

November 13, 2013

Dear AAP Board of Directors:

Suppose a medical organization announced a series of press releases opposing all use of radiation treatment based on two types of studies published in a prominent medical journal. The first type of study reached its conclusion based only upon inappropriate levels of radiation dosages. The second type of study used typical dosages, but stridently disparaged radiation on the basis of one more significant association than would be expected by chance.

While it is hard to imagine such studies being considered sufficient evidence to discontinue radiation, these are exactly the kinds of studies that *Pediatrics* not only publishes about disciplinary spanking, but *features* to the media. Two retrospective studies by Afifi et al.^{1,2} were said to provide evidence against all disciplinary spanking, when the survey measure only used the terms “push, grab, shove, slap, or hit,”^{1,2} not “spank.” Now an article by MacKenzie et al.³ claims to have evidence against all spanking when only 2 of 16 tests were significant (after all controls were included), and the mean effect of spanking at the age of 3 was in the opposite direction (albeit not significantly so). Overall, the mean effect size was equivalent to an odds ratio of 1.06 (where OR = 1.00 indicates no association at all), which could easily be due to other confounding variables.

Why is *Pediatrics* highlighting these kinds of studies to the media, when this kind of evidence would not be acceptable for publication if used to evaluate a medical treatment? Even a journalist reporting on the first study noted the disconnect between the press release and the actual study findings.⁴ Two possible explanations come to mind. The first possible explanation is that the conclusions advanced in these weak studies have already been established by higher quality research. But this is not the case in the three studies recently published in *Pediatrics*. To the contrary, all three studies relied heavily on a meta-analysis by Gershoff⁵ based solely on *correlational* evidence. Correlational data provide a poor basis for inference about the efficacy of treatment. When using correlations, all corrective actions (whether disciplinary or medical) appear to be harmful for chronic problems because people without the problem typically do not receive the treatment. For instance, there is a positive correlation between cancer and radiation treatment within any given year, because those of us who didn't have cancer that year didn't receive any radiation.⁶ Cross-sectional correlations would even make a perfect cancer treatment look harmful, because cancer symptoms during treatment would count as evidence against it. Longitudinal studies would make it appear ineffective because the correlations would average $r = .00$, if radiation patients became indistinguishable from the general population on cancer-related outcomes. Thus even a perfect corrective action would be regarded as harmful or ineffective by the unadjusted correlational evidence used in Gershoff's⁵ meta-analysis.

Fortunately, two recent meta-analyses of disciplinary spanking have moved beyond the kinds of correlations that are biased against corrective disciplinary actions. Based on studies similar to MacKenzie et al.,³ the first meta-analysis found tiny adverse effects of spanking of children under the age of 7 on externalizing behavior problems (partial $r = .06$, equivalent to OR = 1.24), which could easily be accounted for by unmeasured confounds.⁷ The second meta-analysis found

that physical punishment led to more adverse outcomes than alternative disciplinary tactics only when it was used *severely* or as the *main disciplinary method*.⁸ Customary spanking led to similar outcomes as all alternative tactics across all studies except one, which favored spanking. Conditional spanking (nonabusive usage when 2- to 6-year-olds respond defiantly to milder tactics) was associated with significantly *less* noncompliance or aggression than 10 of 13 alternative tactics to which it had been compared. Analyses of conditional spanking included the only four randomized trials of spanking, all of which supported conditional spanking as one of the two most effective enforcements for time out for children demonstrating clinical levels of noncompliance.

Only two studies have replicated the strongest causal evidence against customary spanking while also testing alternative disciplinary methods that parents could use instead.^{9,10} They both found similar tiny adverse effects for all other types of disciplinary corrections as well as for two professional treatments for behavior problems. Psychotherapy and *Ritalin* both appeared to be just as harmful as spanking in this kind of statistically controlled prospective study. Additional analyses in those studies indicated that all these apparently adverse effects were due to residual selection bias, which is reduced but not eliminated by statistical controls.¹¹

The other likely explanation for why the *Pediatrics* editorial office might feature such weak evidence is because they are biased against considering the possibility that disciplinary spanking might be an acceptable disciplinary option under some limited conditions. If so, this bias must be minimized in order for *Pediatrics* to maintain its scientific credibility. Previously, the American Academy of Pediatrics championed scientific objectivity on this issue by co-sponsoring a scientific consensus conference on corporal punishment,¹² which found no convincing evidence of harm when parents used disciplinary spanking appropriately.¹³

Please consider the evidence we have cited and consult with your editorial staff so that a more informed and objective treatment can be applied to any future study of disciplinary spanking published in *Pediatrics*.

Robert E. Larzelere, PhD

*Professor, Dept. of Human Development and Family Science
Oklahoma State University*

Den A. Trumbull, MD, FCP

*Pediatric Healthcare
Montgomery, AL*

Joseph Zanga, MD, FAAP, FCP

*Chief of Pediatrics, Columbus Regional Health and Professor of Pediatrics
Mercer University School of Medicine.*

Marjorie Lindner Gunnoe, PhD

*Professor, Dept. of Psychology
Calvin College*

Christopher J. Ferguson, PhD

Associate Professor and Chair, Dept. of Psychology
Stetson University

References

1. 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.
2. Afifi TO, Mota N, MacMillan HL, Sareen J. Harsh physical punishment in childhood and adult physical health. *Pediatrics*. 2013;132(2):e333-e340.
3. 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.
4. Moyer MW. When is it OK to spank? A lot of what you've heard about the dangers of spanking might not be true. *Slate*. 2012, July 11.
http://www.slate.com/articles/double_x/doublex/2012/07/spanking_and_mental_illness_a_new_study_does_not_link_the_two.html.
5. Gershoff ET. [Corporal punishment by parents and associated child behaviors and experiences: A meta-analytic and theoretical review](#). *Psychological Bulletin*. 2002;128:539-579.
6. Larzelere RE, Baumrind D. [Are spanking injunctions scientifically supported?](#) *Law and Contemporary Problems*. 2010;73(2):57-88.
7. Ferguson CJ. [Spanking, corporal punishment and negative long-term outcomes: A meta-analytic review of longitudinal studies](#). *Clinical Psychology Review*. 2013;33:196-208.
8. 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.
9. Larzelere RE, Ferrer E, Kuhn BR, 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(2):180-189.
10. Larzelere RE, Cox RB, Jr., Smith GL. [Do nonphysical punishments reduce antisocial behavior more than spanking?](#) A comparison using the strongest previous causal evidence against spanking. *BMC Pediatrics*. 2010;10(10).
11. Rothman KJ, Greenland S, Lash TL. *Modern epidemiology*. 3rd ed. Philadelphia, PA: Wolter Kluwer; 2008.
12. Friedman SB, Schonberg SK. Proceedings of a conference on "The short- and long-term consequences of corporal punishment". *Pediatrics*. 1996;98:803-860.
13. Friedman SB, Schonberg SK. [Personal statement: "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."] *Pediatrics*. 1996;98:857-858.