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## Spanking and young children's socioemotional development in low- and middle-income countries

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### Abstract

Spanking is one of the most common forms of child discipline used by parents around the world. Research on children in high-income countries has shown that parental spanking is associated with adverse child outcomes, yet less is known about how spanking is related to child well-being in low- and middle-income countries. This study uses data from 215,885 children in 62 countries from the fourth and fifth rounds of UNICEF's Multiple Indicator Cluster Surveys (MICS) to examine the relationship between spanking and child well-being. In this large international sample which includes data from nearly one-third of the world's countries, 43% of children were spanked, or resided in a household where another child was spanked, in the past month. Results from multilevel models show that reports of spanking of children in the household were associated with lower scores on a 3-item socioemotional development index among 3- and 4-year-old children. Country-level results from the multilevel model showed 59 countries (95%) had a negative relationship between spanking and socioemotional development and 3 countries (5%) had a null relationship. Spanking was not associated with higher socioemotional development for children in any country. While the cross-sectional association between spanking and socio-emotional development is small, findings suggest that spanking may be harmful for children on a more global scale than was previously known.

### Keywords

Child development; Corporal punishment; International research; Spanking

### 1. Introduction

Spanking is a common method to punish children. When children are age 3, about 53% of mothers and 44% of fathers had spanked their child at least once in the past month (Lee, Altschul, & Gershoff, 2015). Research demonstrates that spanking is associated with more internalizing and externalizing behavior problems, antisocial behavior, and aggression in children (Gershoff & Grogan-Kaylor, 2016). While some researchers argue we know enough about the effects of spanking to stop hitting children (e.g., Gershoff, 2013), much of what

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we know about spanking is based on research on children in the United States and other high-income countries. Thus, one key question is whether this evidence is generalizable internationally.

In particular, few studies examine the relationship between spanking and child well-being in low- and middle-income countries, even though attitudes endorsing use of some forms of physical punishment are more common in low- and middle-income countries compared to high-income countries (Lansford & Deater-Deckard, 2012; Zolotor & Puzia, 2010). Furthermore, as countries decide whether to implement bans on corporal punishment (Lansford et al., 2017; Zolotor & Puzia, 2010), it is important to determine whether spanking is a universally risky form of child punishment. This study uses data from UNICEF's Multiple Indicator Cluster Surveys (MICS) (Bornstein et al., 2012) to test the association between spanking and young children's socioemotional development in 62 countries.

### 1.1. Definition and prevalence of spanking

Physical punishment of children takes many forms. Researchers have developed a list of physical punishments that is commonly used in survey research to ask caregivers about how they discipline their children. These punishments include spanking on the bottom with bare hand, hitting on the bottom with a hard object, slapping on the hand/arm/leg, pinching, and shaking the child (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998). Notably, these items have been widely used to assess children's exposure to forms of physical punishment including spanking in North American and global studies of child well-being (Hillis, Mercy, Amobi, & Kress, 2016; Lansford & Deater-Deckard, 2012).

Of all these behaviors, spanking is the most common (UNICEF, 2014a). Research shows that most children are spanked at some point during childhood. According to data from MICS, about 44% of children aged 2 to 14 in low- and middle-income countries were spanked at home in the past month (UNICEF, 2014a). There is variation in the prevalence of spanking across countries (Lansford & Deater-Deckard, 2012; Lansford et al., 2010; Runyan et al., 2010; Tran, Luchters, & Fisher, 2017) and within countries over time (Lansford et al., 2015; Ryan, Kalil, Ziolo-Guest, & Padilla, 2016). Runyan et al. (2010) sampled mothers from 19 communities in Brazil, Chile, Egypt, India, Philippines, and the United States and found that mother-reported spanking by the mother and/or her husband/partner in the past year ranged from 16% to 76%. Lansford et al. (2010) reported the results of survey data from nine countries on the percent of caregivers reporting mild corporal punishment in the last month, and showed a similar wide range in the use of spanking ranging from 6% of boys in Sweden to 97% of boys in Kenya; for severe corporal punishment, estimates in the past month ranged from 0% of either boys or girls in Sweden to 62% of boys in Kenya. Similarly, MICS data indicates a wide range in caregivers' reports of frequency of corporal punishment toward children in the past month (Lansford & Deater-Deckard, 2012).

### 1.2. Spanking and child development

In a comprehensive meta-analysis of 50 years of research summarizing the corporal punishment literature, including both U.S.-based and international studies conducted with

160,927 unique children, Gershoff and Grogan-Kaylor (2016) found that spanking was consistently associated with negative outcomes for children, including more internalizing and externalizing child behavior problems, antisocial behavior, and child aggression. Studies of U.S. samples revealed that having a history of being spanked as a child is associated with mental health problems and antisocial behavior in adulthood (Afifi, Mota, Sareen, & MacMillan, 2017). Even low levels of spanking were associated with higher externalizing behavior (MacKenzie, Nicklas, Waldfogel, & Brooks-Gunn, 2013). Overall, the literature demonstrates that spanking is harmful for children, but, again, this knowledge is primarily based in the context of high-income countries.

### 1.3. International context

Some research has investigated the context of corporal punishment and the effects of spanking on children internationally (Lansford et al., 2016; Ripoll-Núñez & Rohner, 2006). For example, Gershoff et al. (2010) examined data from a cross-sectional convenience sample of 292 middle-class families with 8 to 12-year-old children in China, India, Italy, Kenya, Philippines, and Thailand. They found that spanking was associated with higher mother-reported and child-reported aggression, and higher child-reported anxiety. Using the same data set, Lansford et al. (2005) found that physical punishment (which included spanking, slapping, grabbing, shaking, and beating up) was associated with adverse child outcomes, especially in countries in which physical punishment is less culturally normative; and in later longitudinal analysis of 1,432 children in nine countries, Lansford et al. (2015) noted that corporal punishment was a predictor of child maltreatment.

On a larger scale, though not focused exclusively on spanking, Tran et al. (2017) analyzed data from 35 MICS countries and found that, on average, 3- and 4-year-old children from low Human Development Index (HDI) countries have lower child development scores when they reside in a household in which physical punishments are administered to a child in the household. These authors did not find an association of physical punishment and child development for children in medium and high HDI countries. The researchers used the full composite of child development items in MICS, which encompass language/cognitive, physical, socio-emotional, and approaches to learning constructs. Furthermore, this study did not use multilevel modeling, thus the statistical procedures used in the current study offer a more precise and rigorous examination of the association between spanking and child outcomes.

Other international studies have used MICS data to examine the association between spanking and child well-being have used smaller subsets of countries. For example, one study examined the prevalence of physical punishment in five Caribbean countries (Yildirim & Roopnarine, 2017). Frongillo, Kulkarni, Basnet, and de Castro, (2017) examined physical punishment and child educational outcomes using data from 26 MICS countries (Frongillo et al., 2017). Lansford et al., used data from 8 MICS countries that have enacted bans on the use of corporal punishment (Lansford et al., 2017). In sum, based on the MICS studies published to date, the present study focuses more precisely on linkages between spanking and early child socioemotional development as an outcome; uses a more rigorous analytical approach (multilevel modeling) than some prior studies; and, in addition, by incorporating

the most recently available data from all low- and middle-income MICS studies, presents the largest study to date of low- and middle- income countries to examine the association between spanking and child socioemotional development.

#### 1.4. The current study

Specifically, we examined whether the use of spanking was associated with socioemotional development of 3- and 4-year-old children. We also tested for moderation by several variables including respondent beliefs about physical punishment, whether the child was directly spanked or exposed to spanking in the household, and in cases when there was only information about the spanking of a co-residing child the age of the co-residing child.

The analyses also included a robust set of covariates. First, analyses controlled for child age and child sex. Numerous studies have shown that parental spanking varies considerably by the age of the child, with children ages 2–5 experiencing the highest levels of spanking and spanking declining as children enter school (Straus & Stewart, 1999). Some studies have shown that boys experience more physical punishment from parents than girls (Lansford et al., 2010). Both within the U.S. and internationally, sociodemographic factors, such as lower levels of maternal education and lower household income (Lansford & Deater-Deckard, 2012; Ryan et al., 2016) are also associated with higher use of physical punishment. Additionally, analyses herein controlled for important considerations such as whether the household respondent was the child’s biological parent, sex of the household respondent, number of household members, and urban vs. rural residence.

## 2. Method

### 2.1. Sample

Data are from the United Nations Children’s Fund (UNICEF) Multiple Indicator Cluster Surveys (MICS). These surveys have been conducted since 1995 in over 100 low- and middle-income countries, sometimes called developing and transitioning countries. MICS collects data on issues related to women and children and is designed to be comparable across countries and representative of each sampling area within a country. Multi-stage cluster sampling is used with clusters typically being enumeration areas from a country’s most recent census. Households are randomly chosen within clusters. Questions about child discipline were introduced for the third round of MICS, but questions about children’s socioemotional development were not included until the beginning of fourth round. We used data from the fourth round (MICS4), which was conducted between 2009 and 2013, and the fifth round (MICS5), which was conducted between 2012 and 2017.

Interviews were conducted in-person. Members of the household completed several types of surveys. First, the head of household, their spouse, or another adult caregiver of children completed a survey regarding demographics and characteristics of the household. This survey included a module (i.e., section of survey) on child labor and child discipline. The interviewer used a random number table embedded within the survey to select one of the children in the household aged 2–17 (MICS4) or 1–17 (MICS5) to be the reference child for the section. If the child was 14 or under, the household respondent indicated whether they

or anyone else in household disciplined the selected child in various ways in the past month. After the household survey concluded, each mother or primary caregiver in the household completed a questionnaire for each of their children under age 5, which included a section on the child's development. Only one questionnaire was completed for each child under 5.

This study used data from 62 countries with publicly released data sets as of August 2018 (see Table 1). Guinea-Bissau was the only public data set not yet available in MICS4, though it was available in MICS5. In MICS5, Mexico (Mexico City), Pakistan (Gilgit-Baltistan), Pakistan (Khyber Pakhtunkhwa), Thailand (14 Provinces) were not yet available. Both MICS4 and MICS5 included questions for child discipline and socioemotional development as part of its standard questionnaires throughout the duration of its respective round. However, countries which participate in MICS may add or remove questions, and not all countries included these items in their surveys. We downloaded every available MICS4 and MICS5 data set from the UNICEF MICS website and included every data set that had data on spanking and socioemotional development. One exception was Cuba, which we excluded because it did not have data for household wealth, one of our control variables. The data set for the Nyanza Province in Kenya was also excluded because key variables had different response options than all other data files. All data files were checked for consistency and appended to create one data set. Five countries (Bosnia, Kosovo, Macedonia, Montenegro, and Serbia) included a separate Romani ethnicity data set, which we appended to its respective country. In some cases, there were separate data files for a given country by region. These files were appended to their respective countries.

## 2.2. Measures

**2.2.1. Socioemotional development**—Socioemotional development was measured using three yes/no questions from the ten-item Early Childhood Development Index (ECDI) (Loizillon, Petrowski, Britto, & Cappa, 2017), which also covers language/cognitive, approaches to learning, and physical (e.g., fine motor skill) domains. The child's caretaker (the mother in 99.7% of cases) was asked whether (1) the child gets along well with other children; (2) the child kicks, bites, or hits other children or adults (reverse-coded); and (3) the child gets distracted easily (reverse-coded). UNICEF chose these items in 2007 after reviewing existing measures of child development. In 2008, UNICEF conducted a pilot test in Jordan and the Philippines and determined these items were appropriate for young children as part of the standard MICS protocol. A child is considered developmentally on-track if they have at least two out of three positive items (UNICEF, 2014b). Researchers have used various coding strategies for the ECDI and its subscales. Some scholars have treated the full ECDI and/or its subscales as continuous (e.g., Jeong, McCoy, Yousafzai, Salhi, & Fink, 2016; Tran et al., 2017) while others have used dichotomous coding for whether the child is considered developmentally on-track (e.g., Miller, Murray, Thomson, & Arbour, 2016). We summed the items to generate an index ranging from 0 to 3 with higher values indicating higher socioemotional development. Summing the items may balance cultural differences in child behavior and caregivers' interpretations of behavior, and allows us to determine whether, overall, spanking is associated with higher or lower socioemotional development.

**2.2.2. Spanking**—The spanking question was drawn from a modified version of the Parent-Child Conflict Tactics Scale (Straus et al., 1998). The question asks whether in the past month the household respondent or anyone else in the household “spanked, hit or slapped him/her on the bottom with bare hand” (1 = yes; 0 = no). A unique characteristic of this variable in MICS is that it is in reference to one randomly selected child in the household. For example, in MICS there may be data for whether a child’s older sibling was spanked, but not for the target child (i.e., for whom we have socioemotional development data) was spanked. As a result, a variable was constructed for whether the spanking variable was in reference to the 3 to 4-year-old child (44% of sample) or another child in the household (56% of sample). This variable measures direct vs. vicarious exposure to spanking (Vittrup & Holden, 2010) and was used for moderation analysis.

**2.2.3. Covariates**—For child characteristics, we included child age (in months) and child sex. For family and household characteristics, we included a dichotomous variable for whether the household respondent is the child’s biological parent, sex of the household respondent, whether the household respondent believes a child needs to be physically punished in order to be raised properly, education of the child’s mother (none, primary, secondary or more), number of household member, household wealth score standardized within each country, and urban vs rural residence. We controlled for MICS round because 11 countries participated in both MICS4 and MICS5, the age range of the disciplined child was slightly larger for MICS5 (1–14) than MICS4 (2–14), and also to account for the time difference between the rounds.

### 2.3. Analytic strategy

The initial data file included 601,309 children nested within 386,137 households. We did not include 374,071 children who were missing data on the outcome. This was primarily due to children aged 0–35 months being ineligible for the socioemotional development items. We excluded 2 children who had data on the outcome but were not aged 36–59 months. Next, we excluded 10,873 observations missing data on spanking and 230 observations in which a child aged 15–17 had data on spanking despite ineligibility for the child discipline questions. This reduced the sample to 216,133 children. Examining missingness across the remaining variables, maternal education was missing for 161 observations and beliefs about physical punishment was missing for 83 observations. Four observations were missing other demographic information. We excluded the remaining 248 observations with missing data. The final analytic sample was 215,885 children nested within 192,041 households. On average, households with more than one child in the analytic sample had 2.13 children in the analytic sample.

In order to examine the relationship between spanking and socioemotional development, we used multilevel modeling to account for country-level and household-level clustering, allowing a random intercept for each country and household, a random coefficient for spanking to vary across countries, and a covariance between the random intercept and random coefficient for spanking for each country (Raudenbush & Bryk, 2002). Further, we examined the model’s country-specific spanking coefficients to show the relationship between spanking and socioemotional development in each specific country. We used Stata

15.1 for data management and analysis (StataCorp, 2017) and the ggplot2 package in R for our figures (R Core Team, 2017; Wickham, 2009).

### 3. Results

Descriptive statistics of the variables used in our analysis are found in Table 2. Children's socioemotional development score had a mean of 2.02. Overall, 43% of children in the sample were spanked, or reside with another child who was spanked, in the past month. The prevalence of reported spanking ranged from 8% in Zimbabwe to 68% in São Tomé and Príncipe, and Tunisia. One-third of household respondents indicated they believed physical punishment is necessary to bring up, raise, or educate a child probably. Children's sex and age were approximately evenly distributed. Eighty-three percent of household respondents were male, 74% of household respondents were the child's mother or father. A cross-tabulation of household respondent's sex and relationship to the child indicated the child's father was the household respondent for 66% of children in the sample. Some children lived in households with many members. After capping upper values at 50, the mean number of household members was 6.95. The household wealth score constructed by UNICEF is in standard deviation units. The mean of the wealth score was  $-0.12$  which indicates that, on average, families in the analytic sample had 0.12 standard deviations less wealth than the average wealth within the full sample of the sampling area within their respective countries. Because the mean wealth score was not 0, the standard deviation shown in Table 2 is 0.97 instead of 1; nevertheless, in our multilevel models, a one unit increase in the wealth score coefficient can be interpreted as a one standard deviation increase in wealth in comparison to the rest of the sampling area within a country. The majority of children lived in rural areas. Approximately 62% of mothers had completed primary education or more. The majority of children in the sample were from MICCS5.

#### 3.1. Multilevel models

We began by running a 2-level model with household intercept as the level 2 variable and the full set of level 1 covariates predicting socioemotional development. The intraclass correlation coefficient (ICC) was .34 suggesting that 34% of the variance in child socioemotional development could be explained by the household in which a child lives ( $\chi^2(1) = 3393, p < .0001$ ). Next, we added a third level to the model by including a country intercept. The likelihood ratio test indicated the 3-level model was an improvement over the 2-level model ( $\chi^2(1) = 10810, p < .0001$ ). The ICC for country was .07, suggesting that 7% of the variance in child socioemotional development could be explained by the country in which a child lives. The ICC for household in this model was .36. In the final stage of model building, we added a random coefficient for spanking for each country to determine whether the relationship between spanking and socioemotional development varied by country, and a covariance between the random intercept and random coefficient for spanking which would allow us to analyze the relationship between each country's socioemotional development intercept and spanking slope. This model was an improvement over the previous model ( $\chi^2(2) = 98, p < .0001$ ), suggesting there were differences in the relationship between spanking and socioemotional development by country.

Table 3 shows results of the multilevel model with random intercepts for country and household, a random slope for spanking for each country, and a covariance between the random country intercept and random country slope. On average across the 62 countries, spanking is associated with lower socioemotional development ( $\beta = -0.101, p < .001$ ). Positive attitudes toward physical punishment of children were also negatively associated with the outcome ( $\beta = -0.055, p < .001$ ). A linear combination test showed that the report of spanking was more strongly associated with socioemotional development when compared to beliefs about physical punishment ( $p < .001$ ).

### 3.2. Moderation analyses

In results not shown in Table 3, we ran three models testing interaction effects. First, we tested for moderation by the household respondent's beliefs about the effectiveness of physical punishment. This interaction was statistically non-significant suggesting the relationship between spanking and socioemotional development did not vary by the household respondent's beliefs about spanking and other forms of physical punishment.

Second, we tested whether the relationship between spanking and socioemotional development differed for direct and vicarious reports of spanking. As shown in the predictive margins plot in Fig. 1, a direct report of spanking had a slightly stronger negative slope (i.e., stronger association) than vicarious exposure to spanking ( $p = .024$ ); nevertheless, the association between spanking and socioemotional development was observed regardless of whether a child was directly spanked or was exposed to the vicarious spanking of the co-residing child.

In the final interaction model, we limited the sample to children with vicarious reports of spanking ( $n = 121,599$ ) and tested for moderation by the age of the co-residing child the spanking question was in reference to. This interaction showed that the association between vicarious spanking and socioemotional development varied by the age of the co-residing child ( $p = .001$ ). As shown in Fig. 2, the association was strongest at younger ages, less strong at older ages, and was always lower than the predicted values for children who were not exposed to vicarious spanking of the co-residing child.

### 3.3. Variation by country

Finally, we investigated how the relationship between spanking and socioemotional development varied by country. In the multilevel model shown in Table 3, we included a covariance between the random coefficient for spanking for each country and each country's socioemotional development intercepts. We converted this covariance into a correlation ( $r = -0.48$ ), which indicated that the association between spanking and socioemotional development was more strongly negative in countries in which children had higher average socioemotional development scores. In order to investigate this further, we used post-estimation to derive spanking slopes and 95% confidence intervals for each of the 62 countries. These results are shown in Fig. 3. A range of plausible values for beta coefficients and confidence intervals are shown at the bottom of Fig. 3. Countries are listed on the left and sorted by coefficient value. Each country's coefficient is presented as a dot while 95% confidence intervals are shown as horizontal bars. When a country's 95% confidence



interval overlaps with the dashed vertical line (i.e., a beta of 0), the relationship between spanking and socio-emotional development in that country (or, more precisely, the sampling area within that country) is not significant at the 95% confidence level. As an illustrative example of how to interpret the figure, at the bottom of the plot, Malawi has a spanking coefficient of  $-0.18$  with a 95% confidence interval that does not overlap with 0; thus, for children in Malawi in the sample, we would expect that spanking is associated with a 0.18 unit lower socioemotional development score compared to no spanking. In contrast, at the top of the plot, Chad has a spanking coefficient of  $-0.01$  with a confidence interval ranging from  $-0.04$  and  $0.03$ , which includes 0; thus, we conclude the relationship is neither negative or positive. Overall, these results indicate that 59 countries (95%) had a negative relationship between spanking and socioemotional development and 3 countries (5%) had a relationship that was neither negative or positive. No countries had a positive relationship between spanking and young children's socioemotional development.

#### 4. Discussion

This study is the largest to date to examine associations between parental spanking and child well-being. Specifically, in their meta-analysis of 50 years of research on parental spanking and child well-being, Gershoff and Grogan-Kaylor (2016) reported a sample size of 160,927; the current study sample size is 215,885 children from 62 low- and middle-income countries. In this large international sample, 43% of children ages 36–59 months were spanked, or resided in a household where another child was spanked, in the past month. Results from cross-sectional analysis indicated there was a small but statistically significant negative association between spanking and young children's socioemotional development. Countries with higher average socioemotional development scores tended to have stronger negative associations between spanking and socioemotional development. In no country was there a statistically significant positive relationship between spanking and young children's socioemotional development. It appears that in this sample, which includes children from nearly one-third of the world's countries, spanking may do more harm than good.

Regardless of whether a child was directly exposed to spanking or vicariously exposed to the spanking of a co-residing child (Vittrup & Holden, 2010), both circumstances were associated with lower socioemotional development. Interestingly, in the case of vicarious exposure, the association was most negative when the co-residing child was very young and became less negative at older ages. This is a phenomenon that has not received much attention in the child discipline literature. On one hand, this result seems counterintuitive. Older children are less likely to be spanked than younger children so this type of vicarious exposure to spanking may be especially harsh and less culturally normative. On the other hand, we might expect the association to be stronger at younger ages because spanking is likely to be more frequent than at older ages. Moreover, because 3- and 4-year-old children may be interacting more with younger children in the household, the frequency and proximity of vicarious spanking exposure may be especially salient. It may also be reasonable to assume that if a child's close-in-age sibling is being spanked, the child is also being directly spanked. Further research is needed to understand the role of vicarious spanking exposure in young children's lives, but this study suggests direct and vicarious exposure have similar effects.

The results of this study make a significant contribution to a large body of research, often conducted in high-income countries such as the U.S. and Canada, which shows that “normal” or “normative” forms of family violence such as spanking are detrimental to children’s socioemotional outcomes. Results are consistent with a recent meta-analysis which indicated children’s exposure to spanking is associated with child aggression and externalizing behavior problems, with small to moderate effects sizes (Gershoff & Grogan-Kaylor, 2016). The current study suggests that these findings can be generalized to low- and middle- income countries.

One way to interpret the results of this study is to consider the meaning of small effect sizes when observed at the population level. Studies show that spanking is one of the most common parenting practices used to punish children across cultural contexts (UNICEF, 2014a); indeed, in this study, in 43% of households there was spanking of at least one child in the household in the past month. Across the globe, the majority of children grow up in households where they are exposed to physical punishment (Lansford & Deater-Deckard, 2012; UNICEF, 2014a). Given the high prevalence of this behavior across cultural contexts at the global population level, even small effect sizes showing detrimental associations with child well-being should be viewed as compelling evidence that exposure to socially sanctioned family violence, such as spanking, is a significant and meaningful public health problem. An implication is that this behavior may have worldwide consequences for children’s mental health, and their mental health as adults (Afifi, Ford et al., 2017; Merrick et al., 2017). Thus, reductions in corporal punishment might do a great deal to reduce the global burden of children’s mental health and improve child development outcomes globally.

#### 4.1. Practice and policy implications – bans on corporal punishment

Advocates for children’s right to be free of all forms of violence, including corporal punishment, often invoke the United Nations Convention on the Rights of the Child (UN General Assembly, 1989), which states that “States Parties shall take all appropriate legislative, administrative, social and educational measures to protect the child from all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation... while in the care of parent(s), legal guardian(s) or any other person who has the care of the child.” A recent UNICEF report encourages governments to “enact and enforce legislation to protect children from all forms of violence, including corporal punishment in all settings, even the home...” (UNICEF, 2017). Research suggests there is a strong need to protect children from violence through national policies, focusing both on intervention intended to reduce harsh discipline as well as legal reform to reduce or eliminate corporal punishment (Britto & Ulkuer, 2012). Taking the UN Convention on the Rights of the Child and research on corporal punishment to heart, 54 countries worldwide have banned the use of corporal punishment ([endcorporalpunishment.org](http://endcorporalpunishment.org) Accessed November 2018) as a step toward enhancing the well-being of children. Although it is important to conduct further research to replicate the results of the current study, and to examine other health and mental health consequences of exposure to spanking using international samples, the results of this study suggest that bans on the use of corporal punishment would benefit child well-being broadly. Research has shown some empirical support that bans on corporal punishment are correlated with reductions in caregivers’ use

of corporal punishment (Durrant, 1999; Lansford et al., 2017; Zolotor & Puzia, 2010). However, further research is needed to more rigorously examine whether such bans are responsible for causing changes in caregivers' behaviors (Zolotor & Puzia, 2010).

#### 4.2. Study limitations

While these results help to address an important gap in the international spanking literature, there are important limitations that need to be mentioned. First, the socioemotional development measure is only comprised of three items. While these items may be cross-culturally appropriate and comparable, there are many aspects of young children's social and emotional development that this measure does not capture. The three items in MICS may be more indicative of child well-being in some locations than others. That being said, MICS provides the best source to date of global population-based data about spanking and child socioemotional development from low- and middle-income countries. Further, other research using more comprehensive measures have found similar results (Gershoff et al., 2010; Lansford et al., 2005).

Second, the data are cross-sectional, which is common in the international spanking literature. A longitudinal design would be ideal. That said, researchers have noted that effect sizes linking spanking to detrimental outcomes for children are highly consistent across both cross-sectional studies and methodologically more rigorous studies (i.e., those with longitudinal designs). In other words, longitudinal studies that were examined in one meta-analysis did not show significantly smaller effect sizes than those with cross-sectional designs (Gershoff & Grogan-Kaylor, 2016). Future research could implement population-based longitudinal study designs in several countries to deal with this limitation.

Third, this study assumes the questions about spanking and children's development are interpreted the same way and mean the same thing across and within all families in the sample. This may not be the case. There is considerable cultural and linguistic diversity in the sample and this may affect the results. Further, there is no outside validation of the child's behaviors, which are reported by only one caregiver, usually the mother. Having multiple reports for child behavior would have increased our confidence in the accuracy of the measure. A strength of this study is that the use of a multilevel modeling approach offers some level of statistical control for between country and between household differences in reporting. That being said, there may be unobserved differences that are not fully accounted for in the current models.

Finally, similar to other research on the effects of spanking on children, we cannot conclude this relationship is causal. The associations we see in this study do not prove that spanking causes children to have lower socioemotional development. Scholars, practitioners, and policy makers continue to debate about the merits of spanking, in part due to correlational evidence. Nevertheless, the highest quality studies, which employ various methods to statistically control for possible confounders (e.g., Gershoff, Sattler, & Ansari, 2018; Ma, Grogan-Kaylor, & Lee, 2018), consistently demonstrate negative effects of spanking, and even "small effects can translate into large societal impacts" (Gershoff & Grogan-Kaylor, 2016, p. 465). At best, spanking is likely an ineffective practice for helping children develop socially and emotionally; at worst, it is likely harmful to children across the world.

## 5. Conclusion

Research documents considerable variability in the use of spanking and other forms of physical punishment both within and across countries worldwide (Lansford & Deater-Deckard, 2012; Lansford et al., 2014; Runyan et al., 2010; UNICEF, 2014a). The results of this study suggest that the use of spanking is detrimental to children across cultural contexts. Specifically, this study used data from 62 countries, representing nearly one-third of the world's countries, and demonstrated that caregivers' reports of spanking of children in the household were associated with lower socioemotional development of 3- and 4-year-old children. Country-level results showed that 59 countries (95%) had a negative relationship between spanking and child socioemotional development, and 3 countries (5%) had a null relationship. While most caregivers do not think physical punishment is a necessary form of discipline (UNICEF, 2014a, p. 153), spanking remains remarkably common suggesting that changing patterns of parent-child interactions may be difficult for many parents. There is some limited evidence to suggest that bans may be helpful in motivating caregivers to decrease their use of corporal punishment (Lansford et al., 2017). The results of this study suggest that bans are warranted and likely benefit child well-being in the long term. Furthermore, caregivers can be supported in their efforts to change parenting behaviors through culturally competent parent education as well as the use of evidence-based practices that promote alternatives to physical punishment (Gershoff, Lee, & Durrant, 2017).

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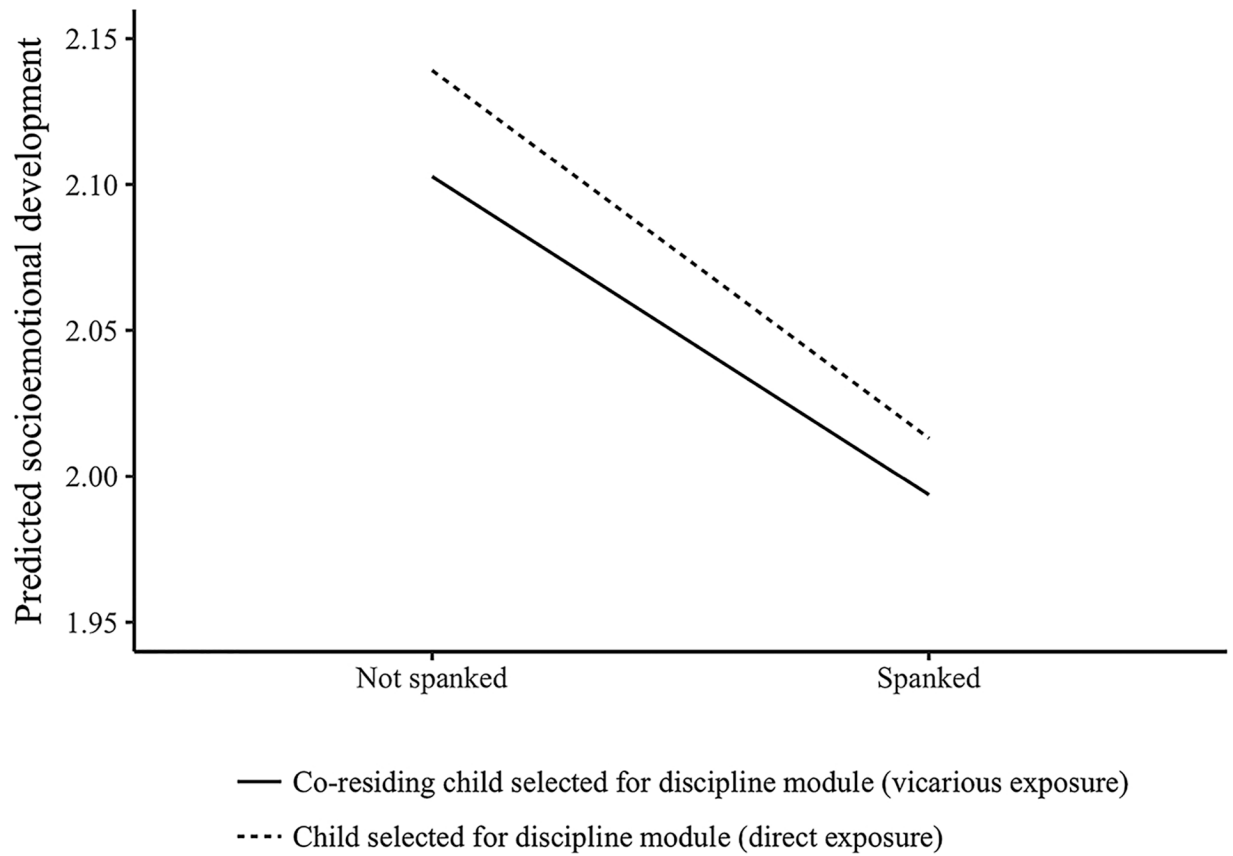
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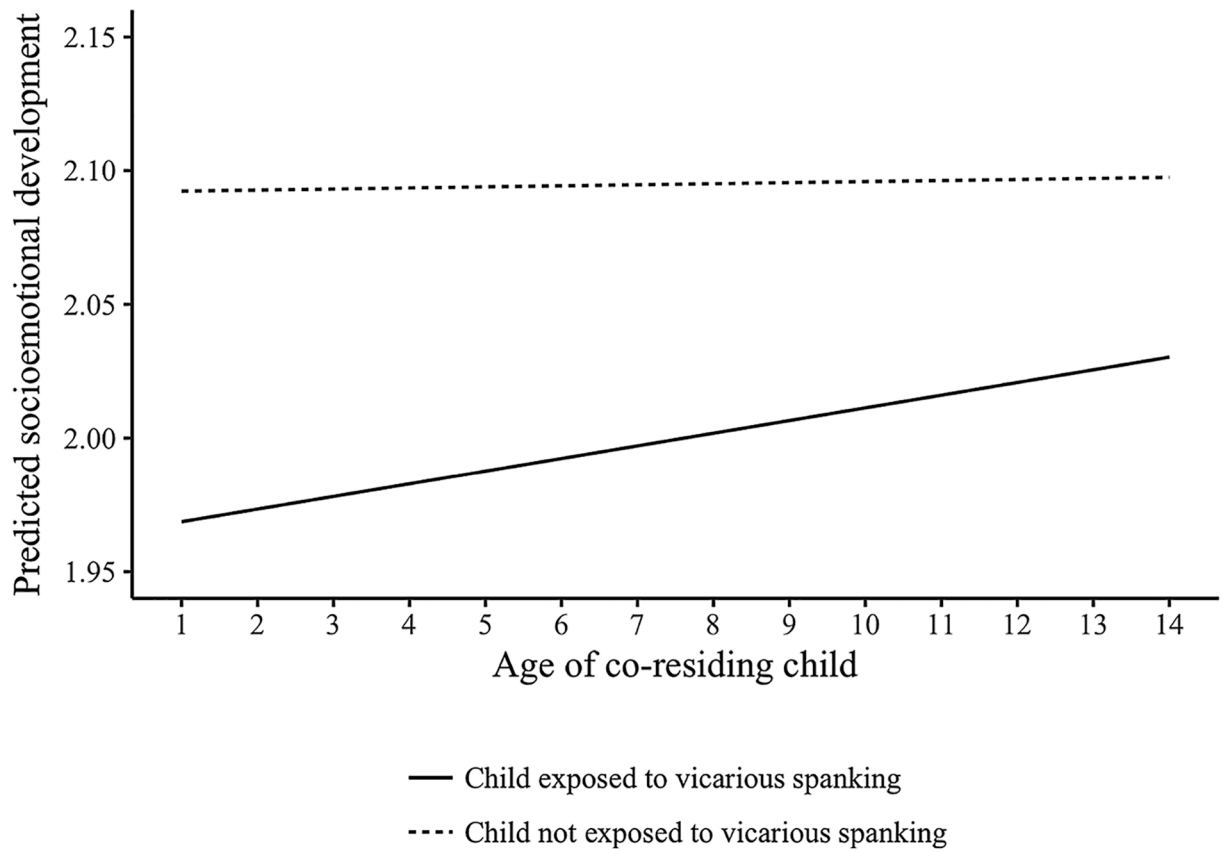
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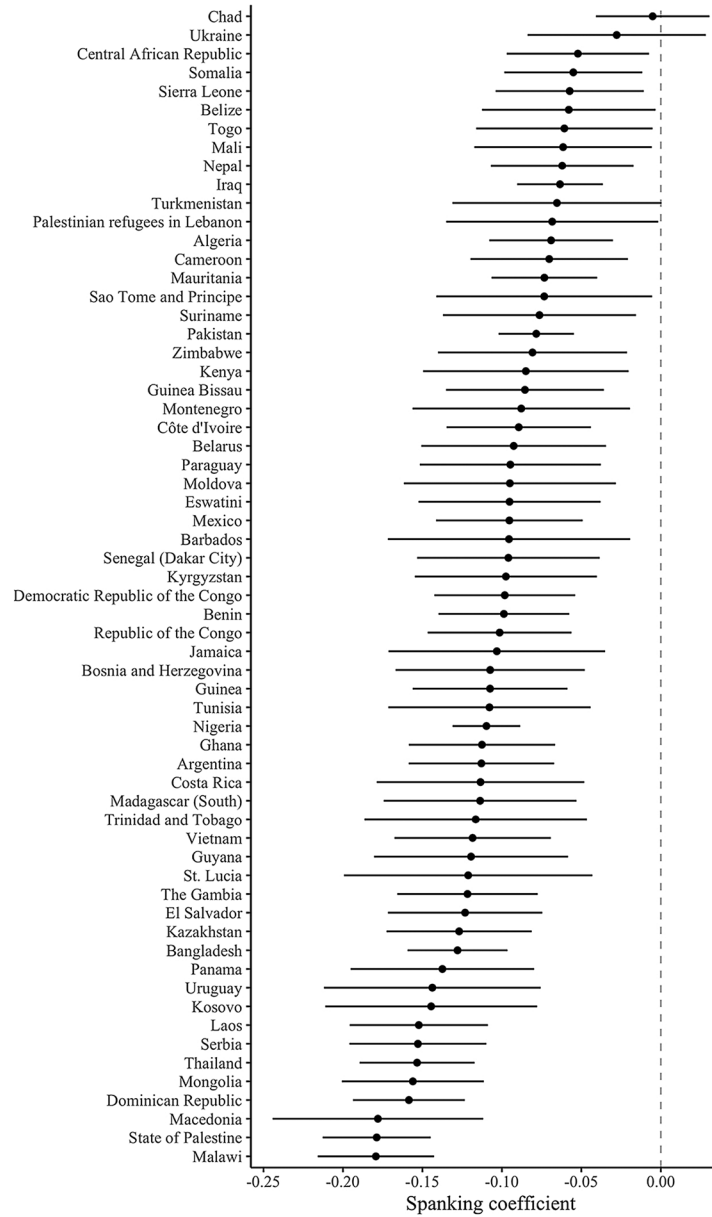


**Fig. 1.** Margins plot showing predicted socioemotional development by direct and vicarious exposure to spanking.



**Fig. 2.** Margins plot showing predicted socioemotional development across the co-residing child's age in years by whether the co-residing child was spanked.





**Fig. 3.** Country-specific spanking coefficients (with 95% confidence intervals) derived from multilevel model predicting socioemotional development.

**Table 1**

Countries included in analytic sample.

Country	MICS Survey Round	N
Algeria	4	5,033
Argentina	4	3,270
Bangladesh	5	8,348
Barbados	4	193
Belarus	4	1,395
Belize	4 and 5	1,838
Benin	5	4,507
Bosnia and Herzegovina	4	1,305
Cameroon	5	2,604
Central African Republic	4	3,588
Chad	4	6,363
Costa Rica	4	890
Cote d'Ivoire	5	3,401
Democratic Republic of the Congo	4	3,857
Dominican Republic	5	7,077
El Salvador	5	2,756
Eswatini	4 and 5	2,097
Ghana	4	3,169
Guinea	5	2,897
Guinea Bissau	5	2,695
Guyana	5	1,198
Iraq	4	13,282
Jamaica	4	632
Kazakhstan	4 and 5	3,932
Kenya	5	1,010
Kosovo	5	891
Kyrgyzstan	5	1,645
Laos	4	4,155
Macedonia	4	727
Madagascar (South)	4	1,185
Malawi	5	7,172
Mali	5	1,900
Mauritania	4 and 5	7,318
Mexico	5	3,174
Moldova	4	698
Mongolia	4 and 5	4,463
Montenegro	5	850
Nepal	4 and 5	3,571
Nigeria	4 and 5	20,451

Country	MICS Survey Round	N
Pakistan	5	16,868
Palestinian refugees in Lebanon	4	704
Panama	5	2,292
Paraguay	5	1,697
Republic of the Congo	5	3,337
Sao Tome and Principe	5	767
Senegal (Dakar City)	5	1,625
Serbia	4 and 5	3,703
Sierra Leone	4	3,520
Somalia	4	3,873
St. Lucia	4	115
State of Palestine	4 and 5	7,012
Suriname	4	1,168
Thailand	5	6,024
The Gambia	4	3,965
Togo	4	1,731
Trinidad and Tobago	4	501
Tunisia	4	1,112
Turkmenistan	5	1,438
Ukraine	4	1,807
Uruguay	4	751
Vietnam	4 and 5	2,471
Zimbabwe	5	3,867

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**Table 2**

Descriptive statistics (N = 215,885).

	%	Mean	SD	Min	Max
Socioemotional development		2.02	0.82	0	3
Child in household spanked in past month	43.32				
Household respondent believes in physical punishment					
Yes	32.55				
No (Ref)	65.85				
Don't know / No opinion	1.61				
Child age in months		47.30	6.86	36	59
Child is male	50.80				
Household respondent is child's father or mother	73.78				
Household respondent is male	83.39				
Number household members		6.95	4.02	2	50
Household wealth score		-0.12	0.97	-10.11	7.30
Urban residence	40.96				
Mother's education					
None	33.04				
Primary	30.96				
Secondary or more	36.00				
MICS Round					
Round 4	44.47				
Round 5	55.53				

**Table 3**

Multilevel model predicting socioemotional development (N = 215,885).

	$\beta$	SE	p-value	95 % CI	
Child in household spanked in past month	-0.101	0.007	< 0.001	-0.115	-0.087
Household respondent believes in physical punishment					
Yes	-0.055	0.004	< 0.001	-0.063	-0.047
No (Ref)					
Don't know / No opinion	0.003	0.014	0.805	-0.024	0.030
Child age in months	0.003	0.000	< 0.001	0.003	0.003
Child is male	-0.096	0.003	< 0.001	-0.102	-0.089
Household respondent is child's father or mother	0.009	0.004	0.050	0.000	0.017
Household respondent is male	0.018	0.005	< 0.001	0.008	0.028
Number of household members	-0.005	0.001	< 0.001	-0.006	-0.004
Household wealth score	0.028	0.002	< 0.001	0.024	0.032
Urban residence	-0.016	0.004	< 0.001	-0.025	-0.008
Mother's education					
None (Ref)					
Primary	-0.022	0.005	< 0.001	-0.032	-0.012
Secondary or more	0.020	0.006	0.001	0.008	0.031
MICS Round					
Round 4 (Ref)					
Round 5	0.022	0.006	0.001	0.009	0.034
Intercept	1.963	0.043	< 0.001	1.880	2.047
Random Effects					
Country-level					
Variance for spanking	0.002	0.001		0.001	0.003
Variance for intercept	0.047	0.009		0.033	0.067
Covariance between spanking and intercept	-0.005	0.002		-0.008	-0.001
Household-level					
Variance for intercept	0.192	0.004		0.185	0.199
Residual variance	0.427	0.003		0.420	0.433