

Physical Punishment and Child Externalizing Behavior: Comparing American Indian, White, and African American Children

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Abstract

This study examined if, compared to White and African American children, maternal spanking of American Indian children was associated with child externalizing behavior problems. Using a community-based sample of 3,632 children (1,183 White, 2,183 African American, 266 American Indian), multiple-group autoregressive cross-lagged models examined the associations between maternal spanking and child externalizing behavior across the first 5 years of life. Rates of spanking for American Indian and White children were similar at all three time points (age 1, age 3, and age 5). When comparing White and American Indian groups, maternal spanking at age 1 predicted child externalizing behavior at age 3 (White: $\beta = .10$, $p < .001$; American Indian: $\beta = .08$, $p < .01$), and maternal spanking at age 3 predicted child externalizing behavior at age 5 (White: $\beta = .09$, $p < .05$; American Indian: $\beta = .08$, $p < .01$). When comparing African American and American Indian groups, maternal spanking at age 1 predicted child externalizing behavior at

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age 3 (African American: $\beta = .08, p < .01$; American Indian: $\beta = .06, p < .001$), and maternal spanking at age 3 predicted child externalizing behavior at age 5 (African American: $\beta = .08, p < .001$; American Indian: $\beta = .07, p < .001$). Structural invariance tests suggested that the associations observed among American Indian children were not distinguishable from those observed among White and African American children. Results of this study can be interpreted in light of the recent American Academy of Pediatrics statement that encourages pediatricians to counsel parents against the use of physical punishment. Similar to White and African American families, American Indian families may benefit from reducing or eliminating the use of physical punishment.

Keywords

Native American, parenting, physical discipline, corporal punishment, spanking, Fragile Families and Child Wellbeing Study

Physical punishment, defined as hitting, slapping, or spanking a child in an attempt to correct misbehavior, remains a controversial topic among parents (Gershoff & Grogan-Kaylor, 2016b; Sege & Siegel, 2018). Internationally, approximately 6 in 10 children are exposed to physical punishment in their childhood (United Nations Children's Fund [UNICEF], 2014). The use of physical punishment in the United States tends to be frequent, with surveys of parents (usually mothers) indicating roughly two-thirds of 19- to 35-month-old children are spanked (Regalado, Sareen, Inkelas, Wissow, & Halfon, 2004). A recent meta-analysis that examined over 50 years of physical punishment research cautioned that spanking is associated with lower child socio-emotional development across a variety of outcome domains (Gershoff & Grogan-Kaylor, 2016b). Furthermore, the American Academy of Pediatrics recently released a statement recommending that parents avoid spanking children (Sege & Siegel, 2018).

Although some researchers say that the research base is strong enough to conclude that the harms of physical punishment outweigh the benefits, there is an ongoing debate regarding "conditional corporal punishment" arguments, which state that spanking is not harmful to children in specific conditions or contexts that mitigate its effects (Benjet & Kazdin, 2003; Gershoff, 2013). In other words, the outcomes associated with physical punishment may vary based on sociocultural factors, such as race or ethnicity, as well as other factors within the parent-child relationship, household, or neighborhood environment. In this study, we focus on race and ethnicity. It has often

been suggested that when spanking is more culturally normative or common, it is less harmful to children (Deater-Deckard & Dodge, 1997).

One racial group is largely missing from the literature on the use of physical punishment: American Indians. It is currently unknown whether spanking in American Indian families is associated with deleterious outcomes for children in a manner similar to other racial or ethnic groups in the United States. To note, although there are a number of terms used to describe indigenous populations in North America (e.g., First Nation and Native American), we use the term American Indian for two reasons: First, American Indian is the term used by official government policies, laws, and publications, including the U.S. Census. Second, American Indian is the term used in the survey used in this study, to which participants self-identified their race and ethnicity.

While American Indian populations are incredibly diverse, broadly speaking, the American Indian family is largely defined by its values of closeness and harmony (Martin & Yurkovich, 2014). American Indian families approach the responsibility of parenting with seriousness and respect (LaFromboise & Low, 1998). Examining the outcomes related to spanking among American Indians responds to both the conditional corporal punishment arguments surrounding spanking and its associated effects across racial or ethnic groups, and could help inform policies and practices regarding discipline strategies among American Indian parents. Therefore, this study uses a large community-based sample of parents to compare the associations between maternal spanking and externalizing behavior among American Indian, White, and African American children.

Ethnic and Racial Differences in Physical Punishment

Research with U.S. families has demonstrated that rates of physical punishment of young children are very high. Furthermore, rates of spanking vary by race and ethnicity. For example, numerous studies have shown that African American parents in the United States use physical punishment more frequently than do White parents (Berlin et al., 2009; Gershoff & Grogan-Kaylor, 2016a; Slade & Wissow, 2004).

However, while studies show that race and ethnicity are associated with variation in the use of parental physical punishment, less is known about whether race or ethnicity are moderators of the associations of physical punishment with negative outcomes such as higher levels of externalizing behavior problems. One seminal study suggested White children—but not African American children—who were spanked demonstrated more externalizing

behavior problems (Deater-Deckard, Dodge, Bates, & Pettit, 1996), leading some to surmise that cultural factors within the African American community may be protective for African American children (Deater-Deckard & Dodge, 1997). More recently, a meta-analysis that examined five studies that had separate analyses for African American and White children asserted that physical punishment is associated with negative consequences for both African American and White children (Gershoff & Grogan-Kaylor, 2016a). However, this meta-analysis did not include the American Indian population.

Physical Punishment Among the American Indian Population

There are currently over 560 federally recognized American Indian tribes in the United States, each with its own unique background and culture (Bureau of Indian Affairs, 2017). While this definition of an American Indian is somewhat narrow (i.e., a person belonging to a federally recognized tribe), there are many individuals who classify themselves as American Indian but do not belong to a federally recognized tribe. For the purposes of this study, participants self-identified as American Indian and were not required to provide proof that they belonged to a federally recognized tribe. Thus, to assume all tribes and those who identify as American Indian share the same norms around the practice of physical punishment is not correct. While some tribes view spanking a child as falling within the normative practice of discipline, most tribal cultures prefer nonphysical punishment practices (Fass, 2004; Rushdoony, 2013).

Studies reveal that current physical punishment practices among American Indians, when compared to the general population, range from higher proportions of punishment to similar proportions of punishment (Hanson et al., 2006; Hawkins et al., 2010). Therefore, while the general cultural norm for American Indians suggests less severe options of discipline, many tribal communities struggle with this practice. Discrimination, high unemployment rates, substance use struggles, and the effects of historical trauma continue to challenge many tribal communities (Brave Heart & DeBruyn, 1998; Marrone, 2007; Nutton & Fast, 2015).

Hawkins and colleagues (2010) found that rates for injurious spanking among American Indian youth were 14.4% in 1995 (among the highest of all racial/ethnic groups) and just 7.9% in 2005 (second lowest of all racial/ethnic groups). American Indian groups suggest this may be due to a number of tribes implementing more culturally appropriate and strength-based parenting practices drawing on the positive parenting traditions of the past. Some of these positive parenting traditions include helping both adults and children to learn the language, participating in tribal ceremonies, and reconnecting with

positive parenting practices that strengthen the child–parent bond (Deyhle, 2013; Kulis, Wagaman, Tso, & Brown, 2013).

Even so, the effects of historical trauma, or the cumulative effects of physical, emotional, and psychological group trauma across generations (Brave Heart & DeBruyn, 1998), may potentially continue to negatively affect how and why American Indians discipline their children. Boarding schools and large-scale child separation have been identified as contributors to these challenges. Until the 1970s and 1980s, it was common practice to send American Indian children to boarding schools, where the norm was severe physical punishment (Bussey & Lucero, 2013; Chase, 2012). This may have influenced many of these children, now adults, to discipline their children in similar ways (Bonnell, 1997). Furthermore, the child welfare system has traditionally removed American Indian children at much higher rates than the general population (National Indian Child Welfare Association, 2017). This resulted in an increase in physical punishment of American Indian children due to the increase in emotional modeling and stability (Buntain-Ricklefs, Kemper, Bell, & Babonis, 1994). Thus, physical punishment among American Indians remains a complex legal and cultural issue (Limb, White, & Holgate, 2014).

Considering the complex cultural and historical issues associated with physical punishment among the American Indian population, and given the available literature on the associations of spanking across race and ethnic groups, our first research question was to conduct exploratory analyses comparing White, African American, and American Indian families in their overall usage of spanking. Second, we hypothesized that (a) increases in maternal spanking would be associated with increases in child externalizing behavior across the first 5 years of life for American Indian children and (b) this association of spanking and children’s externalizing behavior would be equivalent across White and American Indian children, as well as African American and American Indian children. In sum, we sought to replicate dozens of studies showing the associations of maternal spanking to increased child externalizing behavior problems (Gershoff & Grogan-Kaylor, 2016b) with a sample of American Indian families, and to replicate the lack of race and ethnicity as a moderator of these associations (Gershoff & Grogan-Kaylor, 2016a; Grogan-Kaylor et al., 2018).

Method

Participants

We analyzed data from the Fragile Families and Child Wellbeing Study (FFCWS). FFCWS is a population-based study that oversampled children of

unmarried mothers from 20 U.S. cities that had a population of 200,000 or more in 1994. The first wave of data was collected between 1998 and 2000, when the children selected for the study were born. Subsequent waves of data were collected when children were 1, 3, and 5 years old. When the children were 3 and 5 years old, an In-Home Longitudinal Study of Pre-School-aged Children ("In-Home") was conducted, where our key dependent variable, child externalizing behavior, was examined. The Institutional Review Board (IRB) at Columbia University and Princeton University approved all participant procedures and data collection for the FFCWS. The IRB at the University of Michigan considered our secondary analysis of these data exempt from further review.

The original FFCWS sample consisted of 4,898 children. We narrowed our sample to only American Indian, White, and African American children, and also dropped 29 children who lived with their mothers "none of the time," leaving a final sample size of 3,632. Biological mothers' and fathers' race were examined during the first wave of data. Children were classified as White if their biological mother's *and* biological father's race was White ($n = 1,183$). Children were classified as African American if their biological mother's *and* biological father's race was African American ($n = 2,183$). Children were classified as American Indian if their biological mother's *or* biological father's race was American Indian ($n = 266$). This means that some American Indian children had one American Indian parent ($n = 107$) and others had two American Indian parents ($n = 159$). Bivariate analyses revealed no significant differences in externalizing behavior or spanking between these two groups (see Table S1 in the Supplemental Material). Therefore, to be more inclusive and to add power to the analyses, children were classified as American Indian if they had at least one biological parent who was American Indian, leaving a final sample size of 3,632 children (1,183 White, 2,183 African American, 266 American Indian).

Measures

Maternal spanking at ages 1, 3, and 5. Maternal spanking was assessed by posing the question "Sometimes children behave pretty well and sometimes they don't. In the past month, have you spanked (child) because (he or she) was misbehaving or acting up?" with mothers responding yes or no. A "yes" response was followed by asking mothers to report the frequency of spanking. From these responses, we created an ordinal predictor variable that reflected the frequency of spanking at age 1, 3, and 5 (0 = *never in the past month*, 1 = *only one, twice, or a few times in the past month*, 2 = *a few times a week or nearly every day in the past month*).

Child externalizing behavior at ages 3 and 5. Child externalizing behavior was measured during the In-Home portion of FFCWS, where mothers' responses from the Child Behavior Checklist (CBCL) were recorded (Achenbach & Rescorla, 2000). CBCL items were rated on a scale from 0 (*not true*) to 2 (*very true or often true*), which assessed externalizing behaviors such as being whiny, defiant, selfish, throwing temper tantrums, and hitting others. When children were 3 years old, the 15-item CBCL/2-3 was used (White: $\alpha = .85$, African American: $\alpha = .86$, American Indian: $\alpha = .83$). When children were 5 years old, the 20-item CBCL/4-18 was used (White: $\alpha = .85$, African American: $\alpha = .86$, American Indian: $\alpha = .87$).

Maternal sociodemographic characteristics. A number of maternal sociodemographic characteristics that could influence spanking and externalizing behavior were included in the model. Maternal age, measured in years at the time of the child's birth, was continuous. Mother-reported household income, which assessed the income of all individuals in the household over the past year, was continuous. Maternal marital status was dichotomously coded (0 = *no*, 1 = *yes*). Whether the mother was cohabitating with the child's biological father was also dichotomous (0 = *no*, 1 = *yes*). Maternal education was a categorical variable measuring educational attainment (0 = *less than high school*, 1 = *high school degree*, 2 = *some college*, and 3 = *college degree*). Maternal depression was measured when the child was 3 years old with the 8-item Composite International Diagnostic Interview-Short Form (Kessler, Andrews, Mroczek, Üstün, & Wittchen, 1998) which assessed the likelihood of the mother being diagnosed with major depressive disorder if they would have been assessed with the full Composite International Diagnostic Interview (0 = *unlikely*, 1 = *likely*).

Child characteristics. Three child characteristics were controlled for: sex, temperament, and attachment style. Child sex at birth was dichotomously coded (0 = *female*, 1 = *male*). Child temperament at age 1, which served as an early measure of child externalizing behavior, was measured using the externalizing items from the Emotionality, Activity, and Sociability (EAS) Temperament Survey for Children (Mathieson & Tambs, 1999). Mothers rated on a scale from 1 (*not at all like my child*) to 5 (*very much like my child*) the degree to which her child reacts strongly when upset, gets upset easily, and often fusses and cries (White: $\alpha = .61$, African American: $\alpha = .60$, American Indian: $\alpha = .65$). Child attachment at age 3 was measured with an FFCWS-adapted version of the Attachment Q-Sort (Waters & Deane, 1985), where mothers sorted 39 cards with descriptions of child behavior into piles from 1 (*applies mostly*) to 5 (*rarely or hardly ever*). Cases were dichotomized into two categories (0 = *insecure*, 1 = *secure*).

Data Analysis

Preliminary and descriptive analyses were conducted in Stata, version 15.1 (StataCorp, 2017). Longitudinal analyses were conducted in Mplus, version 8 (Muthén & Muthén, 1998/2017). Descriptive analyses were conducted to determine whether differences in our study variables existed based on American Indian, White, or African American group membership. Chi-square tests were used to detect differences in categorical variables, and analysis of variance (ANOVA) tests were used to detect differences in means. Welch test corrections were used when violations of equal variance were present (see Table 1). Next, we screened for missing data, violations of normality, and outliers. Missing data on our key independent variable, maternal spanking, ranged from 1% to 16%. Missing data were more substantial on our key dependent variable, child externalizing behavior, with approximately 31% and 43% missing at ages 3 and 5, respectively. Therefore, to avoid bias and use all available data, we used full-information maximum likelihood estimation (FIML), which has been documented as an appropriate way to handle missing data (Kline, 2016). No extreme normality violations that would merit transforming the raw data were found. No outliers were found on our key variables of interest. To account for participants being sampled from 20 U.S. cities, the Mplus “Type = Complex” option was used, which uses sandwich estimators to account for within-cluster correlation.

Multiple-group autoregressive cross-lagged models were specified to examine the longitudinal associations between spanking and externalizing behavior. Multiple-group analysis was ideal, as it allowed us to examine associations among our three racial groups of interest: American Indian, White, and African American. Furthermore, multiple-group analysis allowed us to test whether the associations between spanking and externalizing behavior were similar or different across racial groups (via structural invariance testing). Structural invariance across groups was examined by constraining the cross-lags from (a) spanking at age 1 predicting child externalizing behavior at age 3 and (b) spanking at age 3 predicting child externalizing behavior at age 5, to be equal. We compared this constrained model to an unconstrained model, where the cross-lags were allowed to be freely estimated. If model-fit indices suggest that the constrained model is preferable, then associations between spanking and child externalizing behavior are statistically indistinguishable across racial groups. If model-fit indices suggest that the unconstrained model is preferable, then the associations between spanking and child externalizing behavior are statistically different across racial groups. As our research question centered on how the effects of spanking among American Indian groups compared to White and African American

Table 1. Analysis of Differences in Study Variable Values by Racial Group.

	Total Sample (N = 3,632)	Racial Group			p
		White (n = 1,183)	African American (n = 2,183)	American Indian (n = 266)	
Maternal spanking, age 1, %					<.001
0 times in the past month	71.80	83.87	63.45	85.46	
1-3 times in the past month	21.44	12.83	27.37	11.89	
Few times or every day in the past month	6.76	3.30	9.17	2.64	
Maternal spanking, age 3, %					<.001
0 times in the past month	45.96	50.38	42.66	53.39	
1-3 times in the past month	42.21	40.46	43.24	41.63	
Few times or every day in the past month	11.83	9.16	14.10	4.98	
Maternal spanking, age 5, %					<.001
0 times in the past month	52.01	49.87	47.15	64.45	
1-3 times in the past month	42.56	30.94	46.99	32.70	
Few times or every day in the past month	5.43	5.16	5.87	2.84	
Child externalizing behavior, age 3	0.64	0.60	0.66	0.59	<.001
Child externalizing behavior, age 5	0.53	0.51	0.54	0.56	.040
Maternal marital status, %					<.001
Married	24.23	45.90	12.83	21.43	
Unmarried	75.77	54.10	87.17	78.57	
Maternal cohabitation with biological father, %					.002
Cohabiting	35.27	34.83	34.31	45.11	
Not cohabiting	64.73	65.17	65.69	54.89	
Maternal age	25.22	26.74	24.49	24.41	<.001
Maternal education, %					<.001
Less than high school	33.38	26.37	33.58	63.02	
High school	31.42	25.11	36.56	17.36	
Some college	23.98	24.68	24.50	16.60	
College graduate	11.22	23.84	5.37	3.02	
Maternal household income	3.59	5.60	2.62	2.43	<.001
Maternal depression, %					.033
Yes	14.22	12.25	15.54	12.22	
No	85.78	87.75	84.46	87.78	
Child sex, %					.774
Male	52.09	52.16	52.31	50.00	
Female	47.91	47.84	47.69	50.00	
Child temperament	1.83	1.65	1.92	1.92	<.001

Results are presented as means, unless otherwise specified. Child externalizing behavior ranged from 0 to 2. Maternal age ranged from 15 to 43. Child temperament ranged from 0 to 4. Chi-square tests were used for categorical variables. ANOVA was used for continuous variables. Welch test corrections were used to address violations of unequal variance assumption for maternal age, maternal household income, and child temperament.

groups (and we were not attempting to examine the comparison between White and African American groups), we analyzed two models: First, structural invariance was tested between the American Indian and White groups. Then, structural invariance was tested between the American Indian and African American groups.

Three model-fit indices were used to compare whether the unconstrained models fit significantly better than the constrained models, including comparative-fit index (CFI), root mean square error of approximation (RMSEA), and the chi-square difference test ($\chi^2\Delta$). CFI values of .95 and above, and RMSEA values of .08 or below, suggest good model fit. When Mplus uses the maximum likelihood with robust standard errors (MLR) estimator, the difference between nested models does not form a typical chi-square distribution. Therefore, the chi-square difference test was adjusted using the difference test scaling correction (CD) (Satorra & Bentler, 2010). A significant $\chi^2\Delta$ would suggest the unconstrained model has better fit, and that spanking predicts externalizing behavior differently for the two groups being compared (e.g., White and American Indian groups). A non-significant $\chi^2\Delta$, on the contrary, would indicate that structural invariance was plausible, meaning that spanking predicts externalizing behavior in a similar manner across the two groups being compared.

Results

Descriptive analyses revealed some differences between American Indian, White, and African American groups (see Table 1). Chi-square tests detected differences across the three groups in the frequency of spanking at ages 1, 3, and 5 ($p < .001$), maternal marital status ($p < .001$), maternal cohabitation status ($p = .002$), maternal education ($p < .001$), and maternal depression status ($p = .033$). To further elucidate differences in spanking frequency across groups, more chi-square analyses were tested with a Bonferroni correction to adjust for multiple testing. We found that there were no differences in the frequency of spanking between White and American Indian children at age 1 ($p = .80$), age 3 ($p = .12$), or age 5 ($p = .16$). However, compared to both the White and American Indian groups, the African American group exhibited greater frequencies in spanking at ages 1, 3, and 5 ($p < .001$). ANOVAs detected differences across the three groups in child externalizing behavior at age 3 ($p < .001$) and age 5 ($p = .040$), maternal age ($p < .001$), maternal household income ($p < .001$), and child temperament ($p < .001$). A Welch test was performed for the ANOVAs on maternal age, maternal household income, and child temperament to correct for the violation of equal variances assumption.

Structural Invariance Testing

When comparing White and American Indian groups, both the unconstrained and constrained models had good fit (unconstrained: CFI = .98, RMSEA = .03; constrained: CFI = .97, RMSEA = .03). The chi-square difference test was nonsignificant ($\chi^2\Delta = 2.99$, $CD = 0.72$, $\Delta P = 2$), meaning that structural invariance was plausible. In other words, the unconstrained model did not fit significantly better than the constrained model, suggesting that spanking at ages 1 and 3 was associated with child externalizing behavior at ages 3 and 5 in a similar manner across White and American Indian groups.

When comparing African American and American Indian groups, both the unconstrained and constrained models had good fit (unconstrained: CFI = .98, RMSEA = .02; constrained: CFI = .98, RMSEA = .02). The chi-square difference test was nonsignificant ($\chi^2\Delta = 4.68$, $CD = 0.37$, $\Delta P = 2$), meaning that structural invariance was plausible. In other words, the unconstrained model did not fit significantly better than the constrained model, suggesting that spanking at ages 1 and 3 was associated with child externalizing behavior at ages 3 and 5 in a similar manner across African American and American Indian groups.

Constrained Autoregressive Path Estimates

Standardized model estimates from the constrained multiple-group autoregressive cross-lagged models can be found in Figures 1 and 2. When comparing White and American Indian groups (see Figure 1), child temperament at age 1 predicted child externalizing behavior at age 3 (White: $\beta = .23$, $SE = .04$, $p < .001$; American Indian: $\beta = .25$, $SE = .04$, $p < .001$), and child externalizing behavior at age 3 predicted child externalizing behavior at age 5 (White: $\beta = .53$, $SE = .02$, $p < .001$; American Indian: $\beta = .49$, $SE = .05$, $p < .001$). Also for both groups, maternal spanking at age 1 predicted maternal spanking at age 3 (White: $\beta = .32$, $SE = .03$, $p < .001$; American Indian: $\beta = .32$, $SE = .02$, $p < .001$), and maternal spanking at age 3 predicted maternal spanking at age 5 (White: $\beta = .42$, $SE = .03$, $p < .001$; American Indian: $\beta = .43$, $SE = .05$, $p < .001$).

When comparing African American and American Indian groups (see Figure 2), child temperament at age 1 predicted child externalizing behavior at age 3 (African American: $\beta = .22$, $SE = .02$, $p < .001$; American Indian: $\beta = .24$, $SE = .03$, $p < .001$), and child externalizing behavior at age 3 predicted child externalizing behavior at age 5 (African American: $\beta = .46$, $SE = .02$, $p < .001$; American Indian: $\beta = .44$, $SE = .05$, $p < .001$). Also for both groups, maternal spanking at age 1 predicted maternal spanking at age 3

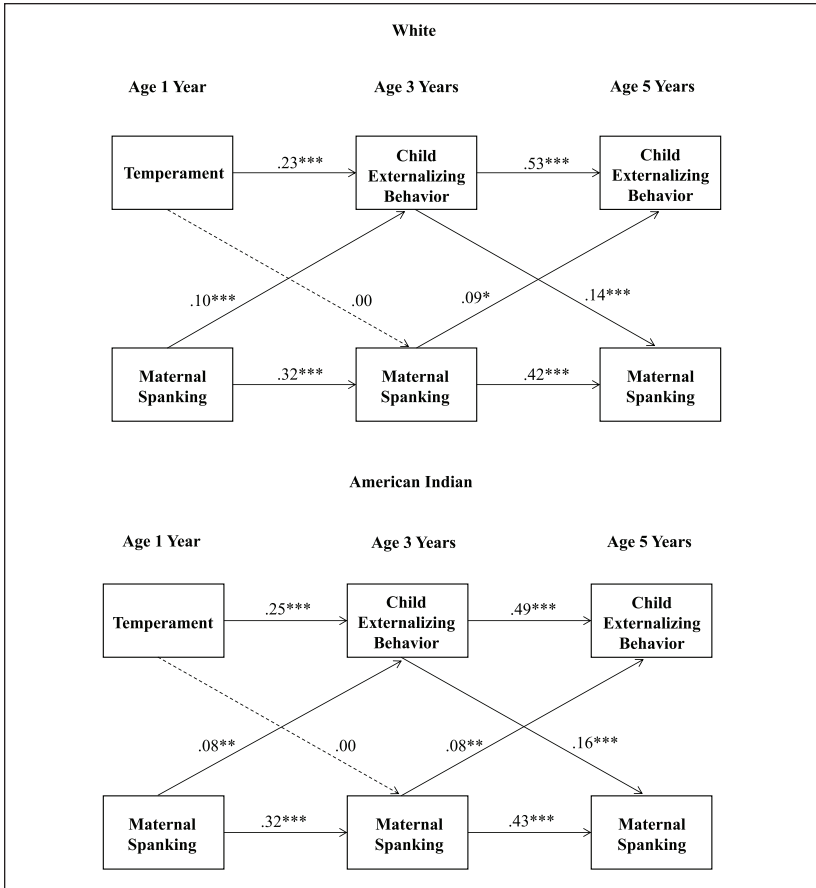


Figure 1. Multiple-group autoregressive cross-lagged models depicting the association between maternal spanking and child externalizing behavior across White and American Indian groups.

Coefficients are standardized. Models controlled for maternal age, household income, maternal marital and cohabitation status, maternal education, maternal depression, child sex, and child attachment style. Dotted lines indicate p -values $>.05$.

* $p < .05$. ** $p < .01$. *** $p < .001$.

(African American: $\beta = .35$, $SE = .02$, $p < .001$; American Indian: $\beta = .28$, $SE = .03$, $p < .001$), and maternal spanking at age 3 predicted maternal spanking at age 5 (African American: $\beta = .35$, $SE = .03$, $p < .001$; American Indian: $\beta = .35$, $SE = .05$, $p < .001$).

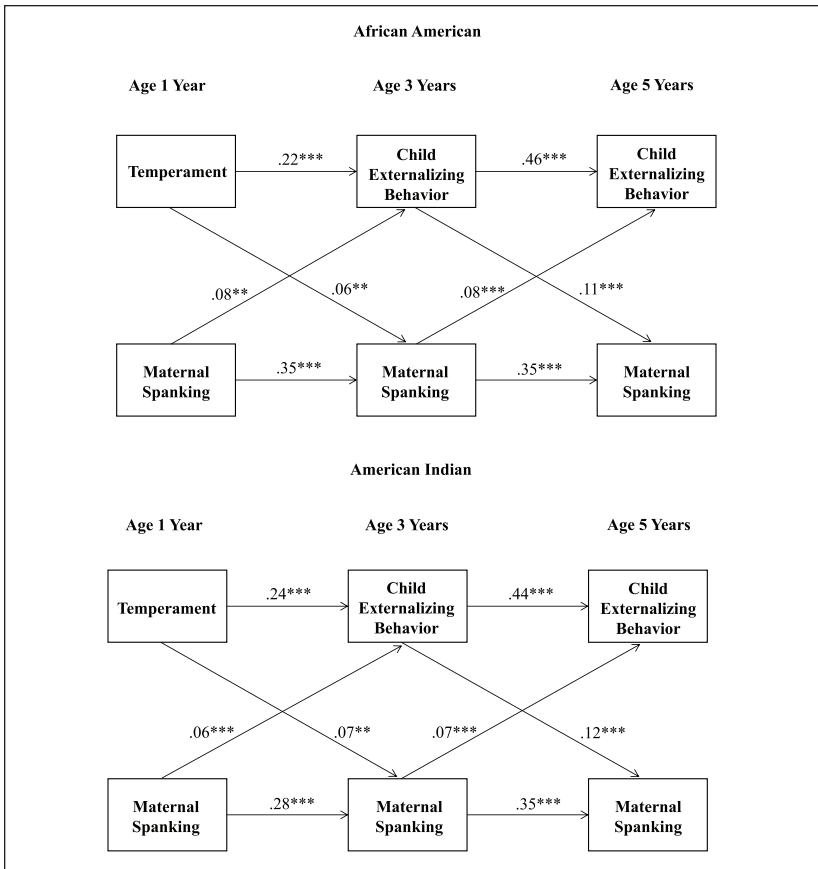


Figure 2. Multiple-group autoregressive cross-lagged models depicting the association between maternal spanking and child externalizing behavior across African American and American Indian groups. Coefficients are standardized. Models controlled for maternal age, household income, maternal marital and cohabitation status, maternal education, maternal depression, child sex, and child attachment style.
 * $p < .05$. ** $p < .01$. *** $p < .001$.

Constrained Cross-Lagged Path Estimates

Cross-lagged estimates comparing White and American Indian groups suggested that spanking significantly predicted externalizing behavior across both groups. Specifically, maternal spanking at age 1 predicted child externalizing

behavior at age 3 (White: $\beta = .10$, $SE = .03$, $p < .001$; American Indian: $\beta = .08$, $SE = .02$, $p < .01$), and maternal spanking at age 3 predicted child externalizing behavior at age 5 (White: $\beta = .09$, $SE = .04$, $p < .05$; American Indian: $\beta = .08$, $SE = .03$, $p < .01$). These results suggest the effects of spanking are similar across White and American Indian subsamples. For the White subsample, the final model accounted for 18.0% ($SE = .03$) and 40.0% ($SE = .03$) of the variance in child externalizing behavior at ages 3 and 5, respectively. For the American Indian subsample, the final model accounted for 15.3% ($SE = .02$) and 32.2% ($SE = .06$) of the variance in child externalizing behavior at ages 3 and 5, respectively.

Cross-lagged estimates comparing African American and American Indian groups suggested that spanking significantly predicted externalizing behavior across both groups. Specifically, maternal spanking at age 1 predicted child externalizing behavior at age 3 (African American: $\beta = .08$, $SE = .03$, $p < .01$; American Indian: $\beta = .06$, $SE = .02$, $p < .001$), and maternal spanking at age 3 predicted child externalizing behavior at age 5 (African American: $\beta = .08$, $SE = .02$, $p < .001$; American Indian: $\beta = .07$, $SE = .02$, $p < .001$). These results suggest the effects of spanking are similar across African American and American Indian subsamples. For the African American subsample, the final model accounted for 20.8% ($SE = .03$) and 32.0% ($SE = .02$) of the variance in child externalizing behavior at ages 3 and 5, respectively. For the American Indian subsample, the final model accounted for 18.1% ($SE = .03$) and 27.4% ($SE = .05$) of the variance in child externalizing behavior at ages 3 and 5, respectively.

Discussion

The adverse effects of spanking are well established in the literature, and are consistent across White and African American racial or ethnic groups in the United States (Gershoff & Grogan-Kaylor, 2016a, 2016b; Grogan-Kaylor et al., 2018). However, the American Indian population is largely absent from the spanking literature. To our knowledge, no study to date has examined whether the longitudinal associations between spanking and child outcomes among American Indian children are similar to the associations found among other racial or ethnic groups. Therefore, the purpose of this study was to determine whether the associations between maternal spanking and child externalizing behavior were similar across American Indian, White, and African American children.

First, using a large community-based sample of families, we found that the frequency of spanking did not differ across American Indian and White groups, suggesting that both groups were equally likely to employ spanking. In this sample, African American parents had significantly higher rates of

spanking than American Indian and White groups. This finding is consistent with prior studies (Berlin et al., 2009; Gershoff & Grogan-Kaylor, 2016a; Slade & Wissow, 2004). Notably, among the parents in this study, and U.S. parents overall, rates of spanking are high, with most young children experiencing spanking (Regalado et al., 2004).

Consistent with our hypothesis and with prior research (Gershoff & Grogan-Kaylor, 2016b; Grogan-Kaylor et al., 2018), maternal spanking was associated with increases in child externalizing behavior across the first 5 years of life among White and American Indian children, as well as African American and American Indian children. In other words, in each group comparison, maternal spanking at age 1 significantly predicted child externalizing behavior at age 3, and spanking at age 3 significantly predicted child externalizing behavior at age 5. In sum, the longitudinal associations of spanking to heightened levels of child behavior problems are similar across these three racial and ethnic groups in the United States.

In addition, among all racial groups in this study, maternal spanking at age 1 predicted an increase in child externalizing behavior at age 3; and externalizing behavior at age 3 predicted an increase in maternal spanking at age 5. This unveils the bidirectional relationships of spanking and externalizing behavior, and the possible coercive cycles that families may exhibit when maternal spanking occurs.

These results stand in contrast to conditional corporal punishment arguments by showing that race and ethnicity does not appear to buffer children from the negative outcomes related to maternal spanking in early childhood. This finding is consistent with a recent meta-analysis showing that White and African American children did not differ in the associations linking spanking to negative child behavioral outcomes (Gershoff & Grogan-Kaylor, 2016a). This finding is consistent with other studies that have countered the conditional corporal punishment argument, for example, research showing that the effects of spanking are consistent across neighborhoods, countries, and parent-child attachment styles (Grogan-Kaylor, 2005; Lansford et al., 2005; Lansford, Deater-Deckard, Bornstein, Putnick, & Bradley, 2014; Ward, Lee, Pace, Grogan-Kaylor, & Ma, 2019). This finding suggests that for American Indian children, as well as White and African American children, maternal spanking appears to be associated with adverse outcomes in such a way that spanking could be considered to be an adverse child experience (Afifi et al., 2017; Merrick et al., 2017).

These results can be interpreted in light of the recent American Academy of Pediatrics statement that practitioners and community mental health workers should not assume (based on American Indian values of unobtrusiveness, for example) that mothers of American Indian children will spank their children less than parents of White children (Sege & Siegel, 2018). Thus, parents

of American Indian and White children should be equally advised to avoid the use of spanking. However, when educating American Indian parents about non-violent discipline techniques, practitioners should consider the historical background connected to American Indian spanking. As physical punishment among American Indians likely stems at least partly from cultural oppression associated with boarding schools and large-scale separation (Bonnell, 1997), practitioners should be sensitive when introducing alternative parenting techniques.

Limitations

Our findings should be interpreted within the context of the study's limitations. The FFCWS oversampled children with unmarried mothers from population-dense cities, where children were more likely to come from low-income and single-parent families. Thus, study findings are not generalizable to the entire U.S. population. In addition, as our American Indian sample was relatively small, the analyses involving the American Indian sample may have been underpowered. These analyses also did not take into account other important factors associated with the American Indian population, such as tribal membership and acculturation, meaning that findings may not generalize to other American Indian samples in the United States. Furthermore, our key independent and dependent variables—spanking and externalizing behavior—were measured through maternal report, which may have been subject to social desirability bias or underreporting. Indeed, it is possible that mothers who spank perceive their children as engaging in more externalizing behavior. Ideally, child externalizing behavior would have been measured by a third-party observer or via medical records.

Along a similar vein, maternal spanking was measured via maternal report. It is possible that mothers underreported their use of spanking or incorrectly recalled the number of times they spanked their child. In addition, although our model controlled for a number of maternal and child variables in our analyses, there may be other omitted variables that could influence maternal spanking and externalizing behavior, such as mothers' childhood experiences of spanking. Therefore, causal inferences should not be made from this study. Furthermore, in our sample, some children classified as American Indian had one American Indian parent and some had two. It will be important for future studies to measure family structure and acculturation in American Indian families to determine whether these factors influence the prevalence or effects of physical punishment.

Finally, we note that fathers were not included in our study. This is primarily because mothers spank and use physical punishment more often than do fathers (Kim, Lee, Taylor, & Guterman, 2014). Furthermore, research has failed to

show cross-lagged associations between fathers' spanking and child aggressive behavior (Lee, Altschul, & Gershoff, 2015), suggesting that the processes linking spanking to child well-being differ for mothers and fathers.

Implications and Future Directions

Our findings have direct implications for community mental health workers and practitioners working with the American Indian population. As our findings suggest that spanking is associated with externalizing behavior among American Indian children, mental health professionals working with American Indian families can recommend that parents avoid the use of spanking and, instead, turn toward culturally appropriate nonviolent parenting techniques. These recommendations could be implemented into existent, culturally attuned programs that serve the American Indian population such as the Head Start program (Office of Planning, Research, & Evaluation [OPRE], 2018) and the Tribal Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program (Early Childhood Development, 2018). When making these recommendations, clinicians would do well to acknowledge the historical trauma and oppression associated with the use of physical punishment among American Indians.

Along a similar vein, the prevalence and deleterious effects of spanking among American Indians suggests the need for more culturally attuned parenting interventions. Dionne, Davis, Sheeber, and Madrigal (2009) developed such an intervention, which links evidence-based parenting skills with American Indian values while also addressing the historical context of American Indian parenting that contributes to current parenting difficulties. This intervention may be useful in providing American Indian parents access to alternative, nonviolent discipline strategies and reduce physical punishment rates. Similarly, the Navajo Nation uses a program called "Parents as Tender Healers" that offers healing ceremonies and tribal-specific practices to help parents and children connect to the positive traditions of their culture (Gonzalez-Santin, Perry, & Limb, 2012). These and similar programs offer parents alternatives to physical punishment that both foster family relationships and enhance cultural strengths.

Our findings also contribute to an emerging global corporal punishment conversation surrounding the implementation of laws and policies to ban corporal punishment. Globally, 54 countries have banned the use of corporal punishment (Global Initiative to End All Corporal Punishment of Children, 2018). In addition, the United Nations Study of Violence on Children and the UNICEF report, *Hidden in Plain Sight* (Pinheiro, 2006; UNICEF, 2014)

conceptualize corporal punishment as a form of family violence. Our study provides preliminary evidence that policies restricting the use of corporal punishment may be beneficial for the American Indian population.

Finally, our findings elucidate the need for additional research that examines the effects of parental discipline techniques on American Indian children. Future research could examine whether similar deleterious effects of physical punishment are found within different tribal communities and whether specific parenting interventions could reduce the prevalence of physical punishment. While our analysis combined a heterogeneous group of American Indians into one category, we acknowledge that there is great diversity both between and within tribal cultures. Future research could also examine whether physical punishment among American Indian children is associated with other adverse outcomes, such as internalizing behavior or decreased prosocial behavior. Such research on parental discipline strategies among the American Indian population could increase the likelihood of policies and resources being dedicated to addressing the needs of American Indian families. Given the lack of research on American Indians, it is very likely that child maltreatment and parental use of physical punishment includes not only the expression of cultural norms and values but also intersects with a whole range of sociodemographic characteristics that tend to be correlated with identity. It is recommended that, as the research body grows with this population, these intersections be further expanded and explored.

Conclusion

Study findings highlight that maternal spanking is associated with child externalizing behavior across American Indian, White, and African American groups. Across all groups, spanking at age 1 predicted child externalizing behavior at age 3, and spanking at age 3 predicted child externalizing behavior at age 5. This study underscores the need for more American Indian samples to be included in the spanking literature, as American Indian children who are spanked may be at risk for later maladjustment. Findings also suggest a need for culturally adaptive programs that prevent spanking and promote nonviolent parenting techniques among the American Indian population.

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Supplemental Material

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