

Parents' Primary Professional Sources of Parenting Advice Moderate Predictors of Parental Attitudes toward Corporal Punishment

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Abstract Despite the risk it poses to children's mental and physical health, approval and use of corporal punishment (CP) remains high in the United States. Informed by the Theory of Planned Behavior, we examined potential predictors of attitudes supportive of CP while assessing the moderating effects of parents' ($N = 500$) chosen primary professional source of advice regarding child discipline: pediatricians (47.8 %), religious leaders (20.8 %), mental health professionals (MHPs) ($n = 18.4$ %), or other identified professionals (13.0 %). We conducted a random-digital telephone survey among parents ages 18 and over within New Orleans, LA. The main outcome measure was derived from the Attitudes Toward Spanking scale (ATS). The main "predictors" were: perceived injunctive norms (i.e., perceived approval of CP by professionals; and by family and friends), perceived descriptive norms of family and friends regarding CP, and expected outcomes of CP use. We used multivariate OLS models to regress ATS scores on the predictor variables for each subset of parents based on their chosen professional source of advice. Perceived approval of CP by professionals was the strongest predictor of parental attitudes supportive of CP, except for those seeking advice from MHPs. Perceived injunctive and descriptive norms of family and friends were important, but only for those seeking advice from pediatricians or religious leaders. Positive expected outcomes of CP mattered, but

only for those seeking advice from religious leaders or MHPs. In conclusion, the strength and relevance of variables predicting attitudes toward CP varied according to the professional from which the parent was most likely to seek advice.

Keywords Corporal punishment · Professionals · Advice · Attitudes · Social norms

Introduction

Corporal punishment (CP) remains an integral part of child discipline in the United States despite being linked to a multitude of negative social, emotional, behavioral, neuro-physiological, and physical consequences for children (Durrant and Ensom 2012; Gershoff 2002; Gershoff and Grogan-Kaylor 2016). Of particular concern, CP raises children's risk for child physical maltreatment (Gershoff and Grogan-Kaylor 2016; Zolotor et al. 2008), mental health disorders (Afifi et al. 2012; Rodriguez and Henderson 2010), and aggressive behavior (Berlin et al. 2009; Gershoff and Grogan-Kaylor 2016; Mackenzie et al. 2015; Taylor, Manganello et al. 2010). The unintentional escalation of CP accounts for the majority of substantiated cases of child physical abuse (Trocmé and Durrant 2003). Even so, studies of nationally representative surveys in the U.S. have found that approximately 65 % of 3-year-old children were spanked by one or both parents at least once in the previous month (Taylor, Lee et al. 2010), and 94 % of parents of 4- to 5-year-olds have used at least one type of CP in the past year (Straus and Stewart 1999). A majority of US adults (76 % of men; 65 % of women) believe it is

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sometimes necessary to discipline a child with a “good hard spanking” (Child Trends Databank 2015). This majority approval holds across race and ethnic groups for men (80 % of Blacks; 76 % of Whites; 73 % of Hispanics) and for women (81 % of Blacks; 62 % of Whites; 62 % of Hispanics). It holds across regions in the U.S. as well, with approval highest in the South (near 80 %) and lowest in the West and Northeast (near 65 %)(Enten 2014).

Several non-modifiable factors are predictive of positive attitudes toward and increased use of CP. Some of the major ones include living in the South (Giles-Sims et al. 1995; Straus and Stewart 1999), religious beliefs (Ellison and Bradshaw 2009), lower socioeconomic status (Giles-Sims et al. 1995; Jackson et al. 1999; Straus and Stewart 1999), lower education level (Ateah and Durrant 2005), race (Straus and Stewart 1999), and greater exposure to CP during childhood (Chung et al. 2009; Gagne et al. 2007; Xu et al. 2000). In a global study of university students, variation in approval of CP also was found by region with greater approval held by men, younger students, those from less affluent backgrounds, and those with more exposure to CP in childhood (Douglas 2006). Taylor, Hamvas and Rice et al. (2011) found the following groups to hold more favorable attitudes toward CP than their counterparts: Blacks (vs. Whites), non-college graduates (vs. college graduates), households without enough money to meet needs (vs. those with enough), non-Catholic Christians (vs. Catholics or other religions), those who attended religious services more than once per week (vs. once per week or less), those who considered religion to be “very important” (vs. less than very important) in their daily life, and those who experienced CP often as a child (vs. sometimes or never). Individuals subjected to CP as children are more likely to consider it a normal practice, endorse its use (Deater-Deckard et al. 2003), and use aggression in solving conflicts (Simons and Wurtele 2010). Douglas and Straus (2006) found higher rates of dating violence and injury in university settings where rates of experiencing CP as a child also were higher. Hence, in addition to the poor outcomes for children cited above, use of CP with children promotes an intergenerational cycle of violence. Thus, it is necessary to better understand the modifiable factors that shape both approval and use of CP.

The Theory of Planned Behavior anticipates that behavioral beliefs, or expected outcomes of a behavior, will predict behavioral attitudes as well as behaviors (Ajzen 1988). Taylor, Hamvas and Rice et al. (2011) found that expecting positive outcomes from using CP, such as respect for parents and better child self-control, were linked with more positive attitudes toward CP; in contrast, expecting negative outcomes from using CP, such as physical injury or increased aggression in the child, was linked with more negative attitudes toward CP. Others also have found

expected outcomes of CP use to be strong predictors of parents’ attitudes toward and use of CP (Gagne et al. 2007; Holden et al. 1999). Importantly, several studies have shown that educating parents about expected outcomes of using CP can impact their attitudes. Presenting people with research findings that describe the problems with using CP can lead to less approval of CP (Holden et al. 2014). In a Canadian study, support for the repeal of Section 43, the law that defends parents’ rights to use CP, increased once the impact of such a repeal was described (e.g., less child abuse) (Romano et al. 2013). Others have found they can reduce approval for CP by not only educating about its harms but also teaching alternative behaviors (Chavis et al. 2013; Reich et al. 2012).

The Theory of Planned Behavior also predicts that attitudes and behaviors will be influenced by normative beliefs, and this has been born out in multiple studies. Douglas (2006) found a link between regional descriptive norms and CP attitudes: being a part of a university group with greater exposure to CP was linked with increased CP approval. In a large study of low and middle-income countries, Lansford et al. (2014) found that approval of one type of violence can carry over to other types: mothers who held beliefs that spousal intimate partner violence could be justified had an increased likelihood of believing that CP was necessary in child-rearing. Taylor, Hamvas and Paris (2011) found both *perceived descriptive norms* (beliefs about the prevalence or commonality of a particular behavior among a relevant social group) and *perceived injunctive norms* (beliefs about others’ approval of a particular behavior) to be strong predictors of attitudes toward CP; they also found these perceived norms to be correlated with expected outcomes of CP use. In particular, they found perceived descriptive norms of CP use amongst peers and also perceived approval of CP by close friends and family as well as by professionals to all be significantly associated with parents’ approval of CP. The latter is a particularly unique finding worth additional exploration.

Professionals play an important role in educating and advising parents, including about child discipline. When parents are unable to manage their children (Golden 2007; Telleen 1990) but believe that their child’s poor behavior can be changed (Rooke et al. 2004), they often consult with professionals for advice. Parents’ use of CP can be predicted by the recommendations they receive from professionals and the personal importance they assign to that professional’s guidance (Walsh 2002). Taylor et al. (2013) identified three major groups of professionals as being parents’ primary sources of professional advice regarding child discipline: pediatricians (48 %), religious leaders (21 %), and mental health professionals (18 %). Pediatricians were the most sought after group for such advice for Whites (56 %) as well as Blacks (42 %). However, Blacks (30 %)

were much more likely than Whites (8 %) to seek guidance from religious leaders. There were no racial differences for those selecting mental health professionals. Fortson et al. (2013) also identified medical professionals as the group considered most reliable for parenting information (45 %) followed by religious leaders (22 %). Parents who seek advice about child discipline from pediatricians are less likely to use CP than those who seek advice from religious leaders (Taylor et al. 2013).

Although an abundance of scientific studies have found that CP raises risk of harm for children, there is still widespread support for this practice among adults in the U.S. Such approval has been significantly and strongly associated with some key modifiable factors, including positive expected outcomes and perceived injunctive and descriptive norms regarding CP use. A particularly unique finding is that perceived approval of CP use by professionals' that parents seek child discipline advice from—most typically pediatricians, religious leaders, and mental health professionals—is strongly associated with parents' approval of CP. Further, likelihood of CP use varies by the particular professional from which they are most likely to seek advice, with CP use being greatest among those that seek advice from religious leaders. However, it remains unclear whether or not the type of professional from which advice is sought moderates the association between key modifiable risk factors and approval of CP. The current study sought to fill this gap by addressing the following research question: does the reported “professional from which parents are most likely to seek advice regarding child discipline” modify the presence or strength of association between parents' attitudes toward CP and key modifiable risk factors (i.e., expected outcomes and perceived norms regarding CP use)?

Method

Participants

A majority of the participants were female (73 %), Black (60 %), married (57 %), not college graduates (60 %) and had one (45 %) or two children (33 %) in their household and a full-time job (59 %). A majority indicated that religion was very important in their daily lives (71 %) and attended religious services once a week or more (51 %); a plurality identified themselves as “non-Catholic Christian” (46 %) and most of the rest were Catholic (40 %). The mean age of participants was 38 years of age ($SD = 11.2$). Most of the index children identified in the survey were male (54 %) with a mean age of seven years old ($SD = 4.5$). The role of “primary disciplinarian” in the household was generally either shared equally between the participant and her/his

partner (49 %) or was held only by the participant (48 %), and most had just one (45 %) or two (33 %) children. A majority had been spanked as children, “sometimes” (54 %) or “often” (19 %); only 26 % had never been spanked.

Procedure

We conducted a random-digit-dial (RDD) telephone survey in New Orleans, LA between December 2008 and February 2009. The response rate was 33.4 %. The sample ($n = 500$) was stratified by gender and race to reflect the demographic profile of the city's parents and to ensure sufficient numbers of respondents in each demographic subgroup. Although 2010 census data reflects an adult female-to-male ratio of approximately 53:47 (U.S. Census Bureau 2010), the gender strata were set to over-represent women (70:30), as 90 % of families with children include a female adult and only 53 % include a male adult. A Black-to-White quota ratio of 60:40 was set as well.

Participants were eligible if they were 18 years of age or older, the parent or legal guardian of at least one child under the age of 18 living in the same household, fluent in English, and self-identified as Black or White. Participants from other racial groups were not included as their numbers would have been too small for meaningful statistical analysis. All questions pertained to an index child, defined as the parent's or legal guardian's child closest to age four—a peak age for use of CP (Straus and Stewart 1999). Each survey interview took approximately 25 min to complete; no incentive was provided. The procedure was approved by Tulane University's Institutional Review Board.

Prior to assessing study eligibility, we informed the person who answered the phone that we were “conducting a survey of parents in New Orleans and your home has been randomly selected as part of our sample. I'd like to ask you a few questions just to find out if you are eligible to take part in our survey.” If the person who answered was under 18 years of age, we asked to speak with someone in the household who was 18 years of age or older. Persons deemed eligible for the study were then told that their “input will help in providing information about parenting and may help to guide future programs for parents.”

Measures

Measurement constructs were selected in accordance with the Theory of Planned Behavior (Ajzen 1988) and tools for perceived norms assessments were informed by this tailored construction guide (Ajzen 2006). All have been described previously (Taylor, Hamvas and Rice et al. 2011; Taylor et al. 2013). Aside from demographics, which were assessed at the start of the survey, constructs were assessed in the order in which they are presented here.

Parental Attitudes Toward CP

Four items from the Attitudes Toward Spanking (ATS) scale were selected to measure each parent's personal attitudes toward CP: "Spanking is a normal part of my parenting," "Sometimes the only way to get my child to behave is with a spank," "When all is said and done, spanking is harmful for my child," and "Overall, I believe spanking is a bad disciplinary technique" (Holden 2001). Respondents rated each item on a 5-point Likert Scale (1 = strongly agree to 5 = strongly disagree). The coding was adjusted so that a higher score always indicated a more positive attitude toward CP; the first two items were reverse scored. The item scores were summed and averaged so that the final scores ranged from 1–5 ($\alpha = 0.79$). (The full ATS scale has ten items. Because we were conducting a phone survey with time restrictions, we used a brief version of the ATS based on the recommendations of ATS author Dr. Holden. The 4 items we used were recommended based on their high item to scale reliability.)

Professional Sources of Parenting Advice

Participants were asked, "When it comes to seeking advice from a professional source about how best to discipline your child, are you more likely to seek advice from: (1) your child's doctor, (2) a religious leader such as your pastor, minister, or rabbi, or (3) some other professional." Parents choosing the latter option were asked to specify the type of professional.

Perceived Injunctive Norms of Professionals

Participants were asked whether their professional of choice would strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with the same four items from the Attitudes Toward Spanking (ATS) scale listed above for "Parental attitudes toward CP." (Holden 2001). The coding was adjusted so that a higher score always indicated a stronger injunctive norm supporting CP. The item scores were summed and averaged so that the final scores ranged from 1 to 5 ($\alpha = 0.82$).

Perceived Injunctive Norms of Close Family Members and Friends

The participants were asked to indicate how close family members and friends would answer each of the ATS scale items asked of the parents themselves. The coding was adjusted so that a higher score always indicated a stronger injunctive norm supporting CP. The item scores were summed and averaged so that the final scores ranged from 1 to 5 ($\alpha = 0.83$).

Perceived Descriptive Norms

To measure the perceived prevalence of CP use within the parents' circle of friends and fellow parents, participants were first asked whether they strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with the following statement: "Most parents who are important to me do not use spanking or swatting as a regular way to discipline their child." Next, the participants were instructed to think about all of the parents they know with children about the same age as their index child, and then to report how often they thought that child was physically disciplined—almost every day (1), often (2), sometimes (3), seldom (4), or never (5). The coding was adjusted so that a higher score always indicated a higher perceived descriptive norm supporting CP. The item scores were summed and averaged so that the final scores ranged from 1 to 5 ($\alpha = 0.68$).

Expected Outcomes of Using CP

Eight items measured expected outcomes of using CP, six of which came directly from the Outcomes of Physical Punishment Scale (Durrant et al. 2003). The question stem states, "How often do you think that physical discipline, such as spanking, of a child leads to..." The selected scale items were: (1) obedience of parents, (2) respect for parents, (3) physical injury to the child, (4) long-term emotional upset in the child, (5) learning of acceptable behavior, and (6) increased child aggression. (One item from the original scale ("guilty feelings in parents") was deleted because it was not included in either the "positive outcome index" or the "negative outcome index" in Durrant and colleagues's original paper (2003) and also because it was focused on parent rather than child outcomes.) Two additional items were added in order to extend our understanding of positive perceived outcomes of CP: (7) healthy family relationships later in life, and (8) a better sense of self-control. Participants rated each item on a 5-point Likert scale (1 = never to 5 = always). The items were divided into two subscales, one consisting of items (1, 2, 5, 7, 8) indicating positive expectations for using CP ($\alpha = 0.80$), and the other consisting of items (3, 4, 6) indicating negative expectations for using CP ($\alpha = 0.84$). The items' scores for each subscale were summed and averaged so that the final scores ranged from 1 to 5.

Demographics

The survey included key demographic items used to control for characteristics known to be associated with attitudes toward CP: (1) *family structure*: the respondent's sex, marital status, and current living situation; number of children in the household; sex and age of index child; and sex

and age of the primary disciplinarian; (2) *socioeconomic status*: education, employment status, and perceived adequacy of household income (used as a proxy for income, as that data point was missing for 8.2 % of the respondents); (3) *religiosity*: religion, attendance at religious services and importance of religion in daily life; and (4) *history of being spanked or swatted in childhood* (often, sometimes, or never).

Data Analyses

First, chi-square tests of independence and one-way ANOVAs were conducted to examine the associations between the respondents' chosen source of professional advice and the demographic and predictor variables. Next, bivariate ordinary least squares (OLS) models—for the sample as a whole and then for each subset of respondents who cited a preferred source of professional advice—were created. These models regressed parental attitudes toward CP on the five main predictors: (1) perceived injunctive norms of the chosen professional, (2) perceived injunctive norms of family and friends, (3) perceived descriptive norms, (4) positive expected outcomes of using CP, and (5) negative expected outcomes of using CP. In order to achieve the most parsimonious final multivariate OLS regression models, empirically redundant control variables were removed and those with the greatest predictive value were retained. The final multivariate OLS models regressed parental attitudes toward CP use on significant demographic variables in addition to the five main predictors listed above.

Results

Almost half of parents (47.8 %) reported they were most likely to seek professional advice regarding child discipline from pediatricians, followed by religious leaders (20.8 %) and mental health professionals (18.4 %). The remaining 13.0 % cited “other” professionals, including teachers, childcare workers, nurses, and parent education specialists. Table 1 shows how participant demographics, the five predictor variables, and the “dependent” variable (i.e., parental attitudes toward CP), listed in column 1, differed by the parents' primary professional source of advice regarding child discipline (column sections 2–4). Only demographic variables with significant group differences are included in this Table.

One-way ANOVA results show that all five examined predictor variables as well as the dependent variable were associated with parents' primary professional source of advice and each of these was statistically significant. Perceived approval of CP by professionals (an injunctive norm) is the most strongly associated ($F = 17.37$), followed by

perceived descriptive norms ($F = 9.08$), perceived approval of CP by close family and friends (an injunctive norm) ($F = 5.53$), positive expected outcomes of CP use ($F = 5.08$), and negative expected outcomes of CP use ($F = 2.80$). Parental attitudes toward CP was also strongly associated ($F = 6.86$).

Table 2 shows results from twenty simple bivariate ordinary least squares' (OLS) models which each regressed parental attitudes toward CP on the five key predictor variables listed in column 1: perceived injunctive norms (both professional and family/friends), perceived descriptive norms, positive expected outcome of CP, and negative expected outcome of CP. The remaining columns display the simple OLS results for four groups of parents in the sample: those who identified pediatricians (Group 1), religious leaders (Group 2), mental health professionals (Group 3), or other professionals (Group 4) as the professional they were most likely to seek advice from regarding child discipline. The first row of findings show that, for all four groups of parents, perceived approval of CP by the professional named in each group (e.g., pediatricians in Group 1) was strongly positively associated with parents' own approval of CP. Row 2 shows the same findings for perceived approval of CP by close family and friends. Row 3 shows that perceived descriptive norms of CP was strongly positively associated with approval of CP for all groups of parents except for those who chose mental health professionals as the professional from which they were most likely to seek advice. Findings in row 4 show that positive expected outcomes of CP use was strongly *positively* associated with approval of CP for all groups of parents; and row 5 shows that negative expected outcomes of CP use are strongly *inversely* associated with approval of CP for all groups of parents. In sum, nineteen out of the twenty examined associations were strong and statistically significant; however, the association between perceived descriptive norms and approval of CP was not significant for parents who chose mental health professionals as their primary source of professional advice about child discipline.

Table 3 shows results from five separate *multivariate* OLS models which each regressed parental attitudes toward CP on all of the parent demographics and the five key predictor variables listed in column 1. The remaining fifteen columns, divided into five Models with three columns each, display the multivariate OLS results first for the full sample (Model 1) and then for the four subsets of respondents based on preferred source of professional advice about child discipline: pediatricians (Model 2), religious leaders (Model 3), mental health professionals (Model 4), and other professionals (Model 5).

As prior work has demonstrated (Taylor, Hamvas and Rice et al. 2011), Model 1 shows that after controlling for key demographics, all five of the theory-based predictor

Table 1 Bivariate analyses of study variables by the professional from whom parents were most likely to seek advice regarding child discipline

Family characteristics	Pediatricians 47.8 % (n = 239)			Religious leaders 20.8 % (n = 104)			Mental health professionals 18.4 % (n = 92)			Other professionals 13.0 % (n = 65)			χ^2 or F-value
	%	Mean	SD	%	Mean	SD	%	Mean	SD	%	Mean	SD	
<i>Participant demographics</i>													
<i>Race</i>													
Black	53.1			85.6			60.9			43.1			40.8 ***
White	46.9			14.4			39.1			56.9			
<i>Marital status</i>													
Married	63.0			40.6			52.8			69.2			31.3 ***
Previously married	10.1			25.7			22.0			9.2			
Never married	26.9			33.7			25.3			21.5			
<i>Current living situation</i>													
Living with index child's other parent	62.3			43.3			52.2			64.6			22.1 *
Single parent living alone	23.9			45.2			35.9			20.0			
Living with other adult	13.0			10.6			11.9			15.4			
<i>Education</i>													
<College	56.9			74.0			58.7			49.2			12.7 **
College or more	43.1			26.0			41.3			50.8			
<i>Religion</i>													
Catholic	52.9			21.2			37.4			46.8			46.7 ***
Christian (non-Catholic)	40.0			74.8			53.0			37.1			
Other religion	7.1			4.0			9.6			16.1			
<i>Attendance at religious services</i>													
Never	14.5			1.0			10.0			17.9			61.3 ***
<once per week	40.3			25.5			41.1			39.1			
Once a week	37.5			36.3			35.6			32.8			
>once per week	7.7			37.2			13.3			10.9			
<i>Importance of religion in daily life^a</i>													
Very important	64.8			93.2			71.4			56.5			37.3 ***
Somewhat important or less	35.7			6.8			28.6			43.6			
<i>Number of children in household</i>													
1	48.5			42.3			41.3			44.6			13.9*
2	34.3			26.9			30.4			41.5			
>3	17.2			30.8			28.3			13.9			
Age of child (years) ^b	6.4	4.7		7.78	4.8		8.0	4.9		6.7	4.7		3.66 **
<i>Independent variables</i>													
Perceived injunctive norms of professionals regarding CP ^c	2.3	0.9		2.9	0.9		2.1	0.9		2.3	1.0		17.37 ***
Perceived injunctive norms of family/friends regarding CP	2.8	1.0		3.2	0.9		2.8	1.1		2.6	1.0		5.53 **
Perceived descriptive norms	2.5	0.9		3.0	0.9		2.5	1.0		2.3	1.0		9.08 ***
Positive expected outcomes of CP	2.7	0.9		3.1	0.9		2.8	0.9		2.8	0.9		5.08 **
Negative expected outcomes of CP	3.0	1.1		2.6	1.1		3.0	1.2		3.0	1.1		2.80 *
<i>Dependent variable</i>													
Parent attitudes towards CP	2.3	1.0		2.8	0.9		2.4	1.0		2.2	0.9		6.86 ***

Note: Total percentages for each variable do not always equal 100 % due to missing values. Missing observations did not exceed 2 % for any one variable except for religion, which was 6.2 %. Bivariate statistical tests were conducted to compare the main variable of interest (“the professional from whom parents were most likely to seek advice regarding child discipline,” which has four categories) with all demographic and other variables. χ^2 tests were used for categorical or ordinal variables; one-way ANOVAS were used for continuous variables. χ^2 or F-value statistics, respectively, are presented in the last column

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

^a The other four response categories were collapsed into “Somewhat important or less so” due to the distribution of the variable as follows: Somewhat important (20.2 %), Neither important nor unimportant (1.6 %), Somewhat unimportant (2.8 %), and Very unimportant (4.0 %)

^b Median age = 6, range = 0–17

^c CP corporal punishment

Table 2 Simple ordinary least squares (OLS) Models regressing positive attitudes toward corporal punishment (CP) on parents' perceived norms and expected outcomes of CP use, representing four groups of parents: those who identified pediatricians (Group 1), religious leaders (Group 2), mental health professionals (Group 3), or other professionals (Group 4) as the professional they were most likely to seek advice from regarding child discipline

Predictors of interest	Group 1: pediatricians (n = 239)			Group 2: religious leaders (n = 104)			Group 3: mental health professionals (n = 92)			Group 4: other professional (n = 65)		
	B	SEB	β	B	SEB	β	B	SEB	β	B	SEB	β
Perceived injunctive norms of professionals regarding CP	0.74	0.06	0.66***	0.76	0.07	0.74***	0.54	0.10	0.49***	0.72	0.07	0.79***
Perceived injunctive norms of family/friends regarding CP	0.59	0.05	0.60***	0.68	0.08	0.65***	0.54	0.08	0.56***	0.56	0.09	0.64***
Perceived descriptive norms	0.65	0.06	0.60***	0.71	0.08	0.67***	0.54	0.09	0.52	0.60	0.09	0.65***
Positive expected outcomes of CP	0.56	0.06	0.52***	0.48	0.09	0.46***	0.72	0.10	0.61***	0.53	0.12	0.55***
Negative expected outcomes of CP	-0.40	0.05	-0.47***	-0.40	0.07	-0.46***	-0.39	0.08	-0.45***	0.30	0.10	-0.37***

Note: B OLS regression coefficient, SEB standard error for B, β standardized regression coefficient

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

variables—three perceived norms and both expected outcomes listed in the bottom five rows—were strongly and significantly associated with positive attitudes toward CP. Models 2–5 aimed to assess whether or not these associations were moderated by the type of professional from which advice was sought.

Model 2 included only those parents who primarily sought advice about child discipline from pediatricians. This Model had very similar results as the full sample model (Model 1). Except that positive expected outcomes of CP was no longer significant ($\beta = 0.09$) and mattered less than in any other model ($\beta = 0.13$ – 0.23). As with Model 1, perceived approval of professionals remained the strongest predictor of parents' approval of CP.

Model 3 examined only those parents who indicated that religious leaders were their primary professional source for advice about child discipline. Four out of five of the theory-based predictor variables were statistically significantly associated with CP attitudes in this model: only negative expected outcomes of CP was not. Perceived approval of professionals and perceived descriptive norms were the strongest predictors in this model ($\beta = 0.33$, for each) and the latter was stronger in this model than in any other group ($\beta = 0.02$ – 0.20).

Model 4 examined only those parents who primarily sought child disciplinary advice from mental health professionals. This model was quite different from the other models. First, it is the only model for which perceived approval of professionals was not the strongest predictor ($\beta = 0.13$) and in fact mattered less than in any other subgroup ($\beta = 0.33$ – 0.58). Second, positive expected outcomes of CP was both the strongest and the only statistically significant variable associated with positive attitudes toward CP ($\beta = 0.23$) in this model, and it was stronger in this model than in any other model ($\beta = 0.09$ – 0.14).

Model 5 examined only those parents who indicated “other” professionals as their primary source of child disciplinary advice. Perceived approval of professionals was both the strongest and the only statistically significant variable associated with positive attitudes toward CP ($\beta = 0.58$) in this model, and it was stronger in this model than in any other model ($\beta = 0.13$ – 0.33).

Discussion

The main objective of this study was to understand if the reported “professional that parents were most likely to seek advice from regarding child discipline” moderated the associations between parents' attitudes toward CP and key predictor variables, namely perceived norms and expected outcomes regarding CP. The simple answer is yes: these associations were moderated by the chosen professional.

Table 3 Multivariate OLS models for positive attitudes towards corporal punishment (CP)

Variables	Model 1: full sample ^a (n = 500)		Model 2: pediatricians ^b (n = 239)		Model 3: religious leaders ^c (n = 104)		Model 4: mental health professionals ^d (n = 92)		Model 5: other professionals ^e (n = 65)						
	B	SEB β	B	SEB β	B	SEB β	B	SEB β	B	SEB β					
<i>Parent demographics</i>															
Gender (ref = female)															
Male	-0.07	0.07	-0.03	0.10	-0.04	0.01	0.15	0.004	0.08	0.20	0.04	0.16	-0.14	0.16	-0.10
Race (ref = White)															
Black	0.03	0.07	0.02	0.10	-0.03	0.23	0.18	0.09	0.30	0.21	0.14	0.19	-0.01	0.19	-0.01
Education (ref = <college educated)															
College graduate or more	0.08	0.07	0.04	0.10	0.02	0.24	0.14	0.11	0.07	0.21	0.04	0.18	-0.36	0.18	-0.20*
Household income (ref = not enough)															
Just enough	-0.09	0.07	-0.04	0.10	0.001	0.01	0.13	0.01	-0.23	0.18	-0.12	0.18	-0.26	0.18	-0.15
More than enough	-0.25	0.11	-0.07*	0.28	0.16	-0.18	0.26	-0.05	-0.05	0.33	-0.02	0.33	-0.12	0.33	-0.03
Religion very important in daily life	0.02	0.07	0.01	0.04	0.09	-0.16	0.24	-0.04	0.09	0.20	0.04	0.20	-0.29	0.20	-0.16
Spanked in childhood (ref = never)															
Sometimes	0.17	0.07	0.09*	0.18	0.10	0.04	0.16	0.02	0.32	0.22	0.16	0.20	-0.06	0.20	-0.03
Often	0.08	0.10	0.03	0.17	0.15	-0.23	0.20	-0.09	0.01	0.28	0.005	0.24	0.06	0.24	0.03
<i>Predictors of interest</i>															
Perceived injunctive norms of professionals regarding CP	0.31	0.04	0.30***	0.38	0.07	0.34	0.10	0.33***	0.15	0.12	0.13	0.53	0.13	0.58***	
Perceived injunctive norms of family/friends regarding CP	0.18	0.04	0.19***	0.20	0.06	0.23	0.10	0.22**	0.17	0.12	0.18	0.11	0.10	0.13	
Perceived descriptive norms	0.24	0.04	0.23***	0.21	0.07	0.35	0.08	0.33***	0.21	0.12	0.20	0.02	0.12	0.02	
Positive expected outcomes of CP	0.14	0.04	0.13**	0.10	0.06	0.14	0.07	0.14*	0.27	0.12	0.23*	0.12	0.11	0.13	
Negative expected outcomes of CP	-0.11	0.03	-0.13***	-0.11	0.04	-0.08	0.06	-0.10	-0.14	0.08	-0.17	0.01	0.08	0.01	

Note: CP Corporal punishment, B OLS regression coefficient, SEB standard error for B, β standardized regression coefficient, Ref reference group

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

^a Model 1: $R^2 = 0.60$, adjusted $R^2 = 0.59$

^b Model 2: $R^2 = 0.60$, adjusted $R^2 = 0.57$

^c Model 3: $R^2 = 0.72$, adjusted $R^2 = 0.67$

^d Model 4: $R^2 = 0.56$, adjusted $R^2 = 0.48$

^e Model 5: $R^2 = 0.74$, adjusted $R^2 = 0.66$

(Note: The term “predictor” is used to signal variable alignment/arrow directions within the Theory of Planned Behavior, with examined “predictor” variables leading to attitudes; however, actual temporality of these associations cannot be established within these cross-sectional data.) Just as indicated in the full sample, the three types of perceived norms remained the strongest predictors of parents’ approval of CP, but only for those parents who sought advice from either pediatricians or religious leaders. In contrast, although positive and negative expected outcomes of CP were strong predictors of parents’ attitudes toward CP in the full sample, the findings across subgroups of parents varied substantially.

First, perceived approval of CP by professionals was the strongest predictor of parents’ approval of CP for 82 % of the sample—i.e., for all but those parents who primarily sought advice from mental health professionals. Given this finding, practitioners wishing to change parental attitudes toward use of CP may do well to work with these professional groups—especially pediatricians and religious leaders—to better educate them about the harms of using CP and how to implement positive parenting strategies. At minimum, it is critical to raise their awareness of their potential influence over parents’ approval and use of CP. Beyond this, additional training on this topic would be very useful for many professionals. Although pediatricians are experts in child health and development, many do not feel adequately trained in counseling parents regarding positive child discipline strategies and could benefit from such training (Burkhart et al. 2016; Scholer et al. 2005). Religious leaders are challenged even further than pediatricians in this arena as most are not trained in child health and development. Additionally, some religious leaders, particular those of Conservative Protestant faiths, are likely to be more supportive of CP than others (Ellison and Bradshaw 2009). Yet, for those wanting to work with religious leaders on this issue, there are many strong models for collaborations, scriptural training, and changing policies to support reductions in approval and use of CP (Dodd 2011; Martin 2007; Rodgers 2012; Vieth 2014).

For the near majority of parents who sought advice primarily from pediatricians, the importance of their opinion to parents seems indicative of the influence and authority that pediatricians possess over matters concerning child health and well-being, in general, and discipline in particular. In a randomized controlled trial, caregivers given a brief child behavior management intervention by their pediatrician were twelve times more likely to develop a discipline plan for their child than caregivers in the control group, who received a well-child visit only (Scholer et al. 2010). Moreover, those in the intervention group were also more likely than controls to report an intention to use less spanking (9 vs. 0 %, respectively). Efforts to prevent child physical abuse and change social norms regarding CP

should focus heavily on educating and working with pediatricians as well as integrating relevant interventions into pediatric clinics (Dubowitz et al. 2009; Kirby 2014; Selph et al. 2013). In particular, of the four sub-groups in this study, this group of parents is also the most likely to be influenced by expecting negative outcomes of CP. Hence, providing these parents with education about the harmful effects of CP could be quite beneficial.

For those parents seeking advice from religious leaders, nearly all considered religion very important in their daily life and so are likely looking to religious leaders as moral authorities on how best to raise their children. Unfortunately, given that most religious leaders are not trained in child development and many rely on scriptural passages to suggest that CP is necessary, these parents are at four times greater risk for using CP than are parents who seek parenting advice from pediatricians (Taylor et al. 2013). The strong link between expecting positive outcomes of CP use and approval of CP use among this group might at least partially explain this increased risk. For this group of parents, use of CP by family and friends mattered just as much as the perceived approval of CP by religious leaders. It may be that parents with strong connections to their church might value the parenting behaviors of their peers more than non-church-affiliated parents. For many, religion and/or scripture is often cited as a key influence in the decision to use CP (e.g. Taylor, Hamvas and Paris 2011). This might also explain why negative expected outcomes for CP had less of a link with CP attitudes for this group. These findings imply that parenting initiatives aimed at reducing use of CP in collaboration with faith-based communities will do best when working with religious leaders as well as with the congregation directly given that the perceived norms of both are important to this group of parents.

Across the four subgroups, findings were especially distinct for those parents who primarily sought advice from mental health professionals. Amongst this group, parents’ attitudes toward CP were not significantly statistically linked with perceived norms of any kind. Rather they were most strongly associated with positive expected outcomes of CP use. This seems to be a very distinct group of parents that have perhaps already identified a behavioral or emotional problem in their child, hence the reason they would first ask a mental health professional vs. another type of professional for advice. These results suggest that this group of parents would benefit most from increased education about the harmful effects of CP and positive parenting strategies. Educational interventions could target mental health professionals’ offices to provide this information.

The fourth group of parents examined was really a catch-all for all other named professionals, comprised largely of teachers, child care workers, and parent educators. It is difficult to make too many assumptions about this group

both because of its heterogeneity and also because its size is relatively small (only 13 % of the entire sample) so the power to detect differences is lower than in the other groups. With these caveats in mind, the association between perceived approval of CP by professionals and parents' approval of CP is quite robust amongst this group. This suggests that generally speaking, professionals' approval or disapproval of CP use can potentially have an important impact of parents' own attitudes.

A primary limitation of this study is that these data were collected at one point in time and hence direction of associations are only speculative. That is, our model "predictors" might well be outcomes and/or associations might be bidirectional. It's important to highlight that these findings reflect associations with attitudes toward, vs. actual reported use of, CP. Further, the unequal size of the four professional groups is a limitation. In particular, the smaller sample sizes and reduced statistical power for Models 4 and 5 might explain some of the lack of statistically significant associations found in those models. Data collection was limited to just one city and included only Black and White participants (only 3 % of the New Orleans population at the time did not identify as either race), hence findings might not be generalizable to other regions or to other racial groups. It is also possible that our stated intent of the study—to provide information about parenting and help to guide future programs for parents—may have resulted in some form of selection bias. Given the exploratory and time-restricted nature of this phone survey, we altered some measures from the originals (i.e., ATS, Outcomes of Physical Punishment Scale) as described in the measures section. Also, the perceived norms scales are original and were created specifically for this study; however, the perceived injunctive norms scales were specifically designed from the ATS in order to capitalize on the known strengths of that scale. Hence the validity of these specific versions of these measures has not been tested on a prior sample of parents. Despite these limitations, our study provides a new perspective on the professionals who influence parental attitudes toward the use of CP. The strength of this research lies in its specificity regarding recommendations for tailoring interventions delivered to distinct professional groups.

Findings from this study might inform the work of public health and other child health practitioners interested in developing child maltreatment prevention plans and programs, especially those targeted to different groups of professionals and community leaders from which parents seek advice. Because CP is a strong risk factor for child physical maltreatment as well as other poor outcomes for children, child well-being could be improved by reducing the population prevalence and acceptance of CP among parents. The results of this study can help direct future initiatives designed to meet this objective. Our findings can inform the focus of

intervention strategies based on the group of professionals and leaders with which one is partnering. Pediatricians, religious leaders, mental health care providers, and other professionals may all play important roles in advising parents about child discipline. Two key messages are important for nearly all professional groups, particularly pediatricians and religious leaders, to hear. First, their opinions regarding CP use matter to parents' approval and use of CP. Second, given this, it's critical that these professionals take the time to educate parents about the harmful effects of CP and alternative positive parenting strategies. Many such educational tools already exist and have a growing evidence base for implementation in pediatric, mental health, and other family service settings. Examples include Play Nicely (Scholer et al. 2010; Smith et al. 2016), Incredible Years Parent Training Program (Beauchaine et al. 2005), and Triple P Positive Parenting Program (Sanders et al. 2014). While some of these may also be offered via faith-based settings, special and sensitive training with religious leaders is especially warranted to bridge discrepancies between scriptural interpretations of appropriate child discipline and known risks to children's well-being (see for example Dodd 2011; Vieth 2014). Community-based child maltreatment prevention efforts such as these can be selected and implemented according to fit within professional setting.

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Compliance with ethical standards

Conflict of Interest The authors declare that they have no conflict of interest.

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