



# HHS Public Access

Author manuscript

*J Interpers Violence*. Author manuscript; available in PMC 2018 April 01.

Published in final edited form as:

*J Interpers Violence*. ; : 886260516674197. doi:10.1177/0886260516674197.

## Individual and county-level religious participation, corporal punishment, and physical abuse of children: An exploratory study

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### Abstract

**Background**—Parental religiosity has been associated with corporal punishment. However, most of this research has focused exclusively on Christians and has not examined physical abuse. Additionally, little is known about how the larger religious environment might be associated with discipline behaviors. In this exploratory study, we examine how individual and county-level religious attendance are related to corporal punishment and physical abuse.

**Method**—We sampled and surveyed 3,023 parents of children aged 12 and younger from 50 mid-sized California cities. We used weighted Poisson models to calculate the frequency of corporal punishment and physical abuse in the past year.

**Results**—Parents who attend religious groups used corporal punishment more frequently than parents who did not attend religious groups. However, those who lived in counties with greater rates of religious participation used corporal punishment less frequently than those living in counties with lower rates of religious participation. There were no effects for religious participation on physical abuse at the individual or county level.

**Discussion**—This exploratory study suggests that parents who attend religious groups may be more likely to use some types of physical discipline with children. Religious groups could be imparting parenting norms supporting corporal punishment at the individual level. More research examining specific doctrines and faiths is needed to validate the study findings.

### Keywords

religious attendance; multi-level modeling; corporal punishment; physical abuse

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Corporal punishment remains common in the U.S.; approximately 50% of children have been spanked by 20 months of age (MacKenzie, Nicklas, Brooks-Gunn, & Waldfogel, 2011). While corporal punishment is legal in most states, it is associated with physical abuse (i.e. intentional physical harm of children that meets the standard of child abuse) (Gershoff, 2002) and involvement in the child welfare system (Lee, Grogan-Kaylor, & Berger, 2014).

Spanking is also associated with children demonstrating aggressive behavior, poorer mental health, behavioral problems, and lower mental development scores (Berlin et al., 2009; Gershoff, 2002; Taylor, Manganello, Lee, & Rice, 2010) and demonstrates effect sizes for risk of detrimental child outcomes that are similar to child physical abuse (Gershoff & Grogan-Kaylor, 2016).

Religion has been identified as one potential risk factor for corporal punishment, but findings across studies demonstrate mixed results. Several studies have identified conservative Christian Protestants as being more likely to use corporal punishment than parents from other religious groups (Frechette & Romano, 2015; Gershoff, Miller, & Holden, 1999). Upon further exploration, other studies observed that Conservative Protestants might use corporal punishment more than other religious groups because of (a) beliefs among some that the bible should be taken literally (Ellison & Bradshaw, 2009) or (b) adherence to beliefs emphasizing child obedience (Mahoney, Pargament, Tarakeshwar, & Swank, 2001). This might also be true for physical abuse, as Christian parents who viewed the bible literally demonstrated higher child abuse potential (Rodriguez & Henderson, 2010). However, a recent study comparing foreign and U.S. born Hispanics found no association between religiosity and spanking (Lee & Altschul, 2015). Similarly, mothers with greater religiosity (but not necessarily Conservative Protestants) have shown lower child abuse potential (Carothers, Borkowski, Lefever, & Whitman, 2005; Rodriguez & Henderson, 2010).

Many of these studies have focused on self-identified religion or religious beliefs, however, and not religious participation or attendance. Parents who attend religious groups may be exposed to behavioral norms or advice about parenting which could influence their discipline strategies. For example, more frequent religious attendance is associated with less frequent corporal punishment (Petts, 2012). However, 21% of parents seek advice about child discipline from religious leaders, and those who seek advice from religious leaders (vs. pediatricians) have higher odds of corporal punishment (Taylor et al., 2010).

The social ecological model argues that child maltreatment occurs as a result of factors at multiple levels, including individuals, social relationships, communities and society (Bronfenbrenner, 1979). From this perspective, the larger community religious environment might have an independent association with corporal punishment or physical abuse. One recent ecological study found that counties with greater religious conservatism had lower rates of child abuse (Breyer & MacPhee, 2015). However, it is unknown whether community-level religious measures uniquely contribute to physical discipline when controlling for individual behaviors. This preliminary study investigates the following: is parental or county-level religious participation associated with frequency of corporal punishment or physical abuse in a general population study of California parents?

## Method

### Cities & Participants

We conducted a general population telephone survey with parents/legal guardians of children ages 12 or younger, who were residing within 50 mid-sized cities (i.e., 50,000 to

500,000 population) in California between March and October 2009. The data were collected as part of a larger study on social ecological mechanisms, alcohol use, and parenting behaviors ((Freisthler & Gruenewald, 2013). Respondents were sampled from geographic based lists obtained from entities such as credit card companies and included 3,023 parents or legal guardians with approximately 60 respondents per city (range of 47 to 74). We used post-stratification adjustments based on gender, race/ethnicity, and household type to reflect city-specific population attributes identified in the sampling frame (Brick & Kalton, 1996). The response rate for the survey was 47.4%. Respondents received \$25 for participating in the 30 minute interview. The majority of the survey was conducted with a live interviewer using computer-assisted telephone interviewing (CATI) then respondents were transferred to a computerized system using interactive voice response (IVR) technology, which allows data to be obtained anonymously and potentially reduces bias in self-reports of parenting behaviors (Kepple, Freisthler, & Johnson-Motoyama, 2014). All study procedures were approved by the Institutional Review Board of [INSTITUTION BLINDED FOR REVIEW]. Weighted descriptive statistics for the sample are presented in Table 1.

## Assessments and Measures

### Individual-level measures

**Corporal punishment and physical abuse:** The frequency of corporal punishment and physical abuse in the past 12 months were measured with the Parent-Child Conflict Tactics Scale (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998). Parents were asked about four corporal punishment behaviors such as “In the past year, how often have you spanked your child on the bottom with your bare hand” and four or five (depending on age of child) behaviors potentially signifying physical abuse, such as “In the past year, how often have you hit your child with a fist or kicked him/her?” The response options ranged from none to more than 10 times in the past year. Following recommendations by Staus et al. (1998), we summed the midpoint of each category to create a yearly frequency.

**Religious participation:** Participants were asked whether they attended religious group meetings, with response options including yes or no (i.e. “Please tell me if you attend their meetings from time to time: church related groups?”). *Control variables.* We controlled for demographic characteristics such as parental age, gender, income level, marital status, number of children, and race or ethnicity. In addition, we measured drinking status using a graduated frequency approach, and dichotomized respondents into those who had used alcohol in the past year (drinkers) versus those who had not had a drink in the past year (abstainers). We assessed parental impulsivity with 7 items from the Dysfunctional Impulsivity Scale (Dickman, 1990), which examines whether parents are apt to act quickly without thinking in potentially problematic ways (e.g. “I often make up my mind without taking the time to consider the situation from all angles”). Items were reverse coded when necessary and summed to create a scale. Depressive and anxiety symptoms were measured with items from the Primary Care Evaluation of Mental Disorders (PRIME-MD) tool (Spitzer, Kroenke, & Williams, 1999), which includes two items about depressive symptoms (e.g. “In the past month, have you been bothered a lot by little interest or pleasure in doing things”) and three items for anxiety symptoms (e.g. “In the past month, have you been

bothered a lot by worrying about a lot of different things?”). Overall social support was evaluated via the Interpersonal Support Evaluation List (Cohen, Mermelstein, Kamarck, & Hoberman, 1985), which includes twelve items assessing a parent’s perceived emotional, tangible, and companionship support (e.g. “If I were sick I could easily find someone to help me with my daily chores”). To ward against the possibility that those who attend religious groups may be more social and active than people who do not, we also controlled for attendance at neighborhood or social groups (e.g. “Please tell me if you attend their meetings from time to time: block clubs, neighborhood or tenants groups, or community organizations?”). Finally, we controlled for characteristics of the focal child, including age and gender.

### County level measures

**Religious participation:** The rate of religious adherents (those who participate in or belong to a faith community including Christian, Jewish, Muslim, and other faiths) per 1,000 residents in California counties was extracted from the U.S. Religion Census Religious Congregations and Membership Study, conducted in 2010 (publically available from <http://www.thearda.com/>).

**Voter registration:** Due to evidence that sociopolitical conservatism might be associated with religious participation at the community-level (Breyer & MacPhee, 2015), as well as individual-level research suggesting a relationship with corporal punishment (Ellison & Bradshaw, 2009), we controlled for the percentage of registered Republicans in each county, using 2009 data obtained from the California Secretary of State (publically available from <http://www.sos.ca.gov/elections/report-registration/ror-021009/>).

### Data analysis

We examined the frequency of corporal punishment and physical abuse using weighted Poisson hierarchical multi-level models in HLM 7.0 (Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2011). As we could not obtain city-specific data on religious participation, respondents (level 1;  $n=3,023$ ) were nested in counties (level 2;  $n=26$ ). All Poisson coefficients were exponentiated to obtain Incidence Rate Ratios (IRR; Hilbe, 2011).

### Results

The results for the conditional models examining corporal punishment and physical abuse are presented in Table 2. Individual religious group participation was positively associated with frequency of corporal punishment ( $IRR=1.079$ , 95%  $CI[1.018, 1.444]$ ). In addition, county-level rate of religious participation was negatively associated with corporal punishment ( $IRR=0.997$ , 95%  $CI[0.996, 0.999]$ ). Neither individual religious group attendance nor county-level religious participation was associated with frequency of physical abuse.

### Discussion

Our findings suggest that attending religious groups is associated with using corporal punishment more frequently. Although our study did not examine a particular faith or

denomination, the findings seem in line with the literature linking conservative Protestantism to corporal punishment (Frechette & Romano, 2015; Gershoff et al., 1999). However, our finding is contrary to other research suggesting that mothers who attend religious services more frequently use corporal punishment less frequently (Petts, 2012). This effect is significant even when controlling for participation in neighborhood or social groups, suggesting that participation in religious groups is uniquely associated with frequency of corporal punishment. Parents who attend religious groups may be exposed to parenting norms supporting corporal punishment for disciplining children. However, given that there was no significant relationship between religious group attendance and physical abuse, these norms may not be supportive of actual abusive behaviors. In addition, as our measure of religious participation cannot separately assess individual religious faiths or denominations, these findings remain exploratory. Further research should assess whether this phenomenon differs amongst faith practices, or is an independent effect from self-identified denomination, as some research suggests (Petts, 2012). It is also important to note that the relationship between corporal punishment and child behavior problems may be moderated by social and cultural contexts not measured by the current study (Deater-Deckard & Dodge, 1997; Ellison, Musick, & Holden, 2011; Petts & Kysar-Moon, 2012).

Our county-level findings suggest the larger religious environment could influence parenting behaviors independently of individual religious participation: living in counties with greater rates of religious participation was associated with less frequent use of corporal punishment. Given the exploratory nature of this study, we can only speculate about the mechanisms at play in this ecological effect. It could be that greater religious participation in a county could encourage trust between community members and positive social norms that promote non-physical discipline of children. It is also unknown why these community level findings are opposite of the individual level findings for religious participation. These results may arise from the current study omitting other level 2 factors that may better explain city or county-level variation in corporal punishment or physical abuse, such as concentrated disadvantage, child care burden, or alcohol outlet density (Coulton, Korbin, & Su, 1999; Freisthler & Gruenewald, 2013). Given the limitations of our measures, future research should continue to examine multi-level religious participation in association with parenting behaviors.

### Limitations

Our study drew from a rigorously sampled dataset that has been weighted by race, ethnicity, and gender (amongst other factors) to represent Californians living in mid-sized cities. These data include any self-identified faith participation at the individual and county level, as our religious participation measures are not specific to one religion or religious denomination. However, while the data are inclusive, they do not allow opportunity for more nuanced investigation of sub-groups, religious traditions, and parenting norms, which should be continued in further research. Additionally, we were not able to obtain city-level data for religious participation, which is measured at the county-level. However, due to low clustering of cities within counties ( $m=1.92$ ), our exploratory findings should be relatively unbiased (Clarke, 2008). Counties are relatively large geospatial units and may not best represent the regular ecological exposures of individual parents. Finally, our measures are crude in that they are not able to assess the frequency of participation in religious groups. It

could be that there are significant differences in parenting behaviors between parents who attend religious groups often and those that attend rarely. While limited, these exploratory findings suggest that religious group participation at the individual and county-level may be related to corporal punishment. More precise future research should focus on the potential multi-level effects of religious attendance on parenting in order to better understand risk.

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**Table 1**

Descriptive characteristics of the overall sample (n=3,023)

Variable Name	N	Unweighted % or M (SD)	Weighted % or M (SD)
<i>Focal Child</i>			
Male	1565	51.8	50.4
Female	1454	48.1	49.6
Age	3023	6.7(3.6)	6.9(3.6)
<i>Caregiver</i>			
Male	1050	34.7	48.2
Female	1973	65.3	51.8
Age	3023	39.2(7.8)	39.4(8.4)
White	1753	58.0	49.4
Asian	236	7.8	10.2
Black	111	3.7	4.8
Hispanic	733	24.2	30.6
Multi-Racial	92	3.0	2.5
Other	84	2.8	2.5
Married/ Cohabiting	2673	88.4	76.5
Single	350	11.6	25.7
<i>Income</i>			
\$20,000	258	8.9	10.9
\$20,001 – \$40,000	358	12.3	15.0
\$40,001 – \$60,000	373	12.8	14.2
\$60,001 – \$80,000	450	15.5	14.3
\$80,001 – \$100,000	412	14.2	12.9
\$100,001 – \$150,000	648	22.3	19.4
\$150,001 +	409	14.1	13.3
Impulsivity	2975	0.7 (1.3)	0.8(1.3)
Depression	2984	0.2(.3)	0.2(0.4)
Anxiety	3006	.5(.5)	0.5(0.5)
Social Support	2947	43.5(5.0)	43.4(5.17)
Neighborhood Group Attendance	3022	29.3	29
Social Group Attendance	3022	44.5	42.6
Religious Group Attendance	3022	50.6	50.1
<i>Outcome Variables</i>			
Corporal Punishment	2782	3.1(6.5)	3.1(6.9)
Physical Abuse	2770	0.3(1.9)	0.3(2.1)
<i>County-Level</i>			
Percentage of Registered Republicans	26	32.7(9.3)	
Rate of Religious Participation	26	433.7(66.9)	

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**Table 2**

Incidence rate ratios from multi-level Poisson Regressions for the independent effects of individual and county-level religious participation on corporal punishment and physical abuse

Variable Name (reference group)	Corporal Punishment		Physical Abuse	
	IRR	95% CI	IRR	95% CI
Intercept	<b>23.246</b>	(10.619,50.887)	4.654	(0.304,71.243)
<b>Level 1: Parent Level</b>				
<i>Control Variables</i>				
Male Focal Child (Female)	<b>1.202</b>	(1.127,1.273)	<b>1.405</b>	(1.175,1.682)
Age, Focal Child	<b>0.994</b>	(0.994,0.996)	<b>0.995</b>	(0.992, 0.999)
Men (Women)	<b>1.268</b>	(1.193,1.350)	1.138	(0.939,1.380)
Parental Age	<b>0.963</b>	(0.9595,0.968)	1.003	(0.991,1.016)
Number of children	1.022	(0.992,1.053)	<b>1.138</b>	(1.042,1.243)
Married/Cohabiting (Single)	<b>1.145</b>	(1.034,1.269)	<b>0.752</b>	(0.566,0.930)
Race/Ethnicity (White)				
Asian American	<b>1.451</b>	(1.282,1.644)	<b>1.757</b>	(1.262,2.447)
African American	<b>2.001</b>	(1.779,2.252)	<b>2.479</b>	(1.814,3.388)
Hispanic	<b>0.862</b>	(0.797,0.934)	0.973	(0.771,1.229)
Multi-racial	<b>1.165</b>	(1.020,1.332)	<b>0.422</b>	(0.232,0.769)
Other race	<b>2.127</b>	(1.870,2.421)	1.307	(0.773,2.213)
Income	1.014	(0.995,1.034)	<b>0.901</b>	(0.850,0.956)
Impulsivity	<b>1.077</b>	(1.057,1.098)	<b>1.204</b>	(1.148,1.265)
Depression	0.930	(0.852,1.016)	<b>1.318</b>	(1.005,1.730)
Anxiety	<b>1.235</b>	(1.161,1.314)	<b>0.705</b>	(0.577,0.863)
Alcohol Use (Current Drinker)				
Abstainer	<b>0.697</b>	(0.610,0.797)	<b>0.382</b>	(0.242,0.607)
Social Support	<b>0.986</b>	(0.980,0.992)	<b>0.976</b>	(0.958,0.995)
Neighborhood Group Attendance	<b>0.882</b>	(0.823,0.946)	0.858	(0.699,1.056)
Social Group Attendance	0.988	(0.995,1.034)	1.063	(0.877,1.289)
Religious Group Attendance	<b>1.079</b>	(1.018,1.144)	0.833	(0.692,1.003)
<b>Level 2: City/County Level</b>				
Percentage of Republicans	<b>1.013</b>	(1.002,1.025)	0.971	(0.931,1.014)
Rate of Religious Participation	<b>0.997</b>	(0.996,0.999)	0.997	(0.992,1.003)

Note: Bolded IRRs are statistically significant at the  $p < .05$  level