
Fathers
e. Western II (mainly consisting of French-Speaking countries)


Mothers


Fathers

Note. The colors of bubbles are denoted by heat-mapping, with a hotter color (red, orange) representing the most important themes (mentioned more frequently by parents), and a cooler color (blue, green), representing those less important. Black bordered and dashed blocks are added manually to show the overlapping words.

## Notes

1. A characteristic of a parent that is considered good or even ideal in one cultural setting may be considered inappropriate in another. For instance, it may be deemed inappropriate behavior for Chinese parents to praise their children as smart or clever, whereas such behavior is common and valued in Euro-American parenting (see Li, 2012).
2. It should be noted that we use wording that implies comparisons (e.g., "more important than") throughout this article. However, no formal statistical analysis was carried out in this study to demonstrate statistically significant differences with regard to these features.
3. We requested Leximancer to merge all parts of speech for a word/word variants into a single word, and Leximancer automatically identified the potential stem words for variants, but we did not further transform all descriptors into a single consistent form (e.g., adjective form), in order to reduce subjective human interventions. In any case, descriptors like "family" and "children," which were especially frequent in the Asian parenting culture zone, are nouns without a corresponding adjective form. These specific nouns, rather than being mere "noise", may reflect the specificity of the culture concerned (i.e., Asian culture). Previous research has found that some Asian parenting cultures are child-oriented and family-oriented: parents' parental self/identity largely relies on their thoughts about children and family, including having responsibility or needing to do something for their children and
family. In other words, for these parents, their ideal parenting, instead of focusing on characteristics of themselves as parents, is based on thoughts about children and family: e.g., how they interact with their children and family, what responsibility they have for their family and children, and so on. In support of this, Ng et al. (2014) recently found that some Chinese (Asian) parents' feelings of self-worth are more contingent on children's performance.

This proposal aligns with our analysis result. In this culture, the features relating to "children" and "family" were mentioned often enough to be extracted and listed in the three most frequently-occurring concepts list. Given that we utilized the exact same analysis procedure on the datasets of each culture zone, the fact that the emphasis on children and family only emerged in Asian parenting cultures may reveal a cultural difference. As described in the discussion, after randomly assigning each participant to one of the five groups and replicating exactly the same SNA analysis strategy, we did not find this difference. Therefore, instead of seeing nouns such as "family" or "children" as mere noise, we eventually decided not to make a subjective human intervention on the result.

The semantic association of concepts, indicating how they were interrelated in the raw responses, can be further examined in the semantic network map (in Figure 2). This map demonstrates how concepts were related (whether some concepts were used together in
parents' responses) in raw responses. As explained in our Analysis Strategy, two concepts were connected by edges only when they had a strong association, which considered both direct and indirect association between nodes and the degree of specificity in the concept hierarchy (i.e., whether two concepts had similar occurrences). It is thus possible to see from these figures, for instance, what other concepts are often mentioned in parents' responses when "family" or "children" are mentioned. In Figure 2a, "children" is attached to "love," "take," and "care," which suggests that Asian mothers' responses may often involve the idea of "loving children" or "taking care of children" since these concepts have strong associations. As regards "family," in Figure 2a "family" is attached to "love," "housework," "sacrifice," and "honest" for Asian mothers. This suggests that "loving family," "doing housework for the family," or "sacrificing for the family" are the main ideas of Asian mothers regarding the ideal parent.
4. As the first study examining what ideal parents look like across a wide variety of cultural settings, our findings also supplement the current understanding of culture areas (as distinct from the culture zones defined for the specific purpose of this study). Culture areas are defined as continuous geographical regions in which people have long been observed to have similarities across a wide variety of life domains (see Harkness et al., 2015). Referring to the description of culture areas (see the Human Relations Area Files, https://hraf.yale.edu/about/history-and-development/), we found that parents from the Asia
culture area mainly endorsed a "responsible and children/family-focused" type of ideal parents, parents from the Africa culture area mainly endorsed a "responsible and proper demeanor-focused" type, parents from the Europe (Southern Europe), Middle America and the Caribbean, and South America culture areas mainly endorsed a "loving and responsible" type, and finally, parents from North America, Europe (British Isles and Eastern Europe as well as Scandinavia), and Oceania (Australia) endorsed a "loving and patient" type.
5. To be more specific, China, Japan, Thailand, Vietnam, Turkey, and Iran were clustered together in our findings (in the Asian zone) and the World Value Survey (2020; in the Confucian and West and South Asia African-Islamic clusters). Egypt and Algeria were clustered together in our African zone and the World Value Survey's African-Islamic cluster. Italy, Portugal, Spain, Brazil, Ecuador, and Peru were clustered together in our Hispanic-Italian zone and the World Value Survey's African-Islamic, Catholic Europe, and Latin America clusters. The Netherlands, Germany, Finland, Switzerland, Belgium, France, Canada, France, Austria, the USA, Australia, and the UK were clustered together in our Western I-Russian and Western II zones and the World Value Survey's Catholic and Protestant Europe and English-Speaking clusters.

## Parenting Culture(s): Ideal-Parent Beliefs Across 37 Countries

## Online Supplemental Material

First, the sociodemographic characteristics of fathers and mothers in each country is presented in Table S1 and Table S2. Second, we made supplementary analysis to check the validity of our analysis. After randomly assigning each participant to one of the five groups, we replicated exactly the same SNA analysis strategy as described in the method of the current research. The results showed not only the same concepts but also a similar association between concepts (e.g., one predominant theme, i.e., loving; see Table S3) and relation of educational groups to ideal-parent beliefs (e.g., the concepts of "patient" and "calm" were typical of the high-educated groups whereas "family" and "children" typical of lower educated; see Figure S1).

## Table S1

Sociodemographic Profiles of Father Sample in Each Country


| Canada | 16 | $\begin{aligned} & 33.25 \\ & (7.09) \end{aligned}$ | $\begin{aligned} & 14.50 \\ & (2.48) \end{aligned}$ | 94 | 75 | 13 | 13 | 0 | 0 | 0 | $\begin{gathered} 2.00 \\ (0.73) \end{gathered}$ | $\begin{gathered} 2.13 \\ (0.62) \end{gathered}$ | $\begin{gathered} 2.87 \\ (3.00) \end{gathered}$ | $\begin{gathered} 6.25 \\ (4.06) \end{gathered}$ | $\begin{gathered} 1.50 \\ (2.31) \end{gathered}$ | $\begin{gathered} 1.25 \\ (1.34) \end{gathered}$ | $\begin{gathered} 6.06 \\ (3.02) \end{gathered}$ | 13 | 69 | 19 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Chile | 55 | $\begin{aligned} & 41.15 \\ & (9.54) \end{aligned}$ | $\begin{aligned} & 18.64 \\ & (3.67) \end{aligned}$ | 93 | 80 | 2 | 15 | 2 | 2 | 0 | $\begin{gathered} 1.87 \\ (0.92) \end{gathered}$ | $\begin{gathered} 1.65 \\ (0.73) \end{gathered}$ | $\begin{gathered} 7.68 \\ (10.63) \end{gathered}$ | $\begin{gathered} 11.11 \\ (11.00) \end{gathered}$ | $\begin{gathered} 1.27 \\ (0.71) \end{gathered}$ | $\begin{gathered} 1.07 \\ (0.47) \end{gathered}$ | $\begin{gathered} 7.13 \\ (6.29) \end{gathered}$ | 2 | 62 | 36 |
| China | 178 | $\begin{aligned} & 40.24 \\ & (4.35) \end{aligned}$ | $\begin{aligned} & 10.36 \\ & (2.52) \end{aligned}$ | 97 | 82 | 4 | 4 | 0 | 10 | 0 | $\begin{gathered} 1.37 \\ (0.50) \end{gathered}$ | $\begin{gathered} 1.37 \\ (0.50) \end{gathered}$ | $\begin{gathered} 8.75 \\ (4.71) \end{gathered}$ | $\begin{aligned} & 14.20 \\ & (2.76) \end{aligned}$ | $\begin{gathered} 1.93 \\ (0.94) \end{gathered}$ | $\begin{gathered} 1.80 \\ (0.93) \end{gathered}$ | $\begin{gathered} 3.20 \\ (2.38) \end{gathered}$ | 7 | 87 | 6 |
| Costa Rica | 37 | $\begin{aligned} & 40.57 \\ & (8.72) \end{aligned}$ | $\begin{aligned} & 15.64 \\ & (4.91) \end{aligned}$ | 89 | 81 | 3 | 3 | 0 | 11 | 0 | $\begin{gathered} 1.73 \\ (1.15) \end{gathered}$ | $\begin{gathered} 1.43 \\ (0.69) \end{gathered}$ | $\begin{gathered} 8.47 \\ (7.67) \end{gathered}$ | $\begin{aligned} & 10.65 \\ & (9.50) \end{aligned}$ | $\begin{gathered} 1.35 \\ (0.89) \end{gathered}$ | $\begin{gathered} 1.16 \\ (0.60) \end{gathered}$ | $\begin{gathered} 6.51 \\ (4.82) \end{gathered}$ | 5 | 54 | 41 |
| Cuba | 102 | $\begin{gathered} 40.24 \\ (10.21) \end{gathered}$ | $\begin{aligned} & 13.48 \\ & (3.06) \end{aligned}$ | 91 | 56 | 0 | 7 | 0 | 36 | 1 | $\begin{gathered} 1.78 \\ (0.59) \end{gathered}$ | $\begin{gathered} 1.55 \\ (0.54) \end{gathered}$ | $\begin{gathered} 8.88 \\ (5.39) \end{gathered}$ | $\begin{aligned} & 13.33 \\ & (9.15) \end{aligned}$ | $\begin{gathered} 1.64 \\ (0.64) \end{gathered}$ | $\begin{gathered} 1.42 \\ (0.62) \end{gathered}$ | $\begin{gathered} 9.73 \\ (3.69) \end{gathered}$ | 8 | 63 | 29 |
| Ecuador | 34 | $\begin{aligned} & 33.65 \\ & (6.31) \end{aligned}$ | $\begin{aligned} & 18.41 \\ & (2.54) \end{aligned}$ | 94 | 82 | 0 | 6 | 0 | 12 | 0 | $\begin{gathered} 1.65 \\ (0.81) \end{gathered}$ | $\begin{gathered} 1.62 \\ (0.70) \end{gathered}$ | $\begin{gathered} 2.93 \\ (2.96) \end{gathered}$ | $\begin{gathered} 7.03 \\ (6.44) \end{gathered}$ | $\begin{gathered} 1.76 \\ (0.78) \end{gathered}$ | $\begin{gathered} 1.41 \\ (0.56) \end{gathered}$ | $\begin{gathered} 5.82 \\ (3.54) \end{gathered}$ | 3 | 59 | 38 |
| Egypt | 105 | $\begin{aligned} & 49.06 \\ & (7.11) \end{aligned}$ | $\begin{aligned} & 12.03 \\ & (3.66) \end{aligned}$ | 1 | 88 | 4 | 1 | 0 | 8 | 0 | $\begin{gathered} 3.12 \\ (1.22) \end{gathered}$ | $\begin{gathered} 2.89 \\ (1.40) \end{gathered}$ | $\begin{aligned} & 12.47 \\ & (6.35) \end{aligned}$ | $\begin{aligned} & 20.16 \\ & (8.06) \end{aligned}$ | $\begin{gathered} 1.24 \\ (0.81) \end{gathered}$ | $\begin{gathered} 0.73 \\ (1.14) \end{gathered}$ | $\begin{gathered} 7.66 \\ (2.36) \end{gathered}$ | 30 | 55 | 15 |
| Finland | 134 | $\begin{aligned} & 37.77 \\ & (7.22) \end{aligned}$ | $\begin{aligned} & 17.42 \\ & (3.99) \end{aligned}$ | 91 | 82 | 2 | 14 | 0 | 1 | 0 | $\begin{gathered} 2.19 \\ (1.50) \end{gathered}$ | $\begin{gathered} 2.30 \\ (1.58) \end{gathered}$ | $\begin{gathered} 3.45 \\ (3.24) \end{gathered}$ | $\begin{gathered} 6.91 \\ (5.05) \end{gathered}$ | $\begin{gathered} 1.04 \\ (0.46) \end{gathered}$ | $\begin{gathered} 0.91 \\ (0.29) \end{gathered}$ | $\begin{gathered} 5.89 \\ (2.64) \end{gathered}$ | 0 | 100 | 0 |
| France | 162 | $\begin{aligned} & 43.68 \\ & (9.30) \end{aligned}$ | $\begin{aligned} & 15.29 \\ & (3.14) \end{aligned}$ | 95 | 80 | 6 | 12 | 1 | 1 | 0 | $\begin{gathered} 2.21 \\ (0.95) \end{gathered}$ | $\begin{gathered} 1.81 \\ (0.85) \end{gathered}$ | $\begin{gathered} 8.95 \\ (6.64) \end{gathered}$ | $\begin{aligned} & 13.36 \\ & (9.30) \end{aligned}$ | $\begin{gathered} 1.15 \\ (1.29) \end{gathered}$ | $\begin{gathered} 0.98 \\ (0.70) \end{gathered}$ | $\begin{gathered} 6.11 \\ (3.29) \end{gathered}$ | 3 | 52 | 46 |
| Germany | 30 | $\begin{aligned} & 36.60 \\ & (8.51) \end{aligned}$ | $\begin{aligned} & 14.77 \\ & (6.17) \end{aligned}$ | 80 | 73 | 7 | 13 | 0 | 7 | 0 | $\begin{gathered} 1.60 \\ (0.77) \end{gathered}$ | $\begin{gathered} 1.60 \\ (0.81) \end{gathered}$ | $\begin{gathered} 5.62 \\ (4.91) \end{gathered}$ | $\begin{gathered} 7.93 \\ (7.02) \end{gathered}$ | $\begin{gathered} 1.07 \\ (0.52) \end{gathered}$ | $\begin{gathered} 1.10 \\ (0.40) \end{gathered}$ | $\begin{gathered} 5.30 \\ (2.96) \end{gathered}$ | 7 | 67 | 27 |
| Iran | 175 | $\begin{aligned} & 42.22 \\ & (9.35) \end{aligned}$ | $\begin{aligned} & 13.57 \\ & (3.50) \end{aligned}$ | 95 | 82 | 13 | 4 | 0 | 0 | 1 | $\begin{gathered} 1.87 \\ (1.11) \end{gathered}$ | $\begin{gathered} 1.73 \\ (0.83) \end{gathered}$ | $\begin{gathered} 9.95 \\ (7.25) \end{gathered}$ | $\begin{aligned} & 13.74 \\ & (9.69) \end{aligned}$ | $\begin{gathered} 1.02 \\ (0.36) \end{gathered}$ | $\begin{gathered} 1.03 \\ (0.23) \end{gathered}$ | $\begin{gathered} 3.94 \\ (2.15) \end{gathered}$ | 12 | 61 | 28 |
| Italy | 94 | $\begin{aligned} & 47.15 \\ & (9.86) \end{aligned}$ | $\begin{aligned} & 14.29 \\ & (3.84) \end{aligned}$ | 92 | 89 | 3 | 6 | 0 | 1 | 0 | $\begin{gathered} 1.71 \\ (0.81) \end{gathered}$ | $\begin{gathered} 1.65 \\ (0.80) \end{gathered}$ | $\begin{aligned} & 12.29 \\ & (7.77) \end{aligned}$ | $\begin{aligned} & 14.20 \\ & (9.57) \end{aligned}$ | $\begin{gathered} 1.11 \\ (0.43) \end{gathered}$ | $\begin{gathered} 1.01 \\ (0.31) \end{gathered}$ | $\begin{gathered} 4.86 \\ (3.43) \end{gathered}$ | 2 | 71 | 27 |
| Japan | 182 | $\begin{gathered} 53.73 \\ (12.53) \end{gathered}$ | $\begin{aligned} & 15.16 \\ & (2.42) \end{aligned}$ | 84 | 90 | 1 | 0 | 1 | 6 | 0 | $\begin{gathered} 2.00 \\ (0.78) \end{gathered}$ | $\begin{gathered} 1.63 \\ (0.77) \end{gathered}$ | $\begin{aligned} & 14.61 \\ & (9.82) \end{aligned}$ | $\begin{gathered} 21.16 \\ (12.02) \end{gathered}$ | $\begin{gathered} 1.03 \\ (0.48) \end{gathered}$ | $\begin{gathered} 1.10 \\ (0.37) \end{gathered}$ | $\begin{gathered} 2.99 \\ (2.09) \end{gathered}$ | 2 | 80 | 19 |
| Lebanon | 61 | $\begin{aligned} & 40.13 \\ & (7.58) \end{aligned}$ | $\begin{aligned} & 15.98 \\ & (3.68) \end{aligned}$ | 98 | 95 | 3 | 2 | 0 | 0 | 0 | $\begin{gathered} 2.34 \\ (1.15) \end{gathered}$ | $\begin{gathered} 2.11 \\ (1.00) \end{gathered}$ | $\begin{gathered} 7.09 \\ (6.33) \end{gathered}$ | $\begin{gathered} 9.92 \\ (8.16) \end{gathered}$ | $\begin{gathered} 1.25 \\ (0.47) \end{gathered}$ | $\begin{gathered} 1.00 \\ (0.00) \end{gathered}$ | $\begin{gathered} 5.84 \\ (1.86) \end{gathered}$ | 7 | 69 | 25 |
| Peru | 88 | $\begin{gathered} 43.06 \\ (12.54) \end{gathered}$ | $\begin{aligned} & 13.72 \\ & (4.29) \end{aligned}$ | 94 | 73 | 5 | 11 | 1 | 10 | 0 | $\begin{gathered} 1.99 \\ (0.93) \end{gathered}$ | $\begin{gathered} 1.97 \\ (1.03) \end{gathered}$ | $\begin{gathered} 11.25 \\ (10.27) \end{gathered}$ | $\begin{gathered} 15.33 \\ (11.75) \end{gathered}$ | $\begin{gathered} 1.59 \\ (0.93) \end{gathered}$ | $\begin{gathered} 1.41 \\ (0.91) \end{gathered}$ | $\begin{gathered} 6.26 \\ (4.30) \end{gathered}$ | 8 | 68 | 24 |
| Poland | 123 | $\begin{aligned} & 39.80 \\ & (7.22) \end{aligned}$ | $\begin{aligned} & 16.75 \\ & (3.89) \end{aligned}$ | 98 | 87 | 2 | 4 | 0 | 7 | 0 | $\begin{gathered} 1.93 \\ (0.88) \end{gathered}$ | $\begin{gathered} 1.85 \\ (0.80) \end{gathered}$ | $\begin{gathered} 7.31 \\ (5.38) \end{gathered}$ | $\begin{aligned} & 10.49 \\ & (6.38) \end{aligned}$ | $\begin{gathered} 1.19 \\ (0.69) \end{gathered}$ | $\begin{gathered} 1.11 \\ (0.64) \end{gathered}$ | $\begin{gathered} 4.49 \\ (2.17) \end{gathered}$ | 8 | 76 | 15 |
| Portugal | 151 | $\begin{aligned} & 44.28 \\ & (8.22) \end{aligned}$ | $\begin{aligned} & 13.85 \\ & (4.25) \end{aligned}$ | 97 | 92 | 1 | 5 | 0 | 1 | 0 | $\begin{gathered} 1.71 \\ (0.87) \end{gathered}$ | $\begin{gathered} 1.58 \\ (0.59) \end{gathered}$ | $\begin{aligned} & 10.61 \\ & (6.99) \end{aligned}$ | $\begin{aligned} & 12.81 \\ & (8.24) \end{aligned}$ | $\begin{gathered} 0.98 \\ (0.36) \end{gathered}$ | $\begin{gathered} 0.90 \\ (0.44) \end{gathered}$ | $\begin{gathered} 4.30 \\ (2.09) \end{gathered}$ | 1 | 65 | 34 |


| Romania | 114 | $\begin{aligned} & 39.29 \\ & (6.20) \end{aligned}$ | $\begin{aligned} & 16.10 \\ & (3.12) \end{aligned}$ | 99 | 95 | 2 | 2 | 0 | 2 | 0 | $\begin{gathered} 1.51 \\ (0.71) \end{gathered}$ | $\begin{gathered} 1.54 \\ (0.64) \end{gathered}$ | $\begin{gathered} 5.58 \\ (4.54) \end{gathered}$ | $\begin{gathered} 8.34 \\ (5.22) \end{gathered}$ | $\begin{gathered} 1.47 \\ (0.69) \end{gathered}$ | $\begin{gathered} 1.18 \\ (0.63) \end{gathered}$ | $\begin{gathered} 4.57 \\ (2.30) \end{gathered}$ | 5 | 36 | 59 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Russia | 88 | $\begin{aligned} & 35.94 \\ & (6.86) \end{aligned}$ | $\begin{aligned} & 14.61 \\ & (3.66) \end{aligned}$ | 98 | 84 | 0 | 11 | 0 | 5 | 0 | $\begin{gathered} 1.69 \\ (0.90) \end{gathered}$ | $\begin{gathered} 1.72 \\ (0.88) \end{gathered}$ | $\begin{gathered} 4.15 \\ (3.92) \end{gathered}$ | $\begin{gathered} 7.78 \\ (6.36) \end{gathered}$ | $\begin{gathered} 1.28 \\ (0.71) \end{gathered}$ | $\begin{gathered} 1.08 \\ (0.35) \end{gathered}$ | $\begin{gathered} 3.98 \\ (2.11) \end{gathered}$ | 1 | 56 | 43 |
| Serbia | 35 | $\begin{aligned} & 39.17 \\ & (6.65) \end{aligned}$ | $\begin{aligned} & 14.63 \\ & (5.22) \end{aligned}$ | 94 | 94 | 3 | 0 | 0 | 0 | 0 | $\begin{gathered} 1.63 \\ (0.49) \end{gathered}$ | $\begin{gathered} 1.66 \\ (0.54) \end{gathered}$ | $\begin{gathered} 4.94 \\ (4.85) \end{gathered}$ | $\begin{gathered} 7.51 \\ (5.53) \end{gathered}$ | $\begin{gathered} 0.94 \\ (0.64) \end{gathered}$ | $\begin{gathered} 1.09 \\ (0.51) \end{gathered}$ | $\begin{gathered} 5.57 \\ (2.37) \end{gathered}$ | 6 | 60 | 34 |
| Spain | 126 | $\begin{aligned} & 42.40 \\ & (7.76) \end{aligned}$ | $\begin{aligned} & 15.48 \\ & (3.03) \end{aligned}$ | 94 | 94 | 2 | 3 | 0 | 0 | 0 | $\begin{gathered} 1.70 \\ (0.64) \end{gathered}$ | $\begin{gathered} 1.66 \\ (0.60) \end{gathered}$ | $\begin{gathered} 8.33 \\ (6.72) \end{gathered}$ | $\begin{gathered} 9.93 \\ (8.29) \end{gathered}$ | $\begin{gathered} 1.63 \\ (0.87) \end{gathered}$ | $\begin{gathered} 1.40 \\ (0.72) \end{gathered}$ | $\begin{gathered} 5.02 \\ (3.46) \end{gathered}$ | 10 | 74 | 17 |
| Switzerland | 92 | $\begin{aligned} & 40.25 \\ & (7.62) \end{aligned}$ | $\begin{aligned} & 16.29 \\ & (3.90) \end{aligned}$ | 99 | 85 | 4 | 10 | 1 | 0 | 0 | $\begin{gathered} 1.95 \\ (0.95) \end{gathered}$ | $\begin{gathered} 1.93 \\ (0.84) \end{gathered}$ | $\begin{gathered} 5.42 \\ (6.59) \end{gathered}$ | $\begin{gathered} 8.68 \\ (7.16) \end{gathered}$ | $\begin{gathered} 1.13 \\ (0.50) \end{gathered}$ | $\begin{gathered} 0.99 \\ (0.35) \end{gathered}$ | $\begin{gathered} 6.42 \\ (4.06) \end{gathered}$ | 0 | 55 | 45 |
| Thailand | 90 | $\begin{aligned} & 43.70 \\ & (6.08) \end{aligned}$ | $\begin{gathered} 3.36 \\ (1.11) \end{gathered}$ | 99 | 67 | 0 | 2 | 0 | 30 | 0 | $\begin{gathered} 1.81 \\ (0.60) \end{gathered}$ | $\begin{gathered} 1.83 \\ (0.71) \end{gathered}$ | $\begin{gathered} 8.93 \\ (3.95) \end{gathered}$ | $\begin{aligned} & 12.73 \\ & (4.63) \end{aligned}$ | $\begin{gathered} 1.89 \\ (1.02) \end{gathered}$ | $\begin{gathered} 1.56 \\ (0.91) \end{gathered}$ | $\begin{gathered} 5.30 \\ (3.70) \end{gathered}$ | 0 | 53 | 47 |
| The Netherlands | 34 | $\begin{gathered} 41.50 \\ (10.21) \end{gathered}$ | $\begin{aligned} & 15.94 \\ & (2.09) \end{aligned}$ | 97 | 94 | 3 | 3 | 0 | 0 | 0 | $\begin{gathered} 2.03 \\ (1.00) \end{gathered}$ | $\begin{gathered} 1.80 \\ (0.94) \end{gathered}$ | $\begin{gathered} 9.59 \\ (8.09) \end{gathered}$ | $\begin{gathered} 8.76 \\ (8.64) \end{gathered}$ | $\begin{gathered} 1.32 \\ (0.84) \end{gathered}$ | $\begin{gathered} 1.26 \\ (0.79) \end{gathered}$ | $\begin{gathered} 4.35 \\ (1.56) \end{gathered}$ | 3 | 59 | 38 |
| Togo | 44 | $\begin{aligned} & 38.34 \\ & (8.45) \end{aligned}$ | $\begin{aligned} & 13.79 \\ & (2.88) \end{aligned}$ | 86 | 71 | 18 | 0 | 0 | 2 | 9 | $\begin{gathered} 2.64 \\ (2.00) \end{gathered}$ | $\begin{gathered} 2.91 \\ (1.87) \end{gathered}$ | $\begin{gathered} 3.19 \\ (3.81) \end{gathered}$ | $\begin{gathered} 9.57 \\ (8.30) \end{gathered}$ | $\begin{gathered} 1.11 \\ (0.39) \end{gathered}$ | $\begin{gathered} 1.23 \\ (0.71) \end{gathered}$ | $\begin{gathered} 7.88 \\ (5.00) \end{gathered}$ | 23 | 70 | 7 |
| Turkey | 144 | $\begin{aligned} & 37.41 \\ & (6.42) \end{aligned}$ | $\begin{aligned} & 14.01 \\ & (3.09) \end{aligned}$ | 75 | 86 | 7 | 1 | 0 | 6 | 0 | $\begin{gathered} 1.67 \\ (0.74) \end{gathered}$ | $\begin{gathered} 1.60 \\ (0.63) \end{gathered}$ | $\begin{gathered} 4.55 \\ (3.67) \end{gathered}$ | $\begin{gathered} 7.42 \\ (5.83) \end{gathered}$ | $\begin{gathered} 1.15 \\ (0.47) \end{gathered}$ | $\begin{gathered} 0.97 \\ (0.36) \end{gathered}$ | $\begin{gathered} 7.03 \\ (4.06) \end{gathered}$ | 4 | 71 | 26 |
| The UK | 86 | $\begin{aligned} & 42.26 \\ & (9.39) \end{aligned}$ | $\begin{aligned} & 14.37 \\ & (3.09) \end{aligned}$ | 94 | 90 | 6 | 4 | 0 | 1 | 0 | $\begin{gathered} 1.97 \\ (0.99) \end{gathered}$ | $\begin{gathered} 1.76 \\ (0.72) \end{gathered}$ | $\begin{gathered} 9.66 \\ (7.23) \end{gathered}$ | $\begin{aligned} & 13.27 \\ & (8.70) \end{aligned}$ | $\begin{gathered} 0.99 \\ (0.19) \end{gathered}$ | $\begin{gathered} 0.98 \\ (0.26) \end{gathered}$ | $\begin{gathered} 4.62 \\ (2.42) \end{gathered}$ | 5 | 62 | 34 |
| Uruguay | 104 | $\begin{aligned} & 36.45 \\ & (7.28) \end{aligned}$ | $\begin{aligned} & 12.02 \\ & (4.77) \end{aligned}$ | 94 | 84 | 0 | 8 | 0 | 7 | 0 | $\begin{gathered} 1.64 \\ (0.77) \end{gathered}$ | $\begin{gathered} 1.66 \\ (0.76) \end{gathered}$ | $\begin{gathered} 2.68 \\ (1.71) \end{gathered}$ | $\begin{gathered} 6.19 \\ (5.72) \end{gathered}$ | $\begin{gathered} 1.29 \\ (0.66) \end{gathered}$ | $\begin{gathered} 1.11 \\ (0.42) \end{gathered}$ | $\begin{aligned} & 10.19 \\ & (4.76) \end{aligned}$ | 2 | 77 | 21 |
| The USA | 111 | $\begin{gathered} 41.55 \\ (10.16) \end{gathered}$ | $\begin{aligned} & 14.55 \\ & (3.19) \end{aligned}$ | 87 | 76 | 13 | 5 | 0 | 5 | 1 | $\begin{gathered} 1.93 \\ (1.11) \end{gathered}$ | $\begin{gathered} 1.86 \\ (1.04) \end{gathered}$ | $\begin{gathered} 7.22 \\ (6.48) \end{gathered}$ | $\begin{aligned} & 11.45 \\ & (8.22) \end{aligned}$ | $\begin{gathered} 1.01 \\ (0.95) \end{gathered}$ | $\begin{gathered} 0.96 \\ (0.74) \end{gathered}$ | $\begin{gathered} 6.79 \\ (5.52) \end{gathered}$ | 14 | 62 | 24 |
| Vietnam | 72 | $\begin{array}{r} 38.31 \\ (9.13) \\ \hline \end{array}$ | $\begin{array}{r} 14.13 \\ (3.85) \\ \hline \end{array}$ | 97 | 78 | 0 | 0 | 1 | 19 | 0 | $\begin{gathered} 1.61 \\ (0.80) \\ \hline \end{gathered}$ | $\begin{gathered} 1.48 \\ (0.61) \\ \hline \end{gathered}$ | $\begin{gathered} 7.51 \\ (5.41) \\ \hline \end{gathered}$ | $\begin{gathered} 9.22 \\ (9.10) \\ \hline \end{gathered}$ | $\begin{gathered} 1.54 \\ (0.72) \\ \hline \end{gathered}$ | $\begin{gathered} 1.34 \\ (0.75) \\ \hline \end{gathered}$ | $\begin{gathered} 3.71 \\ (2.44) \\ \hline \end{gathered}$ | 6 | 58 | 36 |
| Pooled sample | 3,517 | $\begin{aligned} & 41.96 \\ & (9.63) \\ & \hline \end{aligned}$ | $\begin{array}{r} 14.23 \\ (4.40) \\ \hline \end{array}$ | 89 | 83 | 4 | 5 | 0 | 6 | 0 | $\begin{gathered} 2.02 \\ (1.23) \\ \hline \end{gathered}$ | $\begin{gathered} 1.94 \\ (1.27) \\ \hline \end{gathered}$ | $\begin{gathered} 7.78 \\ (7.08) \end{gathered}$ | $\begin{aligned} & 11.95 \\ & (9.04) \\ & \hline \end{aligned}$ | $\begin{gathered} 1.28 \\ (0.79) \\ \hline \end{gathered}$ | $\begin{gathered} 1.15 \\ (0.67) \\ \hline \end{gathered}$ | $\begin{gathered} 5.48 \\ (3.67) \\ \hline \end{gathered}$ | 7 | 66 | 27 |

${ }^{\text {a }}$ Means are reported while standard deviations are in parentheses.
${ }^{\mathrm{b}}$ Parents perceived their home resided in a relatively disadvantaged, prosperous, or average neighborhood.

## Table S2

Sociodemographic Profiles of Mother Sample in Each Country


| Chile | 327 | $\begin{aligned} & 35.80 \\ & (5.63) \end{aligned}$ | $\begin{aligned} & 17.69 \\ & (3.31) \end{aligned}$ | 74 | 71 | 13 | 7 | 0 | 8 | 0 | $\begin{gathered} 1.72 \\ (0.88) \end{gathered}$ | $\begin{gathered} 1.83 \\ (1.45) \end{gathered}$ | $\begin{gathered} 4.22 \\ (4.54) \end{gathered}$ | $\begin{gathered} 7.90 \\ (6.52) \end{gathered}$ | $\begin{gathered} 1.57 \\ (0.82) \end{gathered}$ | $\begin{gathered} 0.98 \\ (0.59) \end{gathered}$ | $\begin{aligned} & 11.14 \\ & (7.51) \end{aligned}$ | 2 | 60 | 38 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| China | 211 | $\begin{aligned} & 37.91 \\ & (4.03) \end{aligned}$ | $\begin{aligned} & 10.78 \\ & (2.52) \end{aligned}$ | 91 | 79 | 6 | 2 | 1 | 12 | 0 | $\begin{gathered} 1.32 \\ (0.47) \end{gathered}$ | $\begin{gathered} 1.34 \\ (0.52) \end{gathered}$ | $\begin{gathered} 8.25 \\ (4.69) \end{gathered}$ | $\begin{aligned} & 14.08 \\ & (3.43) \end{aligned}$ | $\begin{gathered} 1.83 \\ (0.80) \end{gathered}$ | $\begin{gathered} 1.60 \\ (0.79) \end{gathered}$ | $\begin{gathered} 4.09 \\ (2.40) \end{gathered}$ | 4 | 92 | 4 |
| Costa Rica | 121 | $\begin{aligned} & 36.17 \\ & (6.77) \end{aligned}$ | $\begin{aligned} & 17.13 \\ & (4.18) \end{aligned}$ | 81 | 72 | 10 | 6 | 0 | 8 | 0 | $\begin{gathered} 1.53 \\ (0.75) \end{gathered}$ | $\begin{gathered} 1.48 \\ (0.68) \end{gathered}$ | $\begin{gathered} 7.34 \\ (7.11) \end{gathered}$ | $\begin{gathered} 8.30 \\ (7.67) \end{gathered}$ | $\begin{gathered} 1.55 \\ (0.84) \end{gathered}$ | $\begin{gathered} 1.06 \\ (0.66) \end{gathered}$ | $\begin{aligned} & 10.80 \\ & (6.29) \end{aligned}$ | 4 | 65 | 31 |
| Cuba | 137 | $\begin{gathered} 40.06 \\ (10.36) \end{gathered}$ | $\begin{aligned} & 13.84 \\ & (3.12) \end{aligned}$ | 78 | 47 | 12 | 15 | 0 | 23 | 0 | $\begin{gathered} 1.63 \\ (0.62) \end{gathered}$ | $\begin{gathered} 1.47 \\ (0.61) \end{gathered}$ | $\begin{aligned} & 11.59 \\ & (8.47) \end{aligned}$ | $\begin{aligned} & 14.82 \\ & (9.50) \end{aligned}$ | $\begin{gathered} 1.68 \\ (0.80) \end{gathered}$ | $\begin{gathered} 1.15 \\ (0.74) \end{gathered}$ | $\begin{aligned} & 11.77 \\ & (4.67) \end{aligned}$ | 11 | 60 | 29 |
| Ecuador | 78 | $\begin{aligned} & 31.95 \\ & (6.81) \end{aligned}$ | $\begin{aligned} & 16.58 \\ & (2.73) \end{aligned}$ | 83 | 59 | 18 | 6 | 0 | 15 | 1 | $\begin{gathered} 1.63 \\ (0.70) \end{gathered}$ | $\begin{gathered} 1.64 \\ (0.68) \end{gathered}$ | $\begin{gathered} 5.31 \\ (4.34) \end{gathered}$ | $\begin{gathered} 8.35 \\ (6.57) \end{gathered}$ | $\begin{gathered} 2.06 \\ (1.09) \end{gathered}$ | $\begin{gathered} 1.38 \\ (0.94) \end{gathered}$ | $\begin{gathered} 8.40 \\ (5.40) \end{gathered}$ | 1 | 74 | 24 |
| Egypt | 109 | $\begin{aligned} & 46.75 \\ & (5.54) \end{aligned}$ | $\begin{aligned} & 10.95 \\ & (3.41) \end{aligned}$ | 2 | 74 | 18 | 0 | 1 | 6 | 0 | $\begin{gathered} 3.51 \\ (1.49) \end{gathered}$ | $\begin{gathered} 3.07 \\ (1.39) \end{gathered}$ | $\begin{aligned} & 14.63 \\ & (6.42) \end{aligned}$ | $\begin{aligned} & 25.03 \\ & (5.30) \end{aligned}$ | $\begin{gathered} 1.36 \\ (1.03) \end{gathered}$ | $\begin{gathered} 1.23 \\ (1.07) \end{gathered}$ | $\begin{gathered} 9.04 \\ (4.02) \end{gathered}$ | 6 | 69 | 25 |
| Finland | 1366 | $\begin{aligned} & 36.28 \\ & (6.40) \end{aligned}$ | $\begin{aligned} & 17.69 \\ & (3.29) \end{aligned}$ | 75 | 78 | 10 | 10 | 0 | 0 | 0 | $\begin{gathered} 2.16 \\ (1.14) \end{gathered}$ | $\begin{gathered} 2.25 \\ (1.27) \end{gathered}$ | $\begin{gathered} 4.43 \\ (4.29) \end{gathered}$ | $\begin{gathered} 7.59 \\ (5.30) \end{gathered}$ | $\begin{gathered} 0.91 \\ (0.37) \end{gathered}$ | $\begin{gathered} 0.87 \\ (0.44) \end{gathered}$ | $\begin{gathered} 7.90 \\ (3.75) \end{gathered}$ | 0 | 100 | 0 |
| France | 589 | $\begin{aligned} & 37.07 \\ & (7.42) \end{aligned}$ | $\begin{aligned} & 15.06 \\ & (2.58) \end{aligned}$ | 82 | 76 | 13 | 9 | 1 | 1 | 0 | $\begin{gathered} 1.90 \\ (0.86) \end{gathered}$ | $\begin{gathered} 1.85 \\ (0.83) \end{gathered}$ | $\begin{gathered} 5.91 \\ (5.33) \end{gathered}$ | $\begin{gathered} 8.78 \\ (6.75) \end{gathered}$ | $\begin{gathered} 1.42 \\ (1.08) \end{gathered}$ | $\begin{gathered} 0.98 \\ (0.67) \end{gathered}$ | $\begin{gathered} 8.65 \\ (5.25) \end{gathered}$ | 3 | 58 | 39 |
| Germany | 93 | $\begin{aligned} & 35.41 \\ & (7.72) \end{aligned}$ | $\begin{aligned} & 13.59 \\ & (4.34) \end{aligned}$ | 69 | 72 | 17 | 7 | 0 | 2 | 0 | $\begin{gathered} 1.88 \\ (1.21) \end{gathered}$ | $\begin{gathered} 1.77 \\ (1.00) \end{gathered}$ | $\begin{gathered} 4.89 \\ (4.93) \end{gathered}$ | $\begin{gathered} 8.14 \\ (7.18) \end{gathered}$ | $\begin{gathered} 1.02 \\ (0.47) \end{gathered}$ | $\begin{gathered} 0.84 \\ (0.54) \end{gathered}$ | $\begin{gathered} 8.38 \\ (4.05) \end{gathered}$ | 5 | 76 | 18 |
| Iran | 179 | $\begin{aligned} & 38.21 \\ & (7.97) \end{aligned}$ | $\begin{aligned} & 13.55 \\ & (3.15) \end{aligned}$ | 40 | 85 | 11 | 3 | 0 | 1 | 0 | $\begin{gathered} 1.87 \\ (0.94) \end{gathered}$ | $\begin{gathered} 1.67 \\ (0.70) \end{gathered}$ | $\begin{aligned} & 10.55 \\ & (7.94) \end{aligned}$ | $\begin{aligned} & 14.12 \\ & (9.35) \end{aligned}$ | $\begin{gathered} 1.13 \\ (0.47) \end{gathered}$ | $\begin{gathered} 0.98 \\ (0.40) \end{gathered}$ | $\begin{gathered} 7.56 \\ (3.56) \end{gathered}$ | 12 | 56 | 33 |
| Italy | 218 | $\begin{aligned} & 42.14 \\ & (8.34) \end{aligned}$ | $\begin{aligned} & 15.26 \\ & (3.70) \end{aligned}$ | 84 | 85 | 6 | 5 | 0 | 3 | 0 | $\begin{gathered} 1.81 \\ (0.71) \end{gathered}$ | $\begin{gathered} 1.78 \\ (0.70) \end{gathered}$ | $\begin{gathered} 8.50 \\ (6.86) \end{gathered}$ | $\begin{aligned} & 11.94 \\ & (8.68) \end{aligned}$ | $\begin{gathered} 1.15 \\ (0.57) \end{gathered}$ | $\begin{gathered} 1.02 \\ (0.43) \end{gathered}$ | $\begin{gathered} 8.33 \\ (5.54) \end{gathered}$ | 2 | 77 | 21 |
| Japan | 148 | $\begin{gathered} 53.33 \\ (15.71) \end{gathered}$ | $\begin{aligned} & 13.77 \\ & (2.02) \end{aligned}$ | 43 | 71 | 16 | 1 | 0 | 5 | 0 | $\begin{gathered} 1.96 \\ (0.77) \end{gathered}$ | $\begin{gathered} 1.54 \\ (0.75) \end{gathered}$ | $\begin{gathered} 13.60 \\ (11.58) \end{gathered}$ | $\begin{gathered} 23.65 \\ (15.81) \end{gathered}$ | $\begin{gathered} 1.14 \\ (0.42) \end{gathered}$ | $\begin{gathered} 0.76 \\ (0.53) \end{gathered}$ | $\begin{gathered} 6.34 \\ (5.01) \end{gathered}$ | 1 | 85 | 14 |
| Lebanon | 117 | $\begin{aligned} & 36.74 \\ & (8.30) \end{aligned}$ | $\begin{aligned} & 16.56 \\ & (3.48) \end{aligned}$ | 55 | 94 | 4 | 1 | 0 | 1 | 0 | $\begin{gathered} 2.26 \\ (1.06) \end{gathered}$ | $\begin{gathered} 2.18 \\ (0.99) \end{gathered}$ | $\begin{gathered} 7.99 \\ (6.32) \end{gathered}$ | $\begin{aligned} & 10.67 \\ & (7.83) \end{aligned}$ | $\begin{gathered} 1.26 \\ (0.52) \end{gathered}$ | $\begin{gathered} 1.01 \\ (0.36) \end{gathered}$ | $\begin{gathered} 7.86 \\ (2.85) \end{gathered}$ | 3 | 70 | 27 |
| Peru | 174 | $\begin{aligned} & 39.34 \\ & (9.81) \end{aligned}$ | $\begin{aligned} & 14.89 \\ & (5.00) \end{aligned}$ | 81 | 61 | 20 | 6 | 0 | 12 | 0 | $\begin{gathered} 1.94 \\ (0.87) \end{gathered}$ | $\begin{gathered} 1.99 \\ (1.13) \end{gathered}$ | $\begin{gathered} 8.40 \\ (7.45) \end{gathered}$ | $\begin{aligned} & 12.92 \\ & (8.82) \end{aligned}$ | $\begin{gathered} 2.05 \\ (1.25) \end{gathered}$ | $\begin{gathered} 1.41 \\ (1.20) \end{gathered}$ | $\begin{gathered} 9.49 \\ (5.87) \end{gathered}$ | 7 | 66 | 27 |
| Poland | 294 | $\begin{aligned} & 33.00 \\ & (5.32) \end{aligned}$ | $\begin{aligned} & 17.87 \\ & (3.32) \end{aligned}$ | 67 | 87 | 6 | 3 | 0 | 5 | 0 | $\begin{gathered} 1.66 \\ (1.00) \end{gathered}$ | $\begin{gathered} 1.65 \\ (0.88) \end{gathered}$ | $\begin{gathered} 3.54 \\ (4.13) \end{gathered}$ | $\begin{gathered} 4.98 \\ (4.78) \end{gathered}$ | $\begin{gathered} 1.19 \\ (0.72) \end{gathered}$ | $\begin{gathered} 0.96 \\ (0.61) \end{gathered}$ | $\begin{gathered} 9.45 \\ (4.98) \end{gathered}$ | 3 | 77 | 19 |
| Portugal | 163 | $\begin{aligned} & 39.43 \\ & (7.37) \end{aligned}$ | $\begin{aligned} & 15.73 \\ & (3.00) \end{aligned}$ | 90 | 88 | 3 | 7 | 0 | 3 | 0 | $\begin{gathered} 1.76 \\ (0.86) \end{gathered}$ | $\begin{gathered} 1.77 \\ (0.78) \end{gathered}$ | $\begin{gathered} 5.78 \\ (5.26) \end{gathered}$ | $\begin{gathered} 9.00 \\ (7.49) \end{gathered}$ | $\begin{gathered} 1.04 \\ (0.51) \end{gathered}$ | $\begin{gathered} 0.89 \\ (0.37) \end{gathered}$ | $\begin{gathered} 5.48 \\ (3.29) \end{gathered}$ | 1 | 62 | 36 |
| Romania | 168 | $\begin{aligned} & 35.95 \\ & (5.11) \end{aligned}$ | $\begin{aligned} & 17.35 \\ & (2.53) \end{aligned}$ | 85 | 89 | 4 | 3 | 0 | 4 | 0 | $\begin{gathered} 1.56 \\ (0.62) \end{gathered}$ | $\begin{gathered} 1.54 \\ (0.61) \end{gathered}$ | $\begin{gathered} 3.41 \\ (3.76) \end{gathered}$ | $\begin{gathered} 6.34 \\ (5.16) \end{gathered}$ | $\begin{gathered} 1.43 \\ (0.74) \end{gathered}$ | $\begin{gathered} 1.09 \\ (0.65) \end{gathered}$ | $\begin{gathered} 9.43 \\ (7.54) \end{gathered}$ | 2 | 23 | 76 |


| Russia | 214 | $\begin{aligned} & 33.66 \\ & (6.47) \end{aligned}$ | $\begin{aligned} & 14.38 \\ & (4.30) \end{aligned}$ | 79 | 74 | 9 | 9 | 0 | 6 | 0 | $\begin{gathered} 1.67 \\ (0.79) \end{gathered}$ | $\begin{gathered} 1.69 \\ (0.80) \end{gathered}$ | $\begin{gathered} 4.03 \\ (3.93) \end{gathered}$ | $\begin{gathered} 8.05 \\ (6.24) \end{gathered}$ | $\begin{gathered} 1.28 \\ (0.67) \end{gathered}$ | $\begin{gathered} 1.02 \\ (0.61) \end{gathered}$ | $\begin{gathered} 9.26 \\ (5.52) \end{gathered}$ | 1 | 61 | 39 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Serbia | 107 | $\begin{aligned} & 37.52 \\ & (5.20) \end{aligned}$ | $\begin{aligned} & 14.84 \\ & (5.04) \end{aligned}$ | 90 | 95 | 2 | 0 | 0 | 2 | 0 | $\begin{gathered} 1.64 \\ (0.68) \end{gathered}$ | $\begin{gathered} 1.65 \\ (0.69) \end{gathered}$ | $\begin{gathered} 4.01 \\ (4.22) \end{gathered}$ | $\begin{gathered} 6.63 \\ (5.25) \end{gathered}$ | $\begin{gathered} 1.25 \\ (0.70) \end{gathered}$ | $\begin{gathered} 1.06 \\ (0.56) \end{gathered}$ | $\begin{gathered} 8.43 \\ (5.12) \end{gathered}$ | 2 | 46 | 52 |
| Spain | 295 | $\begin{aligned} & 40.86 \\ & (8.12) \end{aligned}$ | $\begin{aligned} & 15.39 \\ & (4.11) \end{aligned}$ | 83 | 80 | 9 | 6 | 0 | 3 | 0 | $\begin{gathered} 1.74 \\ (0.75) \end{gathered}$ | $\begin{gathered} 1.73 \\ (0.74) \end{gathered}$ | $\begin{gathered} 8.42 \\ (7.57) \end{gathered}$ | $\begin{gathered} 9.84 \\ (8.54) \end{gathered}$ | $\begin{gathered} 1.44 \\ (1.05) \end{gathered}$ | $\begin{gathered} 1.14 \\ (0.68) \end{gathered}$ | $\begin{gathered} 9.42 \\ (6.46) \end{gathered}$ | 5 | 84 | 11 |
| Switzerland | 185 | $\begin{aligned} & 39.28 \\ & (6.40) \end{aligned}$ | $\begin{aligned} & 15.98 \\ & (3.07) \end{aligned}$ | 87 | 80 | 12 | 8 | 1 | 0 | 0 | $\begin{gathered} 2.00 \\ (0.83) \end{gathered}$ | $\begin{gathered} 2.05 \\ (0.87) \end{gathered}$ | $\begin{gathered} 6.29 \\ (4.95) \end{gathered}$ | $\begin{gathered} 8.78 \\ (5.80) \end{gathered}$ | $\begin{gathered} 1.14 \\ (0.62) \end{gathered}$ | $\begin{gathered} 0.96 \\ (0.48) \end{gathered}$ | $\begin{gathered} 7.34 \\ (4.77) \end{gathered}$ | 0 | 48 | 52 |
| Thailand | 115 | $\begin{aligned} & 42.63 \\ & (5.60) \end{aligned}$ | $\begin{gathered} 3.26 \\ (1.05) \end{gathered}$ | 97 | 71 | 4 | 1 | 1 | 23 | 0 | $\begin{gathered} 1.75 \\ (0.63) \end{gathered}$ | $\begin{gathered} 1.80 \\ (0.74) \end{gathered}$ | $\begin{gathered} 8.97 \\ (3.74) \end{gathered}$ | $\begin{aligned} & 12.90 \\ & (4.74) \end{aligned}$ | $\begin{gathered} 1.83 \\ (1.03) \end{gathered}$ | $\begin{gathered} 1.48 \\ (0.81) \end{gathered}$ | $\begin{gathered} 6.24 \\ (3.95) \end{gathered}$ | 0 | 50 | 50 |
| The Netherlands | 102 | $\begin{aligned} & 36.10 \\ & (6.93) \end{aligned}$ | $\begin{aligned} & 16.97 \\ & (2.30) \end{aligned}$ | 95 | 90 | 4 | 3 | 1 | 0 | 0 | $\begin{gathered} 1.75 \\ (0.71) \end{gathered}$ | $\begin{gathered} 1.68 \\ (0.72) \end{gathered}$ | $\begin{gathered} 4.48 \\ (4.87) \end{gathered}$ | $\begin{gathered} 5.51 \\ (6.11) \end{gathered}$ | $\begin{gathered} 1.50 \\ (0.99) \end{gathered}$ | $\begin{gathered} 1.06 \\ (0.50) \end{gathered}$ | $\begin{gathered} 7.09 \\ (3.09) \end{gathered}$ | 4 | 50 | 46 |
| Togo | 25 | $\begin{gathered} 38.92 \\ (10.67) \end{gathered}$ | $\begin{aligned} & 12.96 \\ & (2.51) \end{aligned}$ | 92 | 76 | 16 | 4 | 0 | 0 | 4 | $\begin{gathered} 2.40 \\ (1.29) \end{gathered}$ | $\begin{gathered} 3.12 \\ (1.76) \end{gathered}$ | $\begin{gathered} 7.51 \\ (7.83) \end{gathered}$ | $\begin{aligned} & 15.84 \\ & (9.88) \end{aligned}$ | $\begin{gathered} 1.52 \\ (0.59) \end{gathered}$ | $\begin{gathered} 0.84 \\ (0.37) \end{gathered}$ | $\begin{aligned} & 11.16 \\ & (6.93) \end{aligned}$ | 16 | 80 | 4 |
| Turkey | 239 | $\begin{aligned} & 35.95 \\ & (5.91) \end{aligned}$ | $\begin{aligned} & 13.68 \\ & (3.61) \end{aligned}$ | 78 | 87 | 6 | 0 | 0 | 5 | 0 | $\begin{gathered} 1.65 \\ (0.62) \end{gathered}$ | $\begin{gathered} 1.63 \\ (0.60) \end{gathered}$ | $\begin{gathered} 4.18 \\ (2.85) \end{gathered}$ | $\begin{gathered} 7.31 \\ (5.35) \end{gathered}$ | $\begin{gathered} 1.14 \\ (0.49) \end{gathered}$ | $\begin{gathered} 1.04 \\ (0.39) \end{gathered}$ | $\begin{gathered} 6.27 \\ (3.01) \end{gathered}$ | 6 | 74 | 20 |
| The UK | 117 | $\begin{aligned} & 37.31 \\ & (7.01) \end{aligned}$ | $\begin{aligned} & 15.75 \\ & (2.94) \end{aligned}$ | 78 | 88 | 9 | 3 | 0 | 0 | 0 | $\begin{gathered} 1.91 \\ (0.89) \end{gathered}$ | $\begin{gathered} 1.80 \\ (0.72) \end{gathered}$ | $\begin{gathered} 4.92 \\ (5.33) \end{gathered}$ | $\begin{gathered} 6.99 \\ (6.07) \end{gathered}$ | $\begin{gathered} 1.03 \\ (0.21) \end{gathered}$ | $\begin{gathered} 0.95 \\ (0.52) \end{gathered}$ | $\begin{gathered} 8.03 \\ (4.43) \end{gathered}$ | 6 | 48 | 46 |
| Uruguay | 173 | $\begin{aligned} & 34.10 \\ & (5.91) \end{aligned}$ | $\begin{aligned} & 13.08 \\ & (4.65) \end{aligned}$ | 87 | 73 | 16 | 4 | 0 | 4 | 0 | $\begin{gathered} 1.57 \\ (0.75) \end{gathered}$ | $\begin{gathered} 1.55 \\ (0.73) \end{gathered}$ | $\begin{gathered} 2.84 \\ (1.71) \end{gathered}$ | $\begin{gathered} 6.10 \\ (4.85) \end{gathered}$ | $\begin{gathered} 1.49 \\ (0.80) \end{gathered}$ | $\begin{gathered} 1.03 \\ (0.60) \end{gathered}$ | $\begin{aligned} & 12.54 \\ & (5.42) \end{aligned}$ | 3 | 72 | 25 |
| The USA | 241 | $\begin{aligned} & 36.88 \\ & (8.58) \end{aligned}$ | $\begin{aligned} & 15.48 \\ & (3.36) \end{aligned}$ | 71 | 68 | 20 | 7 | 0 | 4 | 0 | $\begin{gathered} 2.02 \\ (1.09) \end{gathered}$ | $\begin{gathered} 1.96 \\ (1.04) \end{gathered}$ | $\begin{gathered} 5.83 \\ (5.39) \end{gathered}$ | $\begin{aligned} & 10.56 \\ & (7.36) \end{aligned}$ | $\begin{gathered} 1.15 \\ (0.72) \end{gathered}$ | $\begin{gathered} 0.88 \\ (0.74) \end{gathered}$ | $\begin{gathered} 8.09 \\ (5.10) \end{gathered}$ | 8 | 74 | 18 |
| Vietnam | 88 | $\begin{aligned} & 35.61 \\ & (6.57) \end{aligned}$ | $\begin{aligned} & 13.84 \\ & (4.24) \end{aligned}$ | 94 | 79 | 4 | 0 | 1 | 15 | 0 | $\begin{gathered} 1.58 \\ (0.66) \\ \hline \end{gathered}$ | $\begin{gathered} 1.65 \\ (1.22) \end{gathered}$ | $\begin{gathered} 5.00 \\ (4.72) \end{gathered}$ | $\begin{gathered} 8.08 \\ (6.51) \\ \hline \end{gathered}$ | $\begin{gathered} 1.42 \\ (0.95) \\ \hline \end{gathered}$ | $\begin{gathered} 1.16 \\ (0.75) \\ \hline \end{gathered}$ | $\begin{gathered} 5.24 \\ (3.75) \end{gathered}$ | 4 | 44 | 52 |
| Pooled sample | 8,357 | $\begin{aligned} & 37.56 \\ & (8.02) \end{aligned}$ | $\begin{aligned} & 15.45 \\ & (4.05) \end{aligned}$ | 77 | 78 | 10 | 6 | 0 | 4 | 0 | $\begin{gathered} 1.94 \\ (1.02) \end{gathered}$ | $\begin{gathered} 1.95 \\ (1.10) \end{gathered}$ | $\begin{gathered} 5.90 \\ (5.96) \end{gathered}$ | $\begin{gathered} 9.45 \\ (7.83) \end{gathered}$ | $\begin{gathered} 1.28 \\ (0.79) \\ \hline \end{gathered}$ | $\begin{gathered} 1.02 \\ (0.64) \\ \hline \end{gathered}$ | $\begin{gathered} 8.08 \\ (5.14) \\ \hline \end{gathered}$ | 4 | 69 | 27 |

${ }^{\text {a }}$ Means are reported while standard deviations are in parentheses.
${ }^{\mathrm{b}}$ Parents perceived their home resided in a relatively disadvantaged, prosperous, or average neighborhood.

## Table S3

The Themes and the Three Most Frequently-Occurring Concepts of Ideal-Mother/Father Beliefs Across the Random Groups

| Random Group 1 |  |  |  | Random Group 2 |  |  |  | Random Group 3 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ideal-Mother$(N=1655)$ |  | Ideal-Father$(N=726)$ |  | Ideal-Mother$(N=1601)$ |  | Ideal-Father$(N=744)$ |  | Ideal-Mother$(N=1670)$ |  | Ideal-Father$(N=678)$ |  |
| Themes | \# | Themes | \# | Themes | \# | Themes | \# | Themes | \# | Themes | \# |
| loving | $1536$ | loving | $633$ | loving | $1480$ | loving | $647$ | loving | $1492$ | loving | 573 |
| sense | 488 | affectionate | 249 | empathic | 495 | strong | 159 | empathic | 631 | affectionate | 223 |
| family | $174$ | strict | 52 | available | 278 | children | 113 | family | 321 | family | 83 |
| Concepts | \# | Concepts | \# | Concepts | \# | Concepts | \# | Concepts | \# | Concepts | \# |
| loving | 680 | loving | 280 | loving | 672 | loving | 252 | loving | 689 | loving | 235 |
| patient | 449 | responsible | $181$ | patient | 452 | responsible | $176$ | patient | 481 | responsible | 163 |
| responsible | 385 | patient | 152 | responsible | 347 | patient | 160 | responsible | 357 | patient | 129 |

Random Group 4
Random Group 5

| Ideal-Mother <br> $(N=1715)$ |  | Ideal-Father <br> $(N=681)$ |  |  | Ideal-Mother <br> $(N=1716)$ |  |  | Ideal-Father <br> $(N=688)$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| Themes | $\#$ | Themes | $\#$ |  | Themes | $\#$ | Themes | $\#$ |  |
| loving | 1560 | loving | 572 |  | loving | 1596 | loving | 611 |  |
| empathic | 625 | family | 256 |  | humor | 395 | family | 113 |  |
| family | 252 | widsom | 20 |  | family | 300 | strict | 17 |  |
| Concepts | $\#$ | Concepts | $\#$ |  | Concepts | $\#$ | Concepts | $\#$ |  |


| loving | 712 | loving | 261 | loving | 699 | loving | 232 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| patient | 466 | responsible | 143 | patient | 498 | responsible | 164 |
| responsible | 370 | patient | 132 | responsible | 385 | patient | 134 |

Note. \# represents hits (i.e., the number of texts associated with the theme) of the themes or the frequency count (i.e., the total number of occurrences) of the concepts.

## Figure S1

The Semantic Network Maps of the Ideal-Parent Beliefs and the Educational Groups in the Five Random Groups
a. Random Group 1


Mothers


Fathers
b. Random Group 2

c. Random Group 3


Mothers


Fathers

## d. Random Group 4



Mothers


Fathers
e. Random Group 5


Mothers


Fathers


[^0]:    "mothering" and "fathering" cultures. Finally, we found that ideal-parent beliefs differed by

