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# Beliefs and ideologies linked with approval of corporal punishment: a content analysis of online comments

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## Abstract

This study employs a novel strategy for identifying points of resistance to education efforts aimed at reducing rates of child physical abuse and use of corporal punishment (CP). We analyzed online comments ( $n = 581$ ) generated in response to media coverage of a study linking CP with increased child aggression. Most comments (71%) reflected approval of hitting children for disciplinary purposes. Reasons for this approval were rooted in beliefs linking the use of CP with positive or neutral outcomes such as: 'I was spanked and I am okay', spanking improves child behavior, spanking is more effective than other forms of discipline and spanking is not abuse. However, also linked with approval were more macro-ideological beliefs about society such as: today's generation is worse off than previous ones, outside interference with parenting is wrong, one cause leads to an outcome, justifications for hitting children rooted in religious doctrine, bad parents cannot control their children and children have too much power. Our results suggest a need to better translate and disseminate empirical findings regarding the negative effects of CP to the public in a way that is highly sensitive to parents' needs to feel in control and effective when parenting.

## Introduction

Child maltreatment is a major public health problem [1]. It is estimated that one in eight US children will experience maltreatment by the time they reach adulthood [2]. Child maltreatment contributes not only to risk of immediate injury and death of children but also to cumulative and long-term risk to physical and mental health [3–5]. The high prevalence of child maltreatment combined with its strong health risks suggests that effective population-level health education approaches may help to reduce this epidemic (see, for example, Triple-P [6, 7]).

Population-level health education approaches can have the greatest impact when they are focused on strong risk factors with high prevalence in a population [8]. Yet those risk factors that are most pervasive, normative and accepted in a population can be the most difficult to address with such efforts due to strong cultural and ideological resistance. Current social norms in the USA regarding corporal punishment (CP) are an excellent example of such a risk factor. Despite the fact that 'Social norms regarding physical discipline may be the most prevalent risk factor for child abuse in the USA' [9, p. 371], 10–12] they also remain one of the most neglected and most intractable. CP is defined as hitting or spanking a child 'with the intention of causing a child to experience pain, but not injury,

for the purpose of correcting or controlling the child's behavior' [13].

CP is a strong risk factor for child physical abuse [14]. One population-based study found that parental use of CP increases odds of child physical abuse by nearly three times and by as much as nine times when an object (e.g. a paddle, a belt) was used [15]. An increased use of CP is associated with an increased use of other forms of parent-to-child physical and psychological aggression as well as acts of neglect [16]. Furthermore, there is an increased risk of CPS involvement among infants who are corporally punished [17]. CP use also is strongly associated with presence of intimate partner violence in families [12, 18], which is a strong risk factor for child maltreatment and in some states considered a type of maltreatment itself. Hence children that experience CP are at increased risk for experiencing other acts of violence, aggression and neglect by their parents.

Beyond risk for experiencing more violence, CP also raises risk for additional poor health outcomes in children. In analyses that controlled for more severe acts of child maltreatment, children that received CP were at increased risk for mental and physical health problems [19, 20] and as well as subsequent aggressive behavior [14, 21, 22]. Children who are spanked also are more likely to approve of physical aggression as a means for solving conflicts with peers [23]. Moreover, the mean level of punishment experienced in childhood has been linked with the risk for perpetration of intimate partner violence in adulthood [24]. Thus, use of CP not only raises risk of substantial harm and reduced well-being for children, it also perpetuates a cycle of violence.

Given the weight of empirical evidence citing risks that CP use poses to children, many professional organizations focused on children's health, such as the American Academy of Pediatrics, have advocated against its use [25, 26]. Despite this, 76% of men and 65% of women in the USA believe that CP is a necessary disciplinary tool. Although these approval rates do vary across racial and ethnic groups, it is still a majority of Blacks (81% female, 80% male), Hispanics (62% female, 73% male) and Whites (62% female, 76% male) that support CP use

[10]. Importantly, having a favorable attitude toward CP use is a strong and consistent predictor of its actual use [27–32]. Positive attitudes toward CP are especially common among parents who experienced CP during their childhood [23, 33–35]. Indeed, adults that experienced CP as a child are more likely to use it with their own children [36]. As such, these positive attitudes help explain not only the strong intergenerational transmission of CP but also the spill-over effect of CP that leads children to approve of using aggression with peers [23].

To break this cycle, health education researchers and practitioners would be aided by better understanding potentially *modifiable* factors linked with attitudes supportive of CP use and, similarly, identifying points of resistance to changing such attitudes. These topics have been addressed thus far in a limited body of research, which has shown parental expectations of outcomes of CP to be strongly linked with attitudes toward CP (e.g. [34, 35]). Similarly, other research has linked frequent use of CP to parents' expectations of immediate compliance, appropriate behavior in the long-term, and respect for parental authority [37]. Hence, we know that parents' beliefs about whether or not CP leads to positive or negative outcomes are important; however, it is likely that other types of beliefs influence these attitudes as well.

Most prior research on this topic has been deductive, and therefore, limited by the scope of investigator-generated hypotheses. In this study, we took a more open, inductive approach to try to generate new ideas and a better understanding of common 'points of resistance' to educational messaging relevant to changing social norms regarding CP. To do this, we used a novel data source to examine user generated comments provided in response to media coverage of a study that showed CP was related to increased aggression among children, which some might have viewed as educational regarding the potential harms of using CP. The creation of Web 2.0 and the resulting shift from static to dynamic, user-generated content has changed the way the average citizen is able to interact with the internet by providing an opportunity to express opinions on issues via mass media [38]. Platforms for user-generated

content such as social media websites, blogs, chat rooms and free text comment platforms allow users to express thoughts and opinions in real time, as part of daily life. The resulting wealth of free, easily accessible information presents a unique opportunity for data collection. In stark contrast to the reliance on self-report and questionably reliable memories that characterizes traditional research, user-generated content in the public domain allows researchers to observe actual behaviors and communications as they naturally unfold [39]. Without participant knowledge of observation for research, the Hawthorne Effect, in which individuals modify or improve their behavior as a response to being observed, is virtually eliminated [39]. Additionally, this method of data collection allows researchers to derive a naturally occurring sample from a vast, global community, greatly diminishing the risk of biased respondent selection (as it relates to the study's stated purpose) [39, 40]. Multiple sources conclude that this new, evolving data source is too rich, inexpensive, and easy to collect to be ignored [39–44].

We anticipate that assessment of such data will be invaluable to translational researchers and health educators alike who are often challenged with overcoming barriers and natural resistance to research findings that go against conventional wisdom and norms. While the opinion gap between scientists and the general public is often quite large [45], we hope that this assessment of responses to a news media report of new research findings may provide a unique and potentially rich source of data for better understanding that gap. We used this unique sample to conduct an in-depth, inductive investigation to search for new themes regarding CP attitudes, perhaps not before captured via more traditional data sources, and to determine points of resistance useful to changing such attitudes.

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## Method

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### Sample

In 2010, the release of research findings that linked use of CP with children at 3 years of age to increased

child aggression at 5 years of age generated multiple news stories in the popular media. Among these stories, an article appearing in *Time Magazine* [46] provided a description of the study findings indicating that spanking was associated with subsequent increased child aggression, even after controlling for a host of other issues such as maternal experience of depression, alcohol and drug use, intimate partner violence, and whether or not she considered abortion while pregnant with the child. The article also indicated that the American Academy of Pediatrics does not endorse spanking under any circumstances. The *Time Magazine* story as covered by Yahoo! News prompted nearly 1000 online comments on the Yahoo! News site. The current study examined a random sample of these comments ( $n = 581$ ), 59% of the full sample. Use of the full sample was not necessary because once saturation had been reached, further qualitative analysis of comments would have had little yield. The demographic characteristics of our sample were unobtainable and hence unknown.

### Coding and textual analysis

We conducted a textual analysis of the comments regarding attitudes toward CP in general and the research study specifically. A codebook was developed and two rounds of coding were conducted that included a content analysis and use of a grounded theory approach to uncover ideological nuances. Grounded theory is employed for 'discovering theories, concepts, hypotheses and propositions directly from data' [46]. Use of grounded theory was especially appropriate for this study because the research team did not enter the study with *a priori* hypotheses, but rather used analysis to identify and describe themes in the responses to the news article. Furthermore, our coding process started with small chunks of data which lent itself well to the open coded procedures used in grounded theory approaches.

The initial codebook and codes were developed by the principal investigator (PI), who met with the project manager and project assistant (henceforth referred to as the coding team) several times

during the initial 2 weeks to discuss the codes and the codebook structure. The first 5 pages of comments (40 comments total) served as practice for the coding team and a review of codes and coding techniques.

Initially, three global codes were developed for the content analysis: (i) positive attitudes toward CP (*good*), (ii) negative attitudes toward CP (*bad*) and (iii) general comments about the research (*general*). At least one of these global codes was assigned to each comment (if possible) and then emergent sub codes were assigned, particularly sub codes that expanded upon the positive or negative attitudes toward CP. As emerging themes were identified and codes were developed, the project manager created a codebook that included definitions of codes and identified hierarchical relationships between codes. For example, comments that indicated CP was good for all children received the code *good-all*. Comments that indicated that CP was good but should be used as a last resort received the codes *good-when* and *last resort*. This sub code was defined as ‘when done as a last resort, when other types of discipline have failed’ and was nested under the sub code *good-when*.

In the second stage of coding, the team sought to explore belief systems embedded within the comments. As in the first stage, the coders first met as a team to discuss emergent ‘ideological’ codes, and then met with the PI to review these new codes. Constant comparison and memos were used to develop substantive codes and explore their theoretically coded relationship throughout this stage of coding. For example, the team developed the code *kid power* after identifying comments that alluded to the child–parent power dynamic and the importance of CP in maintaining that balance. Each team member working independently to code approximately 50 comments and then the coding team convened to discuss the coding and reach consensus on the codes. If the coding team could not reach consensus, they reviewed the comment and the proposed codes with the PI and final consensus was reached. The team discussed and added new codes and definitions to the codebook as needed throughout the coding process.

The code data were entered in ATLAS.ti software (Version 5.2) by both members of the coding team (i.e. double entry). To detect and correct any errors with data entry, a code check was conducted by comparing the codes entered by one team member to the codes entered by the other team member. This code check was performed by printing out the coded comments and comparing the print-outs for differences. The double entry and code check procedures were designed to enhance the reliability of data entry.

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## Results

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### Approval of CP

A substantial majority (70.9%) of those commenting on the Time Magazine story [47] covered by Yahoo! News regarding the link between spanking and subsequent increased childhood aggression expressed approval for the use of CP with children. Among the group of respondents who expressed approval of CP, most (89.1%) provided explanations for their positive attitudes (see Table I). Comments could be assigned multiple codes hence explanations were not mutually exclusive. When assessing the commenters’ attitudes in general toward the research study that prompted the news story, ~40% of the sample included comments specific to the study. Of those that commented about the research study specifically, more than 90% disagreed or strongly disagreed with the study findings.

### Approval of CP and personal experience

The most common explanations offered for approval of CP were based on personal experience. Most common of all was the person’s own experience of having been spanked as a child and his or her self-assessment that ‘I turned out okay’. The following comments exemplified this common sentiment:

*I was spanked growing up, so was the rest of my brothers and sister when we were bad and to no bad effects on us.*

*I am not an aggressive person and my mother spanked me on a regular basis.*

**Table I.** Explanations linked with approval of CP (n = 412)

	%	n
I was spanked and I am OK	36.7	151
Spanking improves child behavior	35.9	148
Other forms of discipline are not as effective as spanking	30.8	127
Spanking is discipline, not abuse	26.5	109
I spanked my children and they are OK	22.8	94
Spanking was common in my generation and my generation is OK	11.4	47

Note: Coding categories are not mutually exclusive so do not total 100%. Percentages are out of those respondents who indicated approval of CP.

The second most common explanation of approval of CP was expressed as a belief that CP improves child behavior. Here are some comments exemplifying this theme:

*A timely and well deserved spanking helps a child understand consequences for misbehaving.*

*Spanking teaches kids consequences for their sinful actions, and when they grow older, they think things through more. It is the centuries old method of child discipline. . .*

The next most common comments expressed the conviction that other forms of discipline were not as effective as CP in correcting child behavior problems. The following comments exemplify those in this category:

*Timeouts do nothing—you walk away and kids sit there plotting what they are going to do next until mom/dad/teacher comes back. . .*

*Spanking should not be done in anger, but with the intent of delivering a consequence of punishment for wrong doing. . . . Simply talking sternly to or time outs just don't do the trick.*

Many commenters also expressed the opinion that CP was simply a form of discipline but not abuse:

*There is a difference between discipline, punishment, and abuse. People need to learn how to know the difference.*

*There is a distinct difference between beating/abusing a child and spanking them.*

*There is a BIG difference between physical abuse and disciplining your child with a spanking. It has its place and it IS effective.*

*Even the police tell you it is not abuse to whip a child with belt as long as it is on the behind and of course not excessive. There is nothing wrong with a good 'ole butt whipping from time to time.*

Finally, the last two most common themes contained echoes of the basic idea that CP does no harm and may produce good results. Many commenters noted that they had spanked their own children and that those children had 'turned out okay.' Comments from this group typically referenced the respondent's use of CP and their well-behaved children. For example: *'I believe in spankings, I have 4 wonderful kids that have been spanked. We get so many compliments on how well behaved our kids were.'* Other comments echoed the thought that 'spanking was very common in my generation and my generation is okay'. Comments typical of this group emphasized the positive results of CP for an entire generation:

*I am 67 and my generation got their butts whacked on a regular basis. And it did no harm to our generation. We are the last generation with any moral fiber left. Kids of the younger generations are a much larger problem on average than we were.*

Overall, these findings can be summarized as expressing a firm belief that CP does no harm, is an effective form of discipline, produces positive

**Table II.** Ideologies linked with approval of CP (*n* = 412)

	%	<i>n</i>
Today's society/generation is worse off due to lack of child discipline	26.9	111
Single rather than multifactorial etiologies explain complex outcomes such as criminality	25.8	106
Interference with raising children from outside the family	22.3	92
Religious beliefs (i.e. spare the rod...)	13.4	55
Bad parenting identified with lack of control	13.1	54
Children already have too much power	12.9	53

*Note:* Coding categories are not mutually exclusive, and therefore do not total 100%. Percentages are out of those persons who indicated approval of CP.

results and that other forms of discipline do not work as effectively.

More than a third (36%) of comments expressing approval of CP also specified that such approval was dependent upon specific *conditions*. The most frequently mentioned condition was in regard to the manner in which the parent implemented CP. Nearly one quarter of the 'approval' comments expressed a belief that the parent should take certain steps before implementing CP such as being calm (i.e. not angry with child), explaining to the child why CP is being used, and ensuring CP is not excessive. In addition, many of the comments noted that CP should be used as one strategy along with other forms of discipline such as prior verbal warnings or taking away privileges. Other, less frequently mentioned conditions for approval included using CP as an adjunct to positive reinforcement, specifying which body parts were appropriate for CP (e.g. buttocks, hand), and limiting use of CP to use in response to certain egregious behaviors (e.g. defiance, disrespect, or behavior that places the child in danger such as running into the street).

### **Ideologies linked with approval of CP**

Among the 412 comments in our sample that indicated approval of CP, analysis revealed that most (77%) of these comments also indicated macro-ideologies about our culture (see Table II). The most common of these comments (27%) expressed the conviction that today's generation or society is somehow lacking or 'worse off' than prior generations because social changes have diminished discipline (e.g. 'today's children lack discipline, have

*no fear or respect for authority, and have no boundaries*'). One comment summarized the thoughts of many in this group:

*Yeah. People continue to get so much more sedate and controlled as we continue to soften discipline. There's so much respect this day and age in our societies. Are you people who write this really that naive and stupid? You can't see the correlation between the extreme violence and disrespect today, and the lack of any real discipline?... I can't believe the disrespect and lazy behavior I see from this next generation... Common thread: no discipline.*

Nearly as many comments (26%) focused on beliefs that tied a single factor (such as not using CP) to an undesirable outcome (such as spending time in jail). For example, commenters stated that:

*The African Americans that got spankings for the most part stayed out of prison*

*I can personally say thank you mom and dad for whooping me as a child, because that kept me out of jail.*

*The ones that aren't spanked and need it turn out to be on welfare and can't hold a job.*

Many commenters who approved of CP also noted their distaste for any sort of societal interference with parenting, particularly from the government or scientists (43% and 40% out of this group, respectively). Typical comments included, 'The government and these researchers have taken even our rights as parents away,' and 'The government has stepped in again where it has no business.'

About 13% of those who noted approval of CP also noted religious beliefs and cited Bible passages that supported their position. Comments typical of this group included the following:

*Try putting God first in your life and in the disciplining kids. The Bible says in Proverbs spare the rod spoil the child. It is not wrong to spank your children.*

*I think the Bible out ranks the (AAP) for the final word on corporal punishment.*

*It says right in the bible Spare the rod, Spoil the child.*

The next most common theme identified poor parenting with a lack of control over children's behavior. Some sample comments were:

*Some kids need a good whipping/spanking and the parents don't give it to them. Guess who is in control of that household!*

*SOMEONE MUST BE IN CONTROL and if the PARENTS CHOOSE NOT TO BE, THE*

*CHILDREN WILL AUTOMATICALLY TAKE CHARGE! Without the parents setting the necessary boundaries and enforcing the rules, their children will do as they please and thumb their collective noses at the supposed authority figure.*

Other emerging themes centered on children having too much power in the household. Some examples of this theme were:

*Kids now days have more rights than parents do. Most kids have no respect for their parents or elders—they walk all over them and can get away with it.*

*There are children out there now who run the house because parents have this new thing called a time out—oooohhh so scary.*

### Disapproval of CP

Of the 112 (19.3%) commenters who expressed disapproval of the use of CP with children, more than

three-quarters of this group (76%) specified conditions under which they considered CP inappropriate or harmful. Of these commenters, more than half (53%) identified situations or conditions in which they especially disapproved of CP. These situations included use of CP when the parent is angry; when the parent is impaired in some way, such as being highly stressed or under the influence of alcohol or other drugs; or when a parent relies exclusively or too frequently on CP rather than using other forms of discipline. In addition, ~28% of these comments provided reasons for disapproval of CP. The most frequently mentioned reasons included the belief that nonphysical discipline is effective (11%); that use of CP leads to negative child outcomes such as fear, withdrawal or antisocial behavior (10%); and that the respondent raised his or her children without using CP and the children 'turned out fine' (7%). Here are some examples of quotes from respondents that disapproved of CP:

*Spanking is for apes. Talking it through and explaining what was done wrong, is what humans should do. Use your words not your actions and kids will do the same. I was lucky enough to get parents that had the patience and had the brains to raise my brother and I the better way.*

*Spanking a child! What genius finally figured out that aggression teaches aggression. Hitting a child teaches them that hitting is a way to solve a problem. There are many ways to discipline a child and teach proper behavior. Spanking or hitting them is NOT one of them. I have never spanked my children. I have a grandson that has never been spanked. I don't live in a fairy tale land. I've worked with children with special needs for 30 years, many of which had emotional problems stemming from bad parenting. Imagine being 2–3 feet tall and your parent the person you trust to care for you and protect you starts hitting you. Who do you turn to? There is no one.*

## Discussion

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The findings of the current study complement and are in line with prior quantitative survey studies regarding the US population's attitudes toward CP. First, although we do not know the demographic makeup of our study population, the prevalence of support for using CP found in our study (71%) was on par with the US General Social Survey data showing that 76% of men and 65% of women approve of CP [10]. In addition, the approval rates of CP reported in the current study are highly consistent with existing empirical data on parenting behaviors. Two large national studies have shown that between 65% and 70% of parents use CP to discipline their toddlers (i.e. ages 1–3 years) [11, 12, 48]. The consistency found between rates in this study and in large national studies on this topic suggest that the current study sample *may* be comparable, at least on this topic, to larger, more representative US samples. Hence, our methodology of sampling and coding a large number of comments in a relevant public online forum may suggest a novel approach to data sampling and analysis of public opinion.

The fact that online media accounts of an empirical study linking CP to child aggression prompted thousands of individuals to respond to the content and to the overall idea of the research suggests that many people hold strong feelings about the topic. The open-ended nature of our content analysis provided a unique opportunity to use social media in order to better understand individuals' resistance to information that CP can raise significant risk for harm in children. The comments analyzed in this study provided insights into the conditions under which the public approves of CP, as well as into the more macro-level cultural beliefs and ideologies associated with such approval. Although our data might represent those with the strongest viewpoints, individuals with staunch opinions on a topic are often the most difficult to approach with information contrary to their viewpoint. Therefore, understanding these points of resistance as well as how common they are is an important step toward improving upon the existing evidence-based practice

for the primary prevention of child physical abuse (e.g. Nurse Family Partnership [49], Triple P [7]) and reducing the prevalence of CP use.

The majority of respondents in this study rooted their support of CP in conditions related to instrumental reasoning, including opinions such as CP is an effective disciplinary strategy, CP produces no ill effects and CP is more effective than other forms of discipline. To the latter point, 'time outs' in particular were much maligned; yet it is likely that many parents do not apply the necessary steps for it to be effective [50]. These findings echo those of prior research that sought to better understand support for CP by using other methodologies, such as telephone surveys [e.g. 35]. However, these commonly held notions are inconsistent with the empirical evidence on the risks of CP. Dozens of studies have shown that CP is not likely to promote children's long-term prosocial behavior and increases children's risk for physical, behavioral and mental health problems, such as obesity, aggression and anxiety, respectively [14, 19–22]. Hence, this is an area that needs better translation to the public.

Also common were comments expressing the belief that CP is acceptable under certain conditions, known by some as the *conditional CP* argument [51, 52]. This argument does not promote CP but reasons against a wholesale ban on CP noting, 'the effects of CP are not necessarily negative or positive, but may be either or both depending on many other conditions' [52]. Conditional arguments suggest that CP should be concomitant with other disciplinary methods (such as explaining or reasoning), should be delivered when parents are calm and not out of control, such as when using substances, should not be excessive and should be delivered within the context of an otherwise loving and warm parental relationship. However, qualitative analysis of parent–child interactions suggests that most parents who use CP probably do not follow these guidelines [53]. Furthermore, little empirical evidence is available to support conditional arguments. For example, three recent empirical studies using large national samples of young children showed that CP is harmful to children, even when such punishment is used

in the context of a maternal–child relationship that is otherwise high in warmth [21, 54, 55].

A powerful potential lever for shifting attitudes about CP by addressing instrumental and conditional arguments is a public health campaign designed to educate the general public about the risks and harm to children linked with CP. Instrumental arguments might best be countered by the empirical evidence showing that the likely risks of using CP outweigh the possible benefits, and that other methods of child discipline can be just as or more effective than CP without concomitant risks of harm to the child. Indeed, ‘lack of knowledge regarding the consequences of hitting’ has been an important risk factor targeted in universal campaigns designed to prevent child physical abuse and showing some promising results [56]. Messages of the harms of CP and effective alternative forms of discipline might be integrated, if they’re not already, into existing campaigns as well as developed into new, locally appropriate ones.

The ideological themes seem to broadly represent an overall narrative that children must be controlled, that good discipline is control via hitting, and that parents not only have the right to exert such control but they *must* in order to be considered good parents. There is resentment of external forces (e.g. government and scientists) that suggest parents should not exert such control over their children. There is the belief that to not use CP is to promote children being out of control and ripe for contributing to crime, incivility and general social ills. This viewpoint again runs in contrast to empirical data [e.g. 14] and yet the theme holds strong. We think these beliefs can be countered with education about the effectiveness of a variety of nonphysical disciplinary methods [e.g. 57] as well as messages regarding the need to balance parental rights with children’s rights and well-being. Children’s rights are rarely talked about at the national level in the USA. But at the global level, the UN Convention on the Rights of the Child has been ratified by all countries but the USA [58].

Furthermore, many feel that religious and biblical doctrine, most notably the oft quoted ‘spare the rod, spoil the child,’ supports and justifies parental rights

to use CP. Indeed, parents who report that they are most likely to seek professional advice regarding child discipline from a religious leader have four times the odds of using CP as those who seek such advice from pediatricians [59]. One way to address such ideologies might be to engage trusted and/or prominent community leaders, such as religious leaders, pediatricians, and politicians, to speak out publicly against the use of CP. Disapproval of CP by respected community leaders might help to shift norms regarding the acceptability of CP [35]. For example, following President Obama’s public statement supporting the rights of gays to marry, polling data indicated a shift in the Black community toward greater acceptance of same-sex marriage [60].

### Study limitations

Our unique sample source provided data from individuals regarding their beliefs and opinions on a controversial social topic. However, user-generated content as a data source is not without limitations. First, our sample is a convenience sample of individuals who provided unsolicited comments in an online forum. We were not able to identify respondents’ demographic characteristics, geographical region, or related factors. As a result, the sample may be biased in ways that we cannot address with available data. This limits the generalizability of study findings. User dialog in online forums, particularly with regard to controversial topics, is frequently characterized by comments written in very emotional language [38]. These comments are frequently urgent, impulsive, and reactive [38]. Therefore, it can be deduced that users inclined to provide unsolicited comments in such forums are likely to hold strong opinions on the topic, which, especially when paired with the incivility that frequently appears in online comment threads [61], might skew the comments to extreme viewpoints. In addition, our sampling methodology precluded us from gathering any systematic data regarding key respondent demographic characteristics. However, the anonymity afforded in such forums also means that the likelihood of social desirability bias is

greatly reduced. Furthermore, there is reason to believe that individuals providing anonymous, online comments may be more socioeconomically and racially/ethnically diverse than other study populations. Mobile technology usage is helping to bridge the ‘digital divide’ of economic and social inequality in access to technology-based information [60, 61]. For example, Blacks (33%) and Hispanics (45%) have higher smartphone ownership rates than do Whites (27%) [62]; and young people (those who are most likely to be parents of young children) have especially high rates of mobile technology use, even among low-income individuals [63].

### **Implications for practice and future research**

Use of CP substantially increases children’s *risk* for being physically abused as well as experiencing other harms to their well-being. If we are to change social norms about the use of CP, we must better understand the disconnect between the empirical evidence demonstrating the harms of CP and the highly prevalent attitudes and ideologies that support its use. Indeed, American support for CP, especially for children ages 5 and younger, has continued at high rates, despite research that has shown CP tends to exacerbate and perpetuate negative child outcomes such as increased levels of child aggression: one of the very behaviors parents are often trying to eliminate when they use CP. With a better understanding of the roots of prevailing norms regarding CP, we can develop improved public health prevention and health education strategies designed to counter false beliefs and provide alternative discipline approaches.

Our study identified several specific points of resistance that such strategies will need to overcome. First, support for CP is often couched in instrumental beliefs based on the conviction that CP is an effective means of promoting positive behavior and minimizing negative behavior in children. It will likely take credible community leaders and professionals delivering the message [59], either based on research evidence, community values or both, to

dispel these beliefs. There also is a clear role for a public health approach to promoting positive parenting and discipline strategies, such as those provided by Triple P [6], a program shown to reduce rates of child maltreatment [7]. Our research suggests that it is imperative to include content on the harms of CP into more widely available forms of parent education, such as the Center for Disease Control’s (CDC) Essentials for Parenting Toddler and Preschoolers, an accessible website that provides important education to parents and professional about topics related to discipline but currently does not explicitly advise parents not to use CP [62]. In fact, the CDC has just released a document that suggests the need to promote positive parenting through both public education campaigns and legislative approaches to reduce use of CP as key strategies for preventing child abuse [63]. In order to advance child physical abuse prevention education efforts, more research is needed into how to most effectively and cost-effectively change the beliefs that support CP use and provide parents with alternative, non-violent tools for discipline.

Second, the value of parental rights and control currently trumps that of children’s rights and well-being. Efforts are needed to tap into parents’ sense of wanting to do right by their child and raise a child that is civil, well-behaved, and healthy, and to link those desires with positive parenting and disciplinary behaviors other than CP. The UN Convention on the Rights of Child (CRC), ratified by all countries except the USA, has provided an important framework for many countries aiming to shift social norms regarding CP [64] and prevent child physical maltreatment [65]. Spurred by this Convention, 49 nation states have now adopted universal bans on CP [66]. Without the CRC framework to fall back on in the USA, research is needed particularly to understand how best to help parents value children’s rights, as well as their own, and see them as being paramount to child well-being and safety.

Third, those parents whose beliefs about CP are couched in political or religious ideological beliefs might be most amenable to an appeal from a respected political, religious or other community leader. At present, seeking advice about discipline

from religious leaders raises risk for CP use [59]. Hence, there is a great need to work with leaders of faith to educate them about the harms of CP for children and roadmaps for such practice are available [67].

For all of these resistance points, we suggest that it may be most effective to frame positive parenting and discipline education as helping parents to make an informed *choice* in promoting their children's well-being and improving their children's likelihood of success in life. Strategies perceived as 'soft on discipline', interfering with parental rights, or delivered by non-credible sources will likely be met with strong opposition. While much research has been done in health message framing in general [68, 69], to the authors' knowledge, no research has been done on framing health messages around positive, non-violent parenting. This is an area ripe for child physical abuse prevention research.

The rise of interactive media has created a platform for average citizens to express their opinions and beliefs and in doing so also has created a platform for researchers and educators to observe and moderate online discourse in real time. Though our findings are congruent with several studies [38, 61] which found online discourse to be primarily driven by emotional, polarized comments, we recognize its potential as a tool for both understanding the root of pervading social norms regarding CP of children in the USA and delivering education about positive parenting strategies. Brossoie *et al.* [41] found that when knowledgeable posters participated in the discussion, they were able to regulate both the depth and quality of discussion as well as provoke diverse thinking and more thoughtful posts from other participants. In this vein, as interactive media continues to evolve, it is worthwhile to explore the use of educated moderators in these settings as a method of guiding online discussions regarding CP and other important health-related topics.

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### Conflict of interest statement

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None declared.

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