



## **Discipline of the Child**

### **Physical Punishment: A Scientific Review of its Use in Discipline**

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#### **ABSTRACT**

**A proper understanding and application of the disciplinary process is fundamental to effective parenting. Discipline is the training of a child to produce a specific character or pattern of behavior, which in time leads to the adoption of certain moral and ethical principles. Basic to the process of discipline are the components of instruction, affirmation, and correction. This statement explores the component of correction, specifically the role of physical punishment. Not long ago, the limited use of spanking was considered an acceptable method of correction by a majority of psychologists and over 90% of parents. Today that support has declined. When evaluated objectively, however, research supports the use of spanking in specific disciplinary situations rather than the banning of its use all together, which some have proposed.**

Pediatricians are commonly confronted with questions from parents of young children about discipline. Effective advice will include a discussion of methods for encouraging proper behavior and methods for correcting misbehavior. Disciplinary spanking, one form of physical (corporal) punishment, is a corrective method used by American parents for generations.<sup>1,2,3</sup> Until recently, most primary care physicians, as well as psychologists, had approved of its use in specific behavioral situations with children.<sup>4,5</sup> Some of the most scientifically-supported treatment plans for young children with oppositional defiant disorder or conduct disorder once included spanking as the preferred technique to enforce time-out.<sup>6,7,8,9</sup> In the 1990's, however, spanking began to fall out of favor among professionals due to pressure from opponents claiming harmful outcomes in children. Spanking-ban advocates have cited numerous correlational studies showing associations between the general use of physical punishment and suboptimal child outcomes. An international movement to ban the use of disciplinary spanking has been led by various activist organizations, such as the Global Initiative to End Corporal Punishment of Children.<sup>10</sup> Even the American Academy of Pediatrics (AAP), in a recent policy statement on "Effective Discipline," prominently cites this Global Initiative in its prohibition of all spanking. The AAP does so, however, without citing a single study documenting the effectiveness of any other disciplinary response to noncompliant behavior.<sup>11,12</sup> With this decline in acceptance, pediatricians today are often hesitant to recommend disciplinary spanking. They are uncertain about the role it should play, if any, in childrearing and what method of discipline should be used instead. This policy paper will carefully examine this issue by first describing an overview of the discipline process, and then offering an objective summary of current research relating to parental use of disciplinary spanking.

## DISCIPLINE OF THE CHILD

The fundamental goal of parenting is to teach and assist the child in acquiring character traits such as self-control, teachability, respectfulness, integrity, honesty, empathy and competency. These traits do not come naturally to an infant, toddler or preschooler, but can be acquired with the help of the disciplinary process. *Discipline* is defined as “training expected to produce a specific character or pattern of behavior, especially training that produces moral or mental improvement.”<sup>13</sup>

In the context of parenting, the discipline process is comprised of three primary components: instruction, affirmation, and correction. The effectiveness of these three components is then influenced by a host of factors in a child’s life, such as the environment, parental tendencies, and child temperament (See Figure 1 below). This complex process produces child outcomes through the combination of these many elements — most of which can be influenced by parents, particularly for children at younger ages.

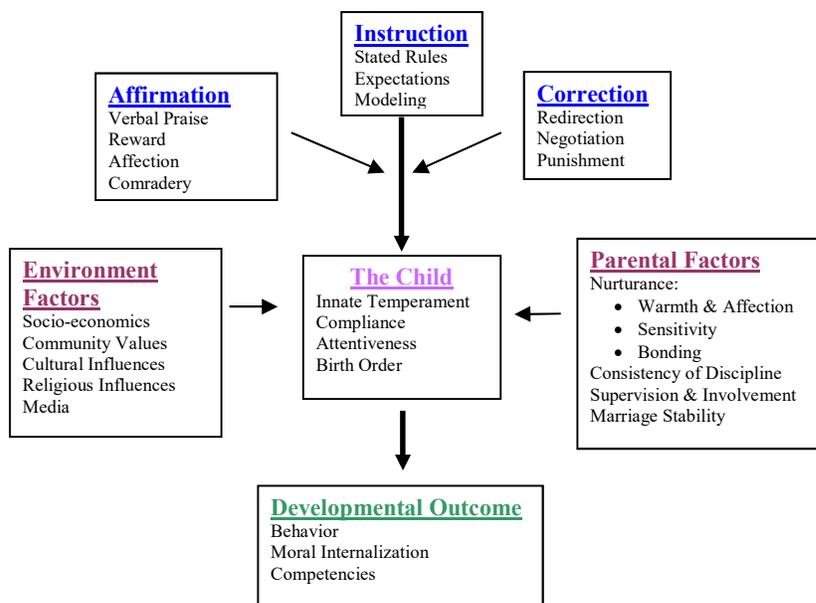
### Developmental and Behavioral Theories

Socialization is the developmental process by which individuals acquire social skills, beliefs, values, and behaviors necessary to function effectively in society or in a particular group.<sup>14</sup> If the parents’ efforts are to be successful, their approach to discipline must accommodate to the child’s developmental stage and abilities. During the preoperational stage of development (ages 2-6 years) children act from an egocentric perspective with growing, but limited, ability to distinguish between his own point of view and those of others. They have difficulty distinguishing causation from coincidence and reality from fantasy. During this period, many children are often not persuaded to change their behavior by verbal reasoning alone, but respond more to its use in combination with positive and negative consequences.<sup>15,16</sup> For the older, more cognitively developed school-aged child, reasoning and/or penalizing consequences become more effective in socializing behavior, especially if children have learned to cooperate with parental authority as a result of “*background power assertion*,” defined as the child’s memory of parental willingness to enforce reasoning with negative consequences when necessary.<sup>17</sup>

Behaviorists emphasize that children learn by how the environment responds to the child’s behavior. A response is called a *reinforcer* (affirmation) if it increases the likelihood of the desired behavior occurring again in the future; it is called a *punisher* (correction) if it decreases the likelihood of the behavior occurring again. Parental attention to the child can be a powerful reinforcer of behavior. A third modifier of behavior is called *extinction*, where the child’s behavior elicits no response from the environment and thus is eventually extinguished. Extinction is demonstrated when ignoring a toddler’s mild temper tantrum results in its elimination. Choosing the right disciplinary measure for the child’s particular age, temperament, and offense is essential to parental success.

FIGURE 1

**DISCIPLINARY PROCESS**



**COMPONENTS OF THE DISCIPLINE PROCESS**

**Instruction**

Of the three basic components of discipline, proper instruction is foundational. A parent’s expectations must be communicated clearly and repetitively in order to begin to achieve appropriate cooperation. After the desired behavior is communicated, the corrective consequence must also be known to the child. For the toddler, the consequence may not be understood initially due to his preoperant cognition, but with repetition, his behavior will be modified by the reinforcer and punisher responses. For the older child, instruction will be understood and a volitional decision to comply or defy will consciously be made. Instruction can also be facilitated nonverbally through parental modeling of proper behavior. Poor behavior outcomes are often linked to unclear or absent instruction and inconsistent parental modeling.

**Affirmation**

Affirmation represents the reinforcer response in the behavioral model. Relative to a child’s level of development, it will take the form of physical affection or verbal praise. Affirmation encourages the child to repeat the target behavior, and it strengthens the parent-child relationship which in turn enhances the effectiveness of mild corrections, such as reprimands or time out. Additionally, when parents seek to cooperate with reasonable child requests, the likelihood of child cooperation in the future is increased.<sup>18</sup> Parents who use little or no affirmation and rely upon harsh and excessive correction fail to achieve optimal behavioral control.<sup>19</sup>

**Correction**

Correction represents the confrontive response in the behavioral model and is necessary when, in spite of affirmation, the child fails to follow instructions. For the infant, this may involve redirection or distraction. Brief expressions of disapproval (nonverbal or verbal) may also modify

behavior at this stage. As a child's mobility and assertiveness mature, correction often requires concrete actions such as physical restraint following disapproval. As cognition and determination mature, the toddler (> 18 months) may require a time-out or an occasional disciplinary spanking (depending upon the setting and degree of defiance) since reasoning alone is often ineffective, especially when toddlers are defiant. However, even though oppositional toddlers are unlikely to be talked into cooperating, some age-appropriate reasoning can prepare them to pay attention to reasoning in the future, provided continued defiance is handled with appropriate negative consequences.<sup>20,16</sup> With further development, reasoning and appropriate negotiation can be useful in helping a child understand why the behavior is required, rather than to just blindly obey. For the older preschooler, reasoning and privilege removal become more effective, and with the adolescent, grounding and work duty or monetary penalties are usually sufficient to achieve cooperation.

Natural and logical consequences can also be effective modifiers of behavior, and their timely use may preclude the need for any additional corrective action by the parent. Examples:

- Natural: A toddler disobediently runs from a parent on a sidewalk and accidentally falls and skins a knee.
- Logical: A toddler refuses to play appropriately with a toy and therefore the toy is taken away for a period of time.

Parents who appropriately instruct and then balance their use of correction with affirmation will achieve a more optimal developmental outcome with their children.<sup>19,21</sup>

## **FACTORS AFFECTING THE DISCIPLINARY PROCESS**

### **Child Factors**

A child's age, developmental level, and individual characteristics should be considered in the implementation of discipline. Innate temperament will influence a child's tendency to comply, as will energy level and individual attentiveness. Age influences a child's need for behavioral correction, with punishment more frequently needed and used during the preschool years.<sup>22</sup> All these child factors should influence the disciplinary measures a parent uses to correct the child, and how they are implemented.

### **Parental Factors**

Parental factors, such as nurturance, communication, marital quality, and effective disciplinary skills, play a pivotal role in child discipline. Parents act as key role models for acceptable and expected behavior.<sup>23</sup> Adult models also influence adverse outcomes in children, such as aggressive behavior.<sup>24</sup> Parental consistency and predictability are necessary in promoting acceptable behavior in children. Changing consequences, delayed imposition of consequences, and irregular application of consequences are practices that often characterize parents of out-of-control children.<sup>25</sup> Proactive instruction versus reactive correction lead to very different behavioral outcomes. A parent who takes the *time* to instruct and forewarn a child is more likely to achieve a desired behavior than one who impulsively corrects a child's uninstructed behavior.

The parent-child relationship is foundational to the disciplinary process. Children respond best if discipline occurs in the context of warm, affectionate, accepting relationship.<sup>23</sup> Parental involvement in, and monitoring of, a child's activities are associated with more compliance.

Bauman and Friedman summarize the results of negative parenting: “Ineffective parenting practices predict conduct disorder in childhood, which is strongly associated with academic failure, peer rejection, and later involvement in chronic deviant behavior, including aggression. Family variables are consistent covariates for early forms of deviant behavior. Families of antisocial children are characterized by harsh, inconsistent discipline, little positive parental involvement with the child, and poor monitoring and supervision. Inept parenting practices, which include noncontingent positive and negative reinforcers, mean coercive child behaviors are unwittingly reinforced.”<sup>26,25</sup>

Finally, the intact biological family unit is ideal for the optimal development of the child.<sup>27</sup> Marital harmony models interpersonal respect and provides a stable environment for emotional growth. Children in families with high levels of marital conflict are more likely to have behavioral problems than those in families with low levels of conflict.<sup>28</sup> Also, single parents and step-families face distinct challenges and need a comprehensive approach for raising their children.

### **Environmental Factors**

Environmental factors, such as socioeconomic conditions, cultural views, ethnicity, peers, religiosity and neighborhood composition influence the effect on the child of disciplinary measures. Families with few socioeconomic resources are less likely to have the time and patience to use slow-working disciplinary actions, which is one reason they use physical punishment more often, yet achieve better behavioral control using it than more affluent families.<sup>29</sup> When environmental risk is high, parenting practices that are firmer result in lower levels of young adolescent antisocial behavior.<sup>30</sup> In neighborhoods where the prevalence of corporal punishment is high, its use does not lead to greater child behavioral problems.<sup>31</sup> African American and lower-income youths are more approving of parental spanking as a disciplinary method.<sup>32</sup> Greater religiosity is tied to more positive family relationships.<sup>33</sup> Several studies have shown that spanking leads to less child aggression in religious and ethnic subcultures in which its use is considered appropriate,<sup>34,35</sup> especially when it is used at younger ages and phased out by age 7-10 years.<sup>36</sup>

### **CORPORAL PUNISHMENT**

*Corporal punishment* is a general term for “physical punishment.”<sup>37</sup> Included under this very broad definition is the practice of ordinary spanking, as well as severe physical acts such as beating, kicking, punching, choking, and face slapping. *Physical child abuse* is defined as “non-accidental injury inflicted by a parent or caregiver.”<sup>38</sup> The National Clearing House on Child Abuse and Neglect defines *physical abuse* as “the infliction of physical injury as a result of punching, beating, kicking, biting, burning, shaking, or otherwise harming a child.”<sup>39</sup> *Disciplinary spanking* has been defined as a mild type of corporal punishment that is “physically non-injurious, intended to modify behavior, and administered with the open hand to the extremities or buttocks.”<sup>40</sup> Although disciplinary spanking and physical child abuse fall under the broad definitional umbrella of corporal punishment, each is very different in intent and result; see Figure 2.

FIGURE 2

**CORPORAL PUNISHMENT**

	<u>Disciplinary Spanking</u>	<u>Physical Abuse</u>
<i>The Act</i>	Spanking: one to three swats to the buttocks of a child	Physical assault, including to beat, kick, punch, choke, etc.
<i>The Intent</i>	Training: to modify behavior	Violence: "physical force intended to injure or abuse." <sup>41</sup>
<i>The Attitude</i>	Love and concern	Anger and malice
<i>The Effects</i>	Mild to moderate discomfort; Behavioral correction	Physical and emotional injury

In order to accurately evaluate the efficacy or inefficacy of disciplinary spanking, it must be distinguished from inappropriate and severe types of corporal punishment. Failure to do so results in confusion, inappropriate generalizations, and inaccurate conclusions. In fact, only one study that excluded overly severe physical punishment found more adverse child outcomes with spanking than with other disciplinary responses, and that was with European-Americans, while the study’s trend was the opposite for African-Americans.<sup>42,43,44</sup> In contrast, three of the five studies of conditional (back-up) spanking found that it resulted in less noncompliance and less antisocial behavior than other disciplinary methods<sup>45,46,47</sup> To our knowledge no other study has ever found a significantly harmful effect of disciplinary spanking after excluding overly severe physical punishment.<sup>48,49,50,21</sup>

**THE ROLE OF PUNISHMENT**

Punishment in general has been a controversial topic for decades. In the 1930’s, B.F. Skinner and Estes dismissed punishment as being a useful or necessary component to effect lasting behavioral modification and instead embraced positive reinforcement (reward) as a sufficient means. The scientific basis for their conclusions was viewed with skepticism by contemporaries and, in the following two decades, behavioral experiments validated this concern by revealing impressive data supporting the long-lasting beneficial effects of punishment on behavioral control.<sup>51,52,53</sup> After a few years of trying to train parents of clinically-defiant young children to use only positive reinforcement, behavioral psychologist Gerald Patterson concluded that teaching parents to use punishment effectively was the most essential component of successful discipline, referring primarily to time-out. He stated, “If I were allowed to select only one concept to use in training parents of antisocial children, I would teach them how to punish more effectively” (p.111).<sup>25</sup>

Parents of socially aggressive children use punishment more often than parents of more compliant children. This observation has led some to conclude that punishment *causes* aggressive behavior. Patterson concluded, however, that the key factor was parental inconsistency in using punishment, especially if children learn that they can get what they wanted by escalating their verbal aggression toward their parents.<sup>54</sup> The current debate about the use of punishment has been dubbed the “politicization of punishment,” noting a shift of emphasis away from the *effectiveness* of punishment towards the societal *ethics* of using punishment.<sup>55</sup> A textbook on the history of psychology labels the presumed ineffectiveness of punishment “one of the most incredible dogmas of the twentieth century (p. 50).”<sup>56</sup>

The most ardent opponents of disciplinary spanking either explicitly or implicitly oppose all forms of disciplinary punishment.<sup>57,58,59</sup> This opposition to punishment in general and spanking in particular is based on a prior anti-punishment commitment that considers superficial, correlational research evidence to be sufficient to oppose all punishment, but fails to provide effective discipline alternatives for parents.<sup>60</sup> For example, the American Academy of Pediatrics (AAP), in its 1998 Guidelines for Effective Discipline, recommended verbal reprimand as the only form of punishment available to the parents of young children, relegating time-out to a form of extinction.<sup>61</sup> Then, in its 2018 follow-up statement, Effective Discipline to Raise Healthy Children,<sup>12</sup> the AAP lists timeout as the only acceptable response to noncompliance, citing only one supporting study that actually *failed* to teach parents how to implement timeout in a pediatric clinic.<sup>11</sup> At the 2015 conference of the American Psychological Association, a leading anti-spanking researcher, Elizabeth Gershoff, was asked what parents should use instead of spanking. She replied that she didn't know, but that time-out and privilege removal don't work.<sup>62</sup> Similarly, when the Society for Research in Human Development adopted a resolution in 2013 to support bans on spanking in the home, "positive parenting" (which opposes corrections with any negative consequences) was the only alternative approach specified.<sup>63,64</sup> Another spanking opponent, psychologist Joan Durrant, actually opposes timeout, privilege removal, and grounding (p. 248).<sup>57</sup> The central point of this exclusively "positive" discipline approach is that negative consequences, such as spanking, time-out, or privilege removal should never be used, and instead should be replaced by explanation and reasoning, regardless the child's age or behavior. Remarkably, there is no sound scientific evidence to support this opposition to negative disciplinary consequences.<sup>65,60</sup>

While parents should be as affirming as possible with their children, it is unrealistic to expect parents to avoid all negative disciplinary consequences all the time, especially with oppositional defiant children. For example, in our own analyses of the Fragile Families study, only 1% of mothers of 5-year-olds<sup>66</sup> were able to avoid using any negative disciplinary consequences for a full year, with 77% occasionally using physical discipline, an additional 11% threatening to use it, and another 11% using either time-out or privilege removal. All of these tactics, however, are opposed by the leading anti-spanking social scientists, leaving parents empty handed when managing defiant child behavior. Positive parenting may be effective by itself with cooperative children, but the effectiveness of positive methods with defiant preschoolers depends upon these methods being backed up with negative consequences when needed.<sup>16,20</sup>

Studies have shown that the effectiveness of punishment depends on its timing, intensity, context, and consistency.<sup>67,51</sup> The shorter the delay between the act of transgression and the resulting punishment, the more effective the punishment will be. The intensity of the punishment should be high enough to generate mild to moderate anxiety, but not too high.<sup>68</sup> Punishment is most effective when used in conjunction with some degree of reasoning and within the context of a warm, affectionate parent-child relationship. When parents explain the reason for the punishment, its use can be delayed and the behavioral goal accomplished with a milder punishment intensity level.<sup>69</sup> Being overly punitive, excessively permissive, or inconsistently cycling between these two extremes are all associated with an increased risk of delinquency.<sup>23,70,71,72</sup>

Punishment is only necessary when a child is cognitively and willingly capable of defying a parent's directive. Innocent curiosity and developmentally driven exploration, which is

characteristic of infancy and early toddlerhood, are not grounds for punishment. Beyond a year of age, increasing mobility and cognition tempt a toddler to venture beyond a parent's directed limits. When repeated instructions and affirmation fail to curb defiance or dangerous behavior, restraint or punishment is necessary to achieve behavioral control. The selection of punishment techniques should be determined by the child's level of development and must include a full range from physical restraint and time-out for the toddler, to disciplinary spanking and privilege removal for the preschooler, to grounding for the adolescent.

### **DISCIPLINARY SPANKING: SPECIFICALLY EXAMINED**

In 1996, the American Academy of Pediatrics (AAP) cosponsored the only known scientific consensus conference on the use of corporal punishment by parents, which included a full range of experts in parenting research.<sup>73</sup> The goal of the two-day symposium was to develop "consensus statements regarding the scientific evidence on the long and short term effects of corporal punishment on children." The co-authors of this policy statement were in attendance as invited participants.

The panel began by establishing the following definitions:

Corporal Punishment: "bodily punishment of any kind."

Spanking: "physically non-injurious, intended to modify behavior, and administered with the open hand to the extremities or buttocks."

Using these definitions, the committee could not reach any strong conclusions favoring or opposing a parent's use of disciplinary spanking. An exhaustive systematic review of the then current medical and psychological literature on nonabusive corporal punishment was presented by Larzelere.<sup>74</sup> In this review, he found stronger causal evidence of beneficial rather than detrimental effects of disciplinary spanking by parents with preschool children, ages 2 to 6 years. In particular, not one of the 35 best studies in the review identified a single alternative discipline response that had superior child outcomes to that of nonabusive physical punishment of children under the age of 13.

Among the findings of the conference were:

- The strongest studies do not support a definitive link between spanking and later violent behavior.
- The most causally conclusive studies do not indicate spanking to be detrimental to a child.
- Spanking should not be the primary or only response used by a parent.
- Limited data suggest short-term effectiveness of spanking in a controlled setting.
- More research is needed on the use of spanking with children.

The co-chairpersons, Stanford Friedman, MD and Kenneth Schonberg, MD, concluded "whether spanking is harmful or beneficial to a child must be viewed within the total context of a child's life and environment.... Given a relatively 'healthy' family life in a supportive environment, spanking in and of itself is not detrimental to a child or predictive of later problems."<sup>75</sup> The most prolific parenting researcher at the conference, Diana Baumrind, concluded, "As Dr. Larzelere's review of quality studies documents, a blanket injunction against disciplinary spanking by parents is not scientifically supportable" (p. 828).<sup>76</sup>

Although the quality and quantity of studies have accelerated on both sides of this issue since then, Dr. Baumrind's conclusion remains as valid today as it was then. Another scientific consensus conference is needed where all valid scientific evidence can again be reviewed and fairly debated. The leading anti-spanking researchers and relevant task force co-chairs have been challenged to debate the full range of evidence before a scientific audience, but the desire for a fair hearing has not been reciprocated.<sup>77,78,79</sup> Instead, anti-spanking researchers continue to impose their viewpoint on scholars, policymakers, and parents worldwide, while disregarding the substantial evidence for a more balanced perspective. Children and parents deserve quality science from multiple perspectives, not ideology-driven research that ignores valid scientific critiques and evidence.

## **RESEARCH ON DISCIPLINARY SPANKING**

Although 94% of American parents spanked their 3-and 4-year old children in the 1990's,<sup>80</sup> that support had declined to approximately 63% in 2014<sup>22</sup> as anti-spanking perspectives came to dominate the media. Two major perspectives in the debate and literature have emerged in recent decades.<sup>81</sup> The first is an unconditional anti-spanking position which opposes all forms of physical punishment. Supporting this position, Elizabeth Gershoff concluded in a 2002 meta-analysis of the literature that parental use of corporal punishment was associated with lower levels of moral internalization and mental health, as well as higher levels of aggression in children.<sup>82</sup> In a 2016 updated meta-analysis, Gershoff and Andrew Grogan-Kaylor<sup>83</sup> repeated these conclusions, still relying only on correlations between spanking and negative outcomes, despite many studies and two meta-analyses that had provided stronger causal evidence to the contrary.<sup>42,84</sup> The second perspective claims supporting evidence for the selective use of spanking, which has been called the conditional-spanking perspective.<sup>81</sup> Supporting this position, Robert Larzelere and Brett Kuhn, in their 2005 meta-analysis of the corporal punishment literature, identified conditions under which spanking (as specifically defined above) has been shown to be more beneficial to children than most alternative disciplinary methods. They concluded that disciplinary spanking can sometimes be used to reduce children's noncompliance or aggression better than other methods.<sup>42</sup>

### **Examining the Research**

Scrutiny of the methods used in many of the recent spanking studies reveals significant flaws, many of which can significantly impact the study's findings. In fact, most research against spanking uses methods so flawed that such studies would be rejected if used to oppose a medical therapy, such as chemotherapy for treating cancer. Studies with these flaws are often cited by researchers opposed to spanking, with the most recent example being the aforementioned 2016 meta-analysis of corporal punishment by Gershoff and Grogan-Kaylor.<sup>83</sup>

*Meta-analyses.* The use of meta-analysis provides the most comprehensive evaluation of a given therapy. The validity of a meta-analysis, however, depends on the validity of the studies included. The causal validity of an analysis depends on whether its studies used randomization or correlations. Meta-analyses of randomized studies provide valid causal evidence, but meta-analyses of non-randomized studies, or those based upon correlations, are widely recognized as being biased.<sup>85</sup> To date, there have been six published meta-analyses on the use of physical punishment by parents. The following table compares the meta-analyses.

TABLE 1. **Strength of Causal Evidence and Conclusions of Meta-Analytic Literature Reviews of Physical Punishment, 2002–2018**

Study	Quality of Causal Evidence	Negative Outcomes
Gershoff (2002) <sup>82</sup>	Weak: Correlational (59% concurrent <sup>a</sup> )	10 of 11 outcomes
Gershoff & Grogan-Kaylor (2016) <sup>83</sup>	Weak: Correlational (55% concurrent <sup>a</sup> )	All outcomes
Paolucci & Violato (2004) <sup>86</sup>	Weak: Correlational (39% concurrent <sup>a</sup> )	None that were substantial
Larzelere & Kuhn (2005) <sup>42</sup>	Strong <sup>b</sup> : Compared strongest causal evidence for physical punishment vs. alternative tactics	Only for severe or predominant use of physical punishment
Ferguson (2013) <sup>84</sup>	Stronger <sup>c</sup> : Longitudinal; 56% controlled for baseline scores on outcome	Miniscule
Larzelere et al. (2018) <sup>44</sup>	Stronger <sup>c</sup> : Longitudinal; 100% controlled for baseline scores on outcome	Miniscule (positive or negative outcomes) <sup>d</sup>

<sup>a</sup> Concurrent correlations are associations between physical punishment and a child outcome measured during the same time period, which cannot ensure that the physical punishment preceded the child outcome. <sup>b</sup> This is the only meta-analysis that compared the outcomes of physical punishment with outcomes of alternative tactics, using the same analyses on the same families; it used the strongest causal evidence available, including simple correlations from applicable studies from Gershoff (2002) when no strong causal evidence was available. <sup>c</sup> These are the only meta-analyses that ensured that the spanking preceded the measure of the child outcome by excluding cross-sectional studies; moreover, they emphasized studies that adjusted statistically for pre-existing differences on those child outcomes.<sup>d</sup> Surprisingly, whether spanking looks slightly beneficial or slightly detrimental depends on which of two valid statistical methods are used to adjust for pre-existing behavior problems in the children. Moreover, the statistical method that finds adverse effects has recently been shown to be biased.<sup>87,88</sup>

The two meta-analyses by Gershoff, claiming to find negative outcomes, summarized non-randomized studies and relied entirely upon correlations to reach their conclusion. The other four meta-analyses, using less correlation and somewhat stronger causal analysis, found little to no negative outcomes. Here are their major conclusions:

- “Exposure to corporal punishment does not substantially increase the risk to youth of developing affective, cognitive, or behavioral pathologies” (p. 197).<sup>86</sup>
- Results “significantly favored conditional spanking over 10 of 13 alternatives for reducing child noncompliance or antisocial behavior. Customary physical punishment yielded effect sizes equal to alternative tactics . . . Only overly severe or predominant use of physical punishment compared unfavorably with alternative disciplinary tactics.” (p.1)<sup>42</sup>

- “The impact of spanking and [corporal punishment] on the negative outcomes evaluated here (externalizing, internalizing behaviors and low cognitive performance) are minimal” (p. 196).<sup>84</sup>
- “Significant results indicated a small risk or a small benefit of spanking, depending on the adjustment method.” (p. 2038)<sup>44</sup>

These conclusions make it clear that the majority of the relevant published meta-analyses do not support a prohibition of all spanking. Despite this evidence, some professional associations (the AAP and the American Psychological Association) embrace the Gershoff meta-analyses and adamantly oppose the use of disciplinary spanking. It is, therefore, important to evaluate the methods used in these meta-analyses to reach their bold conclusions.

### **Fatal Fallacies of the Research**

Remarkably, all the evidence against spanking comes from studies which suffer from four major fallacies, any one of which would be a fatal flaw in medical research.

- The *definition* fallacy: In assessing the effectiveness of an intervention, whether a medical intervention against a disease or a disciplinary action to correct behavior, the intervention must be clearly defined and implemented correctly. Definitions are largely ignored in most studies showing negative outcomes from the use of physical punishment.
- The *correlational* fallacy: Correlations, or associations between two variables, do not prove causation. Correlations are especially misleading when evaluating actions chosen to correct disciplinary or medical problems, called *corrective actions*.
- The *extrapolation* fallacy: Extrapolations can lead to inaccurate conclusions. Even if infrequent spanking is correlated with better outcomes than overly frequent spanking, this does not mean that eliminating all spanking is best.
- The *grouping* fallacy: Indiscriminate grouping or lumping of all forms of physical punishment can account for inaccurate conclusions.

*The Definition Fallacy.* In designing a study to evaluate the effectiveness of one treatment over another, the first step must be to define the treatment with respect to dosage, timing, and setting of the treatment. Disciplinary spanking has been defined as “physically non-injurious, intended to modify behavior, and administered with the open hand to the extremities or buttocks.”<sup>89</sup> Notably, only four of the 75 studies in the latest overview by Gershoff & Grogan-Kaylor verified that spanking was used appropriately, and those four studies actually found disciplinary spanking to be at least as effective as the three alternatives with which it was compared.<sup>46,48,49,45</sup>

*The Correlational Fallacy.* The biggest problem with the “evidence” against spanking is the correlational fallacy. Even college freshmen learn that correlation does not prove causation, yet 100% of the evidence against spanking in Gershoff’s two meta-analyses is based on simple correlations.<sup>83,82</sup> Worse, most of their evidence is based on “concurrent” correlations, i.e. correlations between disciplinary spanking and child behaviors during the same time period, regardless which occurred first. As shown in Table 1, Gershoff’s meta-analyses are the only ones where most of the studies reported concurrent correlations, not even ensuring that the measure of physical punishment preceded their measure of the so-called child outcome. Using this logic, concurrent correlations could be interpreted to show that an effective chemotherapy regimen *caused* a group of patients to develop cancer if the researcher did not distinguish whether the cancer

was present before, during, or after the chemotherapy. Yet this is the kind of flawed evidence from concurrent correlations in 55% of the studies that Drs. Gershoff and Grogan-Kaylor considered relevant for their latest meta-analysis.<sup>83</sup> Did the aggression occur first and elicit more spanking from the parents, or did the spanking occur before the aggression? One cannot tell from concurrent correlations. This type of study would never be accepted as evidence against a medical practice. Including concurrent correlations in a meta-analysis seems to reflect the authors' bias rather than an honest attempt to summarize the most objective causal evidence.

By limiting their meta-analysis to correlations, Gershoff and Grogan-Kaylor ignored evidence from studies that took pre-existing child differences into account. A better meta-analysis in 2013 included only longitudinal studies (45 of them), with 25 taking pre-existing child differences into account with statistical adjustments.<sup>84</sup> This meta-analysis concluded that “the impact of spanking . . . on the negative outcomes . . . are minimal.” (p. 196) Gershoff and Grogan-Kaylor excluded 34 of those 45 longitudinal studies for unspecified reasons and used only simple correlations from the remaining 11 longitudinal studies.

Gershoff and Grogan-Kaylor themselves acknowledged that their correlational evidence was inadequate for supporting any causal conclusion. They stated, “As most of the included studies were correlational or retrospective (72%), causal links between spanking and child outcomes cannot be established by these meta-analyses.” (p.464)<sup>83</sup> They also stated that their strongest evidence from unadjusted longitudinal correlations “do not rule out the potential for a child elicitation effect; however, . . . longitudinal bivariate coefficients are decidedly stronger methodologically than within-time coefficients.” (p.455)

In contrast, the most recent meta-analysis of child outcomes of customary spanking<sup>44</sup> showed how longitudinal studies can be analyzed to approximate valid causal inferences more closely than meta-analyses of simple correlations. It revealed that the correlational evidence used to oppose spanking disappears once pre-existing child differences are accounted for statistically.

Because of this correlational fallacy, Gershoff and Grogan-Kaylor have failed to find *any* disciplinary response that is linked to reductions in children's behavior problems, despite investigating eight other disciplinary responses in a large international study.<sup>90,91</sup> That is because their reliance on correlations makes *all* corrective actions look harmful or ineffective,<sup>92</sup> just as it would for all cancer treatments.<sup>93</sup>

*The Extrapolation Fallacy.* The use of extrapolation can also lead to inaccurate conclusions. For example, if low-dose chemotherapy against cancer is associated with better outcomes than high-dose chemotherapy against the same cancer, would it be correct to conclude that zero chemotherapy would yield even better results? Of course not! Yet, this is precisely the kind of flawed reasoning Gershoff and Grogan-Kaylor use in their anti-spanking research. The meta-analysis recommends that parents never use spanking, in spite of the fact that only four retrospective studies in their meta-analysis actually compared the outcomes of never-spanked children to spanked children. Moreover, one of those studies showed a *beneficial* outcome in that American soldiers who recalled being spanked as children had lower rates of drug abuse than those who did not recall being spanked.<sup>94</sup> Thus, not only is their no-spanking recommendation an extrapolation based upon a comparison of infrequently spanked children versus those spanked too

frequently, but it is also contradicted by one of the few directly relevant studies included in their meta-analysis.

Gershoff and colleagues responded to this criticism by claiming that 26 other studies in their meta-analysis also investigated a “no-spanking” comparison group,<sup>95</sup> but, in fact, most of the children in this group were spanked at some point in their lives. Eleven of those studies reported zero spanking for a short time period (ranging from 10 minutes<sup>46</sup> to one year<sup>96</sup>). Six other studies included occasional spankers in the comparison group (55%<sup>97</sup> to 98%<sup>98,99</sup> were spanked occasionally). The fact that Gershoff, Grogan-Kaylor, and their co-authors still claim that all of these studies can be extrapolated to support their zero-spanking advocacy efforts seems to be another indication of their bias.

Other studies of never-spanked children do exist, but they were not included in their latest meta-analysis. For example, one retrospective study found slightly better adolescent outcomes for those whose spanking was phased out before age 12 compared to adolescents who were never spanked,<sup>100</sup> replicating a prospective longitudinal study with similar results by a leading spanking-ban advocate.<sup>36</sup>

*The Grouping Fallacy.* This latest 2016 meta-analysis condemns all spanking without any evidence against its use in disciplinary settings in which spanking might be considered customary or traditional. Although Gershoff and Grogan-Kaylor commendably dropped most of the studies from her previous 2002 meta-analysis that investigated overly severe physical punishment, they still included some, such as a study by Yan Li, et al citing the use of “spanking the face, hitting on the head or back.”(p.661)<sup>101</sup> Of their 75 studies, only four explicitly limited spanking to their stated focus of “hitting a child on their buttocks . . . using an open hand.”(p.457)<sup>83</sup> Those were the four studies that found spanking to be as or more effective than the three alternatives investigated for enforcing cooperation with time out in defiant 2- to 6-year-olds.<sup>46,48,49,45</sup> Moreover, none of the 71 other studies limited their investigation to disciplinary situations where spanking has been considered an acceptable option for generations (e.g., persistent defiance in older preschoolers). Grouping all forms of corporal punishment under the title of “spanking” confuses rather than clarifies the truth about its efficacy when used appropriately.

## **PROFESSIONAL BIAS**

There appears to be an anti-spanking bias within some professional societies as evidenced by the continued use of flawed research methodology in their publications on disciplinary spanking. In their published 2013 letter to the editor of *Pediatrics*, Trumbull, Larzelere, and Zanga<sup>102</sup> challenged the AAP journal for calling for the cessation of all spanking by parents on the basis of three inadequate studies. They noted that the two retrospective studies by Afifi et al.<sup>103,104</sup> claimed to provide evidence against all disciplinary spanking, even though the key survey questions used only the terms “push, grab, shove, slap, or hit,”<sup>103</sup> not “spank.” A third study by MacKenzie and associates<sup>105</sup> claimed to have evidence against all spanking even though only two of 16 outcomes were significant (after all controls were included), and the mean effect of spanking at the age of 3 years was never in a detrimental direction. Overall, the mean effect size in the study can be calculated as equivalent to a meager odds ratio of 1.06 (OR = 1.00 indicates no association at all), which can easily be explained by unmeasured confounding variables. In contrast, epidemiologists

are reluctant to make causal inferences unless the odds ratio is at least 2.00, even after controls for confounding variables are applied.<sup>106</sup>

The AAP's latest policy statement on discipline, *Effective Discipline to Raise Healthy Children*,<sup>12</sup> appears to rely primarily upon information from an advocacy group, the Global Initiative to End all Corporal Punishment of Children, whereas the previous AAP statement on discipline<sup>107</sup> was informed by an AAP-sponsored scientific consensus conference on corporal punishment.<sup>108</sup> Accordingly, the latest statement reads more like a prejudiced rant against spanking than scientifically informed advice for "effective discipline." Along with its prohibition of all physical punishment, only time-out is recommended for childhood misbehavior, yet only one supporting study is cited which paradoxically concludes, "There was no significant effect for timeout use." (p. e15)<sup>109</sup> Privilege removal had been recommended previously but was dropped in the latest AAP policy statement.

The AAP Statement's cited evidence against physical punishment is based on the 2016 Gershoff meta-analysis of unadjusted correlations,<sup>83</sup> ignoring the more objective Ferguson meta-analysis that reported "trivial" effect sizes in risk-adjusted outcomes.<sup>84</sup> The AAP Statement cited 33 studies in opposition to all physical punishment, including three literature reviews that found only minimal negative effects. Also cited are six publications lacking any original data (five by anti-spanking advocates); five studies about what predicts physical punishment rather than child outcomes predicted by physical punishment; four studies that only investigated other parenting variables (e.g., reprimands, verbal hostility, psychologically intrusive control); and studies of inappropriate physical punishment which was overly severe (six studies) or used during adolescence (one study). Six other studies had trivial adverse effect sizes (mean  $\beta = .07$ ; equivalent to  $d = .15$  or AOR = 1.31) after controlling for pre-existing child differences, which is consistent with the two meta-analyses that summarized risk-adjusted prospective studies of spanking.<sup>84,44</sup> Remarkably, a 2018 published meta-analysis showed that these tiny effect sizes ( $\beta = .07$ ) actually become tiny *beneficial* effects ( $\beta = -.04$ ) when evaluated with an alternative method of adjusting for pre-existing differences.<sup>44</sup> The seventh and final cited study showed better adolescent outcomes for spanked children than never-spanked children as long as the spanking was phased out by age 11.<sup>100</sup> Overall, the cited evidence fails to support the Policy Statement's conclusion of "a strong association between spanking and subsequent adverse outcomes" (p. 4).<sup>12</sup>

An American Psychological Association's claim to have sufficient evidence to oppose all use of spanking appears to be rooted in the anti-spanking biases of the members appointed to the authoring Task Force.<sup>110,111</sup> The strongest replicated causal evidence they cite is based on longitudinal studies that, when analyzed by controlling for pre-existing differences in the children, only revealed minimal negative outcomes.<sup>84</sup> Interestingly, similar types of analyses have consistently found equally harmful-looking outcomes for all corrective measures for oppositional defiance, whether implemented by parents (time-out, privilege removal) or professionals (medication treatment for ADD).<sup>112</sup> The consistency of this surprising result is due to a consistent systematic bias that several statistical experts have identified as typical of these standard longitudinal analyses.<sup>87,113,114</sup> One of those statistical critiques found that spanking was actually beneficial in reducing subsequent externalizing behavior problems after removing this bias (in its Online Supplemental Material).<sup>88</sup>

Finally, *The Lancet* published a 2021 study by Heilmann et al.<sup>115</sup> claiming to show that physical punishment was associated with subsequent child problems in prospective studies after controlling for initial differences in those problems. They failed to report, however, how statistically small these adverse effects are and that, if analyzed more objectively (as shown in Table 1 above), the average small effect of spanking is actually beneficial. Statisticians have shown that when analyses use the ANCOVA-type controls, the outcome is biased against corrective actions, even with common medical treatments for chronic conditions. When co-authors of quantitative meta-analyses of similar studies on spanking (Table 1) submitted Correspondence to *Lancet* challenging this study's results, they were rejected without explanation. The professional bias against spanking has infiltrated some editorial boards.

### **BETTER ANALYSIS, DIFFERENT CONCLUSIONS**

When spanking is analyzed using valid and objective methodologies, the proclaimed negative effects of its usage seem to disappear. Three published meta-analyses have gone beyond using problematic correlational evidence to emphasize stronger causal evidence of the effects of spanking. The first two are the only meta-analyses that were limited to longitudinal studies and emphasized those that controlled statistically for pre-existing differences on the outcome variable. The first of these was a 2013 literature review by Ferguson, which concluded that any adverse effects of spanking were minimal after controlling for pre-existing differences.<sup>84</sup>

The second and most recent meta-analysis by Larzelere, Gunnoe, and Ferguson was limited to longitudinal studies of spanking that controlled for pre-existing differences.<sup>44</sup> It replicated Ferguson's trivial effects after controlling for pre-existing child differences, but further demonstrated that these effects of spanking could look either beneficial or harmful depending on which of two valid statistical methods were used to adjust for pre-existing differences.

The third meta-analysis by Larzelere and Kuhn took a distinct approach in three ways.<sup>42</sup> First, to address the methodological problem inherent in grouping all forms of physical punishment together, it distinguished the following four categories:

1. *conditional* spanking (used under limited conditions, such as to enforce timeout)
2. *customary* physical punishment (typical manner of use by ordinary parents)
3. *overly severe* physical punishment
4. *predominant use of* physical punishment

Second, it compared the child outcomes of physical punishment with outcomes of alternative disciplinary responses, including time-out, reasoning, privilege removal, physical restraint, and scolding. Comparing several discipline responses is like comparing two medical treatments for one presenting problem. Anti-spanking researchers have yet to identify any alternative response to defiant behavior in young children that significantly reduces subsequent misbehavior (using the same types of correlational studies they use to oppose spanking). Third, comparing the outcomes of spanking with alternative disciplinary responses helps to correct for selection bias. For example, more defiant children typically cause parents to use all disciplinary responses more often. If only spanking is studied, it can appear that more frequent spanking causes defiant behavior in more defiant children. However, when all types of disciplinary responses are studied, this selection bias against spanking is cancelled out.

The review's findings are summarized as follows:

- Conditional spanking was associated with less defiance or less aggression than were 10 of 13 alternative disciplinary responses, with no differences in outcomes compared to the other three alternatives. Conditional spanking is used to enforce milder disciplinary responses when young children defiantly refuse to cooperate with them.
- Neither conditional spanking nor customary physical punishment were ever associated with worse outcomes than any other alternative response.
- Customary physical punishment was associated with less substance abuse than was non-contact punishment in one large retrospective study.<sup>94</sup> Otherwise, customary physical punishment was equally as effective as any alternative disciplinary response.
- All types of physical punishment were associated with lower rates of antisocial behavior or aggression than were alternative disciplinary responses.
- Physical punishment predicted more adverse child outcomes than alternative responses only when it was used too severely or as the predominant method of discipline.

Altogether, these three meta-analyses that went beyond simple correlations found that the average effect of customary spanking was no more harmful than alternatives, and even beneficial when used appropriately in appropriate situations. Further, the outcomes of physical punishment were worse than other disciplinary responses only when the punishment was used too severely or as the predominant discipline method. In contrast, disciplinary spanking as defined reduced subsequent defiance or aggression more than most disciplinary tactics when used nonabusively to enforce milder disciplinary tactics in defiant 2- to 6-year-olds.

### **BANNING SPANKING BY PARENTS**

This matter of misrepresenting the science on the effects of spanking in children is significant in that it is being used to influence legislators worldwide to ban spanking by parents. To date, spanking-ban advocates claim that 61 countries have banned disciplinary spanking, with France as one of the most recent cases.<sup>10</sup> Many of these bans are rarely enforced, such as those in Germany (since 2000) and Austria (since 1989), where less than one third of their parents were aware in 2007 that mild spanking had been banned.<sup>116</sup> Some countries have adopted intrusively written bans, such as New Zealand, which prohibit all forms of physical force to correct misbehavior, including restraining a toddler with firm hand to correct defiance.<sup>117</sup> Other countries are considering such bans, and activists in the US are preparing to lobby legislators to do the same. Remarkably, there is no objective evidence that any of these bans have curbed child abuse or teen violence as intended. In fact, there is more evidence that the incidence of each has increased following these bans, especially in countries that enforce them more vigorously.<sup>118,119</sup>

### **EVIDENCE FOR EFFICACY OF DISCIPLINARY SPANKING**

There is a paucity of published research focusing on ordinary, non-abusive disciplinary spanking of young children administered by loving, well-intentioned parents. The studies that meet the most rigorous requirements for evidence-based medical practice are randomized clinical field trials conducted by Roberts with clinically referred oppositional children.<sup>45,46,49,48</sup> To determine which back-up or enforcement procedure was most effective in controlling a child's escape from time-out, the traditional spank procedure was tested against 3 other procedures. The two-swat spank procedure was found to be the most effective, most preferred and most practical of all measures tested. Only a forced one-minute room isolation was equally effective, but it was less preferred

by parents. Forehand and McMahon in their research similarly found "a mild spanking to be the most feasible back-up for the child leaving the time-out chair."(p. 80)<sup>6</sup> Even though these studies focused on spanking only as an enforcer of time-out, they are significant for other reasons:

- They are well-designed randomized clinical field studies that compare spanking to other discipline responses when children refuse to cooperate with milder disciplinary tactics.
- It is essential for parents to deal effectively with persistent defiance in young children. Oppositional defiance makes a child at-risk for a life of delinquency and crime,<sup>120,121</sup> suggesting it is important to correct these behaviors early in life. It is therefore crucial for parents to know that the two most effective enforcements for timeout in defiant 2- to 6-year-olds are a two-swat spanking and a brief room isolation. Note, however, that the latter has only been tested in a laboratory setting and may not equally effective in the typical home.
- The effectiveness of time-out is crucial to most behavioral parenting programs. The spank enforcement technique quickly produces cooperation with time-out, thereby increasing its effectiveness and reducing a parent's need for spanking in the future.

Despite being one of the most effective enforcements for cooperation with timeout, spanking is no longer used in current treatment plans for conduct problems in young children.<sup>122</sup> This may be one reason these psychotherapies are half as effective as when spanking was included.<sup>123</sup> Evidence for this possibility comes from a recent summary of research on time-out implementation, which concluded that spanking and a room isolation were the most effective methods to enforce cooperation with time-out, but that both enforcements were opposed by professional societies.<sup>122</sup> It is a recipe for making parent-implemented therapies less effective when ideology, however well-intentioned, dictates a treatment plan's components rather than sound empirical evidence.

As shown earlier, the long-term effects of any disciplinary measure, including spanking, is enormously influenced by the parental and environmental factors within the disciplinary approach. Two major studies by Baumrind and by Guarendi have shown that the most effective overall parenting approach usually includes disciplinary spanking. Dr. Diana Baumrind, a prominent clinical and developmental psychologist, conducted a decade-long prospective study of families while their children grew up from about 4 to 15 years of age.<sup>19,21</sup> She identified three general parenting styles and evaluated the effects these styles had upon the children's development. The following parenting styles were identified:

*Authoritarian Parents* were more controlling, more restrictive, less inclined to explain, more punitive, detached, and less warm. To discipline they used fear, little encouragement, and often corporal punishment.

*Permissive Parents* were markedly less controlling, minimally demanding, freely granting the child's demands, less involved with the child, and benign toward the child's impulses and actions. The few times they did discipline their children, they used ridicule, guilt provocation, little power and reasoning, and rarely corporal punishment.

*Authoritative Parents* employed a combination of firm control and positive encouragement of the child's growing independence. They affirmed the child's preferences, but also set a standard for their conduct. They made reasonable demands of their children and promoted respect for authority. They were more consistent with the discipline. To discipline, they used reasoning, forcefulness (including some spanking), and positive reinforcement to achieve objectives.

Some of the study's findings included:

- The Authoritative parents who balanced firm control with encouragement reared the most socially responsible and assertive children, i.e., in achievement orientation, friendliness toward peers, cooperativeness with adults, social dominance, nonconforming behavior and purposefulness.
- The Authoritative parents favored spanking over other negative sanctions, but never used it severely.
- Permissive parents admitted to "explosive attacks of rage in which they inflicted more pain or injury upon the child than they had intended." They became more "violent because they felt they could neither control the child's behavior nor tolerate its effect upon themselves." (p. 35)<sup>19</sup>
- Non-severe punishment, including physical punishment, can be effective when used consistently for persistent disobedience by loving parents who frequently listen to the child's perspective and praise appropriate behavior. This combination is thought to have additional benefits, including:
  - More rapid re-establishment of affectional relationship between parent and child following an emotional release.
  - Less guilt reactions to transgression since an unpleasant consequence is imposed.
- Punishment can be an effective means of controlling childhood behavior, especially in the context of authoritative parenting. It is not intrinsically harmful to the child.
- The Authoritative parenting approach (which includes the use of spanking) resulted in the most favorable 10-year outcomes, whereas the poorest outcomes occurred with the use of an overly punitive Authoritarian approach. An overly Permissive approach resulted in the second poorest outcome for the children in the study.<sup>21</sup>

Guarendi found that 70% of the parents of "outstanding" (self-motivated, strong character, considerate of others, and high morality) students employed some physical punishment in the rearing of their children.<sup>124</sup> Some relied upon it often and others rarely used it. He found, "Spanking was generally considered to be one tool in a parent's discipline repertoire."

### **DISCIPLINARY SPANKING: NECESSARY OR NOT?**

Although disciplinary spanking may be seen as unwarranted by some from a philosophical perspective, primary care physicians who field parenting questions every day have viewed spanking as acceptable in at least some situations.<sup>125,126,127,4</sup> In spite of its popular use, however, caring parents do not enjoy or even desire to spank their children. So, the question arises, "Is spanking necessary?"

Spanking is a valid disciplinary measure within the authoritative parenting model for use in achieving one of its primary goals — behavioral control. Its place in the role of correction is to back-up or follow milder disciplinary measures. When clear instructions have been given and measures of affirmation are insufficient in managing a child's behavior, measures of correction are necessary. When simpler measures of correction (such as redirection, disapproval, and ignoring of mild misbehavior) fail to persuade a child to comply, other corrective measures are needed. Methods of punishment for the cognitively immature toddler are limited to consequences (natural and logical), time-out, and disciplinary spanking. For the most defiant child, milder forms

of punishment will often fail, and spanking may be necessary to deter uncontrolled behavior. If used strategically to back-up milder measures, disciplinary spanking can strengthen those milder measures, thereby diminishing the need for spanking as the child matures.

Without disciplinary spanking, parents can quickly exhaust their corrective options and, with a defiant preschooler, can be left with feelings and expressions of exasperation (yelling) in a coercive cycle to persuade the child to behave. The resulting escalation in parental frustration can increase the risk for abuse and neglect. To illustrate, after spanking bans were issued in Austria (in 1989) and Germany (2000), parental use of spanking was studied in 2007. Fewer than 33% of the parents were aware that all spanking had been banned.<sup>116</sup> This set up a natural experiment comparing those who knew mild spanking had been banned with those who considered it still legal. As expected, those who thought it was legal were more likely to use spanking. Remarkably, these same parents were *less* likely to use severe corporal punishment,<sup>116</sup> suggesting that parental frustration with misbehavior was less likely to escalate further toward abuse when spanking was an available disciplinary option.

### **Method of Disciplinary Spanking**

In an earlier systematic qualitative review of the literature, Larzelere examined the child outcomes in families where parents used nonabusive, customary physical punishment.<sup>128</sup> Among the review's conclusions were that disciplinary spanking has "consistently beneficial outcomes when it is nonabusive and used primarily to back up milder disciplinary tactics with 2- to 6-year olds by loving parents" (p. 215). Also, "most detrimental outcomes in causally relevant studies are due to overly frequent use of physical punishment." The following conditions were more characteristic of effective spanking than of counterproductive physical punishment (pp.215-16):

1. Use is not overly severe.
2. Used by a parent under control, not in danger of "losing it" from anger.
3. Used during ages 2 to 6, not during the teenage years. Although conclusive evidence is scarce, spanking should be phased out as soon as possible between ages 7 and 11 years.
4. Used with reasoning, preferably eliciting an intermediate rather than a high level of child distress.
5. Used privately.
6. Motivated by concern for the child, not by parent-oriented concerns.
7. Used after a single warning (generalizing from Roberts).<sup>129</sup> Roberts showed that a single warning before time-out reduced the necessary time-outs by 74% without sacrificing any effectiveness of the behavioral parent training.
8. Used flexibly. If spanking does not work, parents should try other approaches and other tactics rather than increasing the intensity of the spanking.

It is clear that parents should not rely solely upon spanking to accomplish appropriate behavioral control. Evidence suggests that it can be a useful and necessary part of a successful disciplinary plan. Like any corrective measure, its application requires a proactive rather than reactive approach to produce an optimal outcome. Disciplinary spanking is most beneficial and necessary during the ages 2 to 6 years when reasoning alone is often ineffective in managing behavior. With cognitive development, a child will more likely respond to less assertive corrective methods and the need for spanking should diminish.

## Guidelines for Disciplinary Spanking

The following guidelines have been compiled from best available data on disciplinary spanking:

1. Spanking should be used selectively for clear, deliberate misbehavior, particularly that which arises from a child's persistent defiance of a parent's instruction. It should be used only when the child receives at least as much encouragement and praise for good behavior as correction for problem behavior.
2. Milder forms of discipline, such as expression of disapproval, verbal correction, extinction, explanations, mutually acceptable compromises, logical and natural consequences, and time-out should be used initially, followed by spanking when noncompliance persists. Spanking has been shown to be an effective method of enforcing milder tactics, such as time-out with the child who refuses to comply.
3. Only a parent, or in exceptional situations someone else who has an intimate relationship of authority with the child, should administer disciplinary spanking.
4. Spanking should not be administered on impulse or when a parent is out of control. A spanking should always be motivated by love, for the purpose of teaching and correcting, and not for revenge or retaliation.
5. Spanking is inappropriate before 18 months of age and is usually not necessary until after 24 months. It should be less necessary after 6 years and rarely, if ever, used after 10 years of age.
6. After 10 months of age, one slap to the hand of a stubborn crawler or toddler may be necessary to stop serious misbehavior when distraction and removal have failed. This is particularly the case when the forbidden object is immovable and dangerous, such as a hot oven door or an electrical outlet.
7. Spanking should always be a *planned* action (not an impulsive reaction) by the parent and should follow a deliberate procedure:
  - The child should be *forewarned* of the spanking consequence for designated problem behaviors.
  - Spanking should always be administered in *private* (bedroom or restroom) to avoid public humiliation or embarrassment.
  - One to three spanks are administered to the buttocks. This is followed soon thereafter by embracing the child and calmly reviewing the offense and the desired behavior in an effort to reestablish a warm relationship.
8. Spanking should leave only transient redness of the skin and should not cause physical injury.
9. If properly administered spankings are ineffective, other disciplinary responses should be tried again rather than increasing the intensity of spankings. Professional help should be obtained when a satisfactory behavioral response cannot be achieved through the process of discipline.

## CONCLUSIONS

1. The disciplinary spanking debate has become very emotional and polarized, which has led to inaccurate statements of absolute conclusions without an adequate scientific basis. Proper definitions and terminology must be used in objectively evaluating the issue.

2. The discipline of a child is a multifaceted process and the assessment of any one of its components must be considered within the milieu of the other components to arrive at accurate conclusions.
3. The effects of disciplinary spanking, or any nonabusive discipline measure, depend on how it is implemented and by the overall pattern of parental nurturance and control.
4. Acts of harsh corporal punishment resulting in poor child outcomes are often associated with parental anger and depression, marital dysfunction and ineffective parenting skills.
5. There is no established causal link between a parent's use of ordinary nonabusive spanking and the occurrence of physical child abuse, or the development of childhood aggression.
6. There is evidence of short-term effectiveness and positive long-term outcomes when parents use disciplinary spanking for persistent defiance within a nurturing environment.
7. In implementing the disciplinary process, a parent must accomplish an appropriate degree of behavioral control of the child for optimal development. This will require instruction, affirmation, and correction. In the rearing of the young child (particularly under 6 years), a parent's corrective measures are limited. At this age, disciplinary spanking, when properly employed by a parent, can be effective, appropriate, and at times necessary, especially when used to enforce milder disciplinary methods.
8. Parents should be allowed considerable latitude with the disciplinary responses they choose to implement, as long as the responses are not abusive or harmful to the child. To deny a parent the use of disciplinary spanking may result in loss of behavioral control over the young defiant child, thus creating an environment for detrimental parental practices such as yelling, nagging, belittling, and even explosive outbursts of rage.
9. Pediatricians may counsel parents on how and how not to use disciplinary spanking with their children. This advice should emphasize the value of encouragement in establishing an optimal parent-child relationship.
10. An unconditional legal ban against all physical punishment of children by their parents would do more harm than good, based upon current evidence.<sup>118,115</sup>
11. Any future research investigating the effects of disciplinary spanking should focus on appropriate implementation and conditions for its use (e.g., child's age, disciplinary situation), and control for child temperament, parental factors, and environmental factors.

Primary Authors: Den A. Trumbull, MD, and Robert E. Larzelere, Ph.D.

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## REFERENCES

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<sup>1</sup> Buntain-Ricklefs JJ, Kemper KJ, Bell M, Baonis T. Punishments: What predicts adult approval? *Child Abuse & Negl.* 1994;18:945-956.

<sup>2</sup> Straus, MA. *Beating the devil out of them.* 2001. New Brunswick, NJ. Transaction.

<sup>3</sup> Graziano, AM & Namaste, KA. Parental use of physical force in child discipline. *Journal of Interpersonal Violence.* 1990;5:449-463.

<sup>4</sup> Division of Child Health Research, American Academy of Pediatrics. *Periodic Survey of Fellows.* 1998. Retrieved on October 26, 2007 from <http://www.aap.org/research/periodicsurvey/ps38a.htm>.

<sup>5</sup> Anderson KA & Anderson DE. Psychologists and spanking. *J Clinical Child Psych.* Fall 1976:46-49.

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- <sup>6</sup> Forehand RL & McMahon RJ. Helping the noncompliant child. 1981;pp 79-80. New York:Guilford Press.
- <sup>7</sup> Hembree-Kigin TL, McNeil CB. *Parent-child interaction therapy*. New York: Plenum Press, 1995.
- <sup>8</sup> Barkley RA. *Defiant children: A clinician's manual for parent training*. New York: Guilford, 1987.
- <sup>9</sup> Christophersen ER. *Little people: Guidelines for common sense child rearing*. 3rd ed. Kansas City, MO: Westport, 1988.
- <sup>10</sup> Global Initiative to End All Corporal Punishment of Children. Progress. 2019; <http://www.endcorporalpunishment.org/countdown>. Accessed August 1, 2019.
- <sup>11</sup> Larzelere RE, Trumbull DA, Nieman P. Should pediatricians base their parenting advice on advocacy or science? (Comment). *Pediatrics* 2018;**142**(6):e20183112 (under Comments)
- <sup>12</sup> Sege RD, Siegel BS, Council on Child Abuse and Neglect, Committee on Psychosocial Aspects of Child and Family Health. Effective discipline to raise healthy children. *Pediatrics* 2018;**142**(6): e20183112 doi: 10.1542/peds.2018-3112[published Online First: Epub Date].
- <sup>13</sup> The American Heritage Dictionary of the English Language, Fourth Edition. 2000. Houghton Mifflin Company.
- <sup>14</sup> American Psychological Association. Dictionary of Psychology. 2021. Accessed February 3, 2021 online at <https://dictionary.apa.org/socialization>
- <sup>15</sup> Blum NJ et al. Disciplining children: verbal instruction and reasoning. *Pediatrics*. 1995;**96**(2):336-341.
- <sup>16</sup> Larzelere RE, Sather PR, Schneider WN, Larson DB, Pike PL. Punishment enhances reasoning's effectiveness as a disciplinary response to toddlers. *Journal of Marriage and the Family*. 1998;**60**:388-403.
- <sup>17</sup> Hoffman ML. *Empathy and moral development*. Cambridge, UK: Cambridge University Press, 2000, pp. 152-154.
- <sup>18</sup> Pappal M, Maccoby E. Maternal responsiveness and subsequent child compliance. *Child Development*. 1985;**56**:1326-1344.
- <sup>19</sup> Baumrind, D. The development of instrumental competence through socialization. *Minnesota Symp Child Psych*. 1973;**7**:3-46.
- <sup>20</sup> Larzelere RE, Knowles SJ, Henry CS, Ritchie KL. Immediate and long-term effectiveness of disciplinary tactics by type of toddler noncompliance. *Parenting: Science & Practice*. 2018;**18**:141-171.
- <sup>21</sup> Baumrind D, Larzelere RE, Owens EB. Effects of preschool parents' power assertive patterns and practices on adolescent development. *Parenting: Science and Practice*. 2010;**10**:157-201.
- <sup>22</sup> Finkelhor D, Turner H, Wormuth BK, Vanderminden J, Hamby S. Corporal punishment: Current rates from a national survey. *Journal of Child and Family Studies*. 2019;**28**:1991-1997.
- <sup>23</sup> Behrman RE, Kliegman RM. *Textbook of Pediatrics, Fourteenth Edition*. 2002; pp 45-50. WB Saunders Company.
- <sup>24</sup> Bandura A. *Aggression: A Social Learning Analysis*. 1973. Engelwood Cliffs, NJ, Prentice-Hall
- <sup>25</sup> Patterson, G.R. *Punishment for Aggression*. Chapter 6 in *Coercive Family Process*. 1982. Vol. 3. Castalia Publishing Company
- <sup>26</sup> Bauman LJ & Friedman SB. Corporal punishment. *Pediatric Clinics of North America*. 1998;**45**;2:403-414.
- <sup>27</sup> Schneider, B, Atteberry, A, Owens, A. *Family matters: Family structure and child outcomes*. 2005; 1-42. Birmingham, AL. Alabama Policy Institute.
- <sup>28</sup> Cummings, E., & Davies, P. Effects of marital conflict on children: recent advance and emerging themes in process-oriented research. *Journal of Child Psychology and Psychiatry*. 2002; **43**: 31-63.
- <sup>29</sup> Deater-Deckard K, Dodge KA, Bates JE, & Pettit GS. Physical discipline among African American and European American mothers: Links to children's externalizing behaviors. *Developmental Psychology*.1996;**32**:1065-1072.
- <sup>30</sup> Eamon, MK. Poverty, parenting, peer, and neighborhood influences on young adolescent antisocial behavior. *J Soc Serv Res*. 2001;**28**:1-23.

- 
- <sup>31</sup> Simons RL, Lin KH, Gordon L, Brody GH, Murry VM, Conger RD. Community differences in the association between parenting practices and child conduct problems. *J Marriage Fam.* 2002;64:331-345.
- <sup>32</sup> Deater-Deckard K, Dodge KA, Lansford JE, Pettit GS, Bates JE. The development of attitudes about physical punishment: An 8-year longitudinal study. *Journal of Family Psychology.* 2003;17(3):351-360.
- <sup>33</sup> Mahoney A, Pargament KI, Tarakeshwar N, Swank AB. Religion in the home in the 1980s and 1990s: A meta-analysis review and conceptual analysis of links between religion, marriage, and parenting. *J Fam Psych.* 2001;15(4):559-596.
- <sup>34</sup> Gunnoe ML, Mariner CL. Toward a developmental-contextual model of the effects of parental spanking on children's aggression. *Archives of Pediatrics and Adolescent Medicine.* 1997;151:768-775.
- <sup>35</sup> Lansford JE, Deater-Deckard K, Dodge KA, Bates JE, Pettit GS. Ethnic differences in the link between physical discipline and later adolescent externalizing behaviors. *Journal of Child Psychology & Psychiatry.* 2004;45:801-812.
- <sup>36</sup> Ellison CG, Musick MA, Holden GW. Does conservative Protestantism moderate the association between corporal punishment and child outcomes? *Journal of Marriage and Family* 2011;73(5):946-61 doi: 10.1111/j.1741-3737.2011.00854.x
- <sup>37</sup> Random House Unabridged Dictionary. 2006. Retrieved November 5, 2007 at <http://dictionary.reference.com/browse/corporal%20punishment>
- <sup>38</sup> Deley WW. Physical punishment of children: Sweden and the United States. *J of Comparative Family Studies.* 1988. 19(3):419-431.
- <sup>39</sup> National Clearinghouse on Child Abuse and Neglect Information. *What is child maltreatment?* 2000. from website: <http://www.calib.com/nccanch/pubs/factsheets/childmal.cfm>
- <sup>40</sup> "Consensus Statements" in Friedman, Stanford B., MD, & Schonberg, S. Kenneth, MD (eds). "The Short and Long Term Consequences of Corporal Punishment." supplement to *Pediatrics*, 1996; 98 (4):853.
- <sup>41</sup> Merriam-Webster Online Dictionary. Retrieved 3-22-2006. Merriam-Webster Inc.
- <sup>42</sup> Larzelere RE & Kuhn BR. Comparing child outcomes of physical punishment and alternative disciplinary tactics: A meta-analysis. *Clinical Child and Family Psychology Review.* 2005;8:1-37.
- <sup>43</sup> Lansford JE, Wager LB, Bates JE, Dodge KA, Pettit GS. Parental reasoning, denying privileges, yelling, and spanking: Ethnic differences and associations with child externalizing behavior. *Parenting: Science and Practice.* 2012;12:42-56.
- <sup>44</sup> Larzelere RE, Gunnoe ML, Ferguson CJ. Improving causal inferences in meta-analyses of longitudinal studies: Spanking as an illustration. *Child Development.* 2018;89:2038-2050.
- <sup>45</sup> Roberts MW, Powers SW. Adjusting chair timeout enforcement procedures for oppositional children. *Behavior Therapy.* 1990;21:257-271.
- <sup>46</sup> Bean AW, Roberts MW. The effect of time-out release contingencies on changes in child noncompliance. *Journal of Abnormal Child Psychology.* 1981;9:95-105.
- <sup>47</sup> Straus MA, Mouradian VE. Impulsive corporal punishment by mothers and antisocial behavior and impulsiveness of children. *Behavioral Sciences and the Law.* 1998;16:353-374.
- <sup>48</sup> Day DE, Roberts MW. An analysis of the physical punishment component of a parent training program. *Journal of Abnormal Child Psychology.* 1983;11:141-152.
- <sup>49</sup> Roberts MW. Enforcing chair timeouts with room timeouts. *Behavior Modification.* 1988;12:353-370.
- <sup>50</sup> Lansford JE, Wager LB, Bates JE, Pettit GS, Dodge KA. Forms of spanking and children's externalizing behaviors. *Family Relations.* 2012;61:224-236.
- <sup>51</sup> Azrin NH, Holz WC. Punishment. In: Honig WK, ed. *Operant behavior: Areas of research and application.* New York: Appleton-Century-Crofts, 1966:380-447.
- <sup>52</sup> Cipani E. *Punishment on trial.* Reno, NV: Context Press, 2004.

- 
- <sup>53</sup> Axelrod S, Apsche J, editors. *The effects of punishment on human behavior*. New York: Academic Press, 1983.
- <sup>54</sup> Patterson, G.R. *Coercive Family Process*. 1982. Eugene, OR: Castalia Publishing Company.
- <sup>55</sup> Parke, RD. Punishment Revisited: Science, values, and the right question. Comment on Gershoff (2002). *Psychological Bulletin*. 2002;128(4):596-601.
- <sup>56</sup> Marx MH, Hillix WA. *Systems and theories in psychology*. 3rd ed. New York: McGraw-Hill; 1979; p. 50.
- <sup>57</sup> Durrant JE. *Positive discipline in everyday parenting*. 4th ed: Save the Children Sweden, 2016.
- <sup>58</sup> Holden GW, Ashraf R, Brannan E, Baker P. The emergence of "positive parenting" as a revived paradigm: Theory, processes, and evidence. In: Narvaez D, Braungart-Rieke JM, Miller-Graff LE, Gettler LT, Hastings PD, eds. *Contexts for young child flourishing*. New York: Oxford University Press, 2016:201-14.
- <sup>59</sup> McCord J. Unintended consequences of punishment. *Pediatrics*. 1996;98:832-834.
- <sup>60</sup> Larzelere RE, Gunnoe ML, Roberts MW, Lin H, Ferguson CJ. Causal evidence for *exclusively positive parenting* and for timeout: Rejoinder to Holden, Grogan-Kaylor, Durrant, and Gershoff (2017). *Marriage & Family Review*. 2020;56:287-319.
- <sup>61</sup> American Academy of Pediatrics. Guidance for effective discipline. *Pediatrics*. 1998.101;4:723-728.
- <sup>62</sup> Gershoff ET. Personal communication, August 7, 2015.
- <sup>63</sup> Durrant JE. *Positive discipline: What it is and how to do it*. Bangkok, Thailand: Save the Children Sweden; 2007.
- <sup>64</sup> Holden GW. Resolution on corporal punishment (CP) of children. In the original resolution submitted to and accepted by the Society for Research in Human Development 2013.
- <sup>65</sup> Larzelere RE, Gunnoe ML, Roberts MW, Ferguson CJ. Children and parents deserve better parental discipline research: Critiquing the evidence for exclusively "positive" parenting. *Marriage & Family Review*. 2017;53:24-53.
- <sup>66</sup> Larzelere, RE., & Lin, H. Analyses of Conflict Tactics Scale data for 5-year-olds from the Fragile Families & Child Welfare dataset, Feb. 19, 2020.
- <sup>67</sup> Behrman RE, Vaughan VC. *Nelson Textbook of Pediatrics, Thirteenth Edition*. 1987; pp 39-42. WB Saunders.
- <sup>68</sup> Larzelere RE, Merenda JA. The effectiveness of parental discipline for toddler misbehavior at different levels of child distress. *Family Relations*. 1994;43:480-488.
- <sup>69</sup> Parke RD. Effectiveness of punishment as an interaction of intensity, timing, agent nurturance, and cognitive structuring. *Child Development* 1969;40:213. doi: 10.2307/1127169
- <sup>70</sup> Olweus D. Familial and temperamental determinants of aggressive behavior in adolescent boys: A causal analysis. *Developmental Psychology*. 1980;16:644-660.
- <sup>71</sup> Burke JD, Pardini DA, Loeber R. Reciprocal relationships between parenting behavior and disruptive psychopathology from childhood through adolescence. *Journal of Abnormal Child Psychology*. 2008;36:679-692.
- <sup>72</sup> Murray, J, & Farrington, DP. Risk Factors for Conduct Disorder and Delinquency: Key Findings From Longitudinal Studies. *Can J Psychiatry*. 2010;55(10):633-642.
- <sup>73</sup> Friedman, Stanford B & Schonberg, S. Kenneth (eds.). "The Short and Long Term Consequences of Corporal Punishment." supplement to *Pediatrics*, 1996; 98 (4):803-860.
- <sup>74</sup> Larzelere, Robert E. "A Review of the Outcomes of Parental Use of Nonabusive or Customary Physical Punishment." in Friedman, Stanford B., MD & Schonberg, S. Kenneth, MD (eds). "The Short and Long Term Consequences of Corporal Punishment." supplement to *Pediatrics*, 1996; 98 (4):824-828.
- <sup>75</sup> Friedman, Stanford B & Schonberg, S. Kenneth (eds). Personal Statement in "The Short and Long Term Consequences of Corporal Punishment." supplement to *Pediatrics*, 1996; 98 (4):857-858.
- <sup>76</sup> Baumrind D. A blanket injunction against disciplinary use of spanking is not warranted by the data. *Pediatrics*. 1996;98:828.
- <sup>77</sup> Holden GW. Personal communication to Robert Larzelere. June 21, 2012.

- 
- <sup>78</sup> Austin A. Personal communication to Robert Larzelere. February 23, 2012.
- <sup>79</sup> Redding R. Personal communication to Robert Larzelere. August 16, 2019.
- <sup>80</sup> Straus, MA & Stewart JH. Corporal punishment by American parents: National data on prevalence, chronicity, severity, and duration, in relation to child and family characteristics. *Clinical Child and Family Psychology Review*. 1999(2):55-70.
- <sup>81</sup> Benjet, C & Kazdin, AE. Spanking children: The controversies, findings, and new directions. *Clinical Psychology Review*. 2003;23:197-227.
- <sup>82</sup> Gershoff, ET. Corporal punishment by parents and associated child behaviors and experiences: A meta-analytic and theoretical review. *Psychological Bulletin*. 2002;128(4):539-579.
- <sup>83</sup> Gershoff ET, Grogan-Kaylor A. Spanking and child outcomes: Old controversies and new meta-analyses. *Journal of Family Psychology*. 2016;30:453-469.
- <sup>84</sup> Ferguson CJ. Spanking, corporal punishment and negative long-term outcomes: A meta-analytic review of longitudinal studies. *Clinical Psychology Review*. 2013;33:196-208.
- <sup>85</sup> Kulinskaya E, Morgenthaler S, Staudte RG. Combining Statistical Evidence. *International Statistical Review*. 2014;82(2):214-242.
- <sup>86</sup> Paolucci EO, Violato C. A meta-analysis of the published research on the affective, cognitive, and behavioral effects of corporal punishment. *Journal of Psychology*. 2004;138:197-221.
- <sup>87</sup> Hamaker EL, Kuiper RM, Grasman RPPP. A critique of the cross-lagged panel model. *Psychological Methods*. 2015;20:102-116.
- <sup>88</sup> Berry D, Willoughby MT. On the practical interpretability of cross-lagged panel models: Rethinking a developmental workhorse. *Child Development*. 2017;88:1186-1206.
- <sup>89</sup> Friedman SB, Schonberg SK. Consensus statements [from the invitational conference, The Short- and Long-Term Consequences of Corporal Punishment]. *Pediatrics*. 1996;98:853.
- <sup>90</sup> Gershoff ET, Grogan-Kaylor A, Lansford JE, et al. Parent discipline practices in an international sample: Associations with child behaviors and moderation by perceived normativeness. *Child Development*. 2010;81(2):487-502.
- <sup>91</sup> Larzelere RE, Cox RB, Jr. Making valid causal inferences about corrective actions by parents from longitudinal data. *Journal of Family Theory & Review*. 2013;5:282-299.
- <sup>92</sup> Larzelere RE, Lin H, Payton ME, Washburn IJ. Longitudinal biases against corrective actions. *Archives of Scientific Psychology*. 2018;6:243-250.
- <sup>93</sup> Larzelere RE, Baumrind D. Are spanking injunctions scientifically supported? *Law and Contemporary Problems*. 2010;73(2):57-88.
- <sup>94</sup> Tennant FS, Jr., Detels R, Clark V. Some childhood antecedents of drug and alcohol abuse. *American Journal of Epidemiology*. 1975;102:377-385.
- <sup>95</sup> Holden GW, Grogan-Kaylor A, Durrant JE, Gershoff ET. Researchers deserve a better critique: Response to Larzelere, Gunnoe, Roberts, and Ferguson (2017). *Marriage & Family Review*. 2017;53:465-490.
- <sup>96</sup> Zolotor AJ, Theodore AD, Chang JJ, Berkoff MC, Runyan DK. Speak softly-and forget the stick - Corporal punishment and child physical abuse. *American Journal of Preventive Medicine*. 2008;53(4):364-369.
- <sup>97</sup> Power TG, Chapieski ML. Childrearing and impulse control in toddlers: A naturalistic investigation. *Developmental Psychology*. 1986;22:271-275.
- <sup>98</sup> Grinder RE. Parental childrearing practices, conscience, and resistance to temptation of sixth grade children. *Child Development*. 1962;33:803-820.
- <sup>99</sup> Sears, R. R., Maccoby, E. E., & Levin, H. *Patterns of child-rearing*. New York: Harper & Row. 1957:328.

- 
- <sup>100</sup> Gunnoe ML. Associations between parenting style, physical discipline, and adjustment in adolescents' reports. *Psychological Reports: Disability & Trauma*. 2013;112(3):933-975.
- <sup>101</sup> Li Y, Shi A, Wan Y, Hotta M, Ushijima H. Child behavior problems: Prevalence and correlates in rural minority areas of China. *Pediatrics International*. 2001;43:661.
- <sup>102</sup> Trumbull D, Larzelere RE, Zanga J. [Please Stop Publishing Inadequate Science about Spanking](#). Comment to MacKenzie MJ, Nicklas E, Waldfogel J, Brooks-Gunn J. Spanking and child development across the first decade of life. *Pediatrics*. 2013;132(5):e1118-e1125.
- <sup>103</sup> Afifi TO, Mota NP, Dasiewicz P, MacMillan HL, Sareen J. Physical punishment and mental disorders: Results from a nationally representative US sample. *Pediatrics*. 2012;130(2):184-192.
- <sup>104</sup> Afifi TO, Mota N, MacMillan HL, Sareen J. Harsh physical punishment in childhood and adult physical health. *Pediatrics*. 2013;132(2):e333-e340.
- <sup>105</sup> MacKenzie MJ, Nicklas E, Waldfogel J, Brooks-Gunn J. Spanking and Child Development Across the First Decade of Life. *Pediatrics*. 2013; 132(5): e1118-1125.
- <sup>106</sup> Grimes DA, Schulz KF. False alarms and pseudo-epidemics: The limitations of observational epidemiology. *Obstetrics and Gynecology*. 2012;120(4):920-927. Hollingsworth JG, Lasker EG. The Case Against Differential Diagnosis: Daubert, Medical Causation Testimony, and the Scientific Method. *Journal of Health Law*. 2004;37(1):85-111.
- <sup>107</sup> American Academy of Pediatrics. Guidance for effective discipline. *Ibid*.1998;101:723-728.
- <sup>108</sup> Friedman SB, Schonberg SK. Proceedings of a conference on "The short- and long-term consequences of corporal punishment". *Ibid*.1996;98:803-860.
- <sup>109</sup> Barkin SL, Finch SA, Ip EH, et al. Is office-based counseling about media use, timeouts, and firearm storage effective? Results from a cluster-randomized, controlled trial. *Ibid*.2008;122(1):e15-e25.
- <sup>110</sup> Larzelere RE, Gunnoe ML, Ferguson CJ, Roberts MW. The insufficiency of the evidence used to categorically oppose spanking and its implications for families and psychological science: Comment on Gershoff et al. (2018). *American Psychologist*. 2019;74:497-499.
- <sup>111</sup> Rohner RP, Melendez-Rhodes T. Perceived parental acceptance--rejection mediate or moderates the relation between corporal punishment and psychological adjustment: Comment on Gershoff et al. (2018). *Ibid*.:500-502.
- <sup>112</sup> Larzelere, R. E., Ferrer, E., Kuhn, B. R., & Danelia, K. Differences in causal estimates from longitudinal analyses of residualized versus simple gain scores: Contrasting controls for selection and regression artifacts. *International Journal of Behavioral Development*. 2010; 34:180-189. doi:10.1177/0165025409351386
- <sup>113</sup> Hoffman L. *Longitudinal analysis: Modeling within-person fluctuation and change*. New York: Routledge; 2015.
- <sup>114</sup> Usami S, Murayama K, Hamaker EL. A unified framework of longitudinal models to examine reciprocal relations. *Psychological Methods*. 2019;24:637-657.
- <sup>115</sup> Heilmann A, Mehay A, Watt RG, et. al. Physical punishment and child outcomes: a narrative review of prospective studies. *The Lancet* 2021; Vol 398. 10297: 355-364. DOI:[https://doi.org/10.1016/S0140-6736\(21\)00582-1](https://doi.org/10.1016/S0140-6736(21)00582-1)
- <sup>116</sup> Bussmann KD, Erthal C, Schroth A. Effects of banning corporal punishment in Europe: A five-nation comparison. In: Durrant JE, Smith AB, eds. *Global pathways to abolish physical punishment: Realizing children's rights*. New York: Routledge; 2011:299-322.
- <sup>117</sup> Crimes Act 1961. New Zealand. Accessed on February 3, 2021 at <https://www.legislation.govt.nz/act/public/1961/0043/latest/DLM328291.html#DLM328291>
- <sup>118</sup> Larzelere RE, Johnson B. Evaluation of the effects of Sweden's spanking ban on physical child abuse rates: A literature review. *Psychological Reports*. 1999;85:381-392.
- <sup>119</sup> Larzelere RE, Swindle T, Johnson BR. Swedish trends in criminal assaults against minors since banning spanking, 1981-2010. *International Journal of Criminology and Sociology*. 2013;2:129-137.

- 
- <sup>120</sup> Loeber R, Burke JD, Pardini DA. Development and etiology of disruptive and delinquent behavior. *Annual Review of Clinical Psychology*. 2009;5:291-310.
- <sup>121</sup> Timmermans M, van Lier PAC, Koot HM. Pathways of behavior problems from childhood to late adolescence leading to delinquency and underachievement. *Journal of Clinical Child & Adolescent Psychology*. 2009;38:630-638.
- <sup>122</sup> Everett GE, Hupp SDA, Olmi DJ. Time-out with parents: A descriptive analysis of 30 years of research. *Education & Treatment of Children* 2010;33:235-59 doi: 10.1353/etc.0.0091
- <sup>123</sup> Weisz JR, Kuppens S, Ng MY, et al. Are psychotherapies for young people growing stronger? Tracking trends over time for youth anxiety, depression, attention-deficit hyperactivity disorder, and conduct problems. *Perspectives on Psychological Science*. 2019;14:216-237.
- <sup>124</sup> Guarendi R. *Back to the Family*. 1990;215-222. New York: Simon & Schuster.
- <sup>125</sup> McCormick K. Attitudes of primary care physicians toward corporal punishment. *JAMA*. 1992;267:3161-3165
- <sup>126</sup> White K. Where pediatricians stand on spanking. *Pediatric Management*. September 1993: 11-15.
- <sup>127</sup> Morris JL. To report or not to report: physician's attitudes toward discipline and child abuse. *AJDC*. 1985;139:194-197.
- <sup>128</sup> Larzelere, RE. Child outcomes of nonabusive and customary physical punishment by parents: An update literature review. *Clinical Child and Family Psychology Review*. 2000;3:199-221.
- <sup>129</sup> Roberts, MW. The effects of warned versus unwarned time-out procedures on child noncompliance. *Child & Family Behavioral Therapy*. 1982;4:37-53.