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# A Brief Program Improves Counseling of Mothers With Children Who Have Persistent Aggression

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## Abstract

*Objective:* To assess whether a multimedia program can affect counseling behavior related to one of the strongest risk factors for violence later in life, persistent early childhood aggression. *Method:* The design was a controlled trial with unobtrusive measurement in a clinic setting. A researcher, pretending to be the mother of a 2 ½ year old boy, called 19 pediatric residents during clinic hours and requested advice on how to manage her child's persistently hurtful behavior. The intervention was a 40-min lecture focusing on a multimedia program, *Play Nicely*, which teaches accepted strategies for managing aggression in young children ages 1-7 years. Residents' responses were blindly assessed to determine the treatment effect of the intervention. *Results:* Compared with the control group (C), residents in the intervention (I) group were more likely to recommend setting the rule (I: 100% vs. C: 31%,  $p = .01$ ), redirecting (I: 83% vs. C: 8%,  $p = .003$ ), promoting empathy (I: 50% vs. C: 0%,  $p = .02$ ), and more likely to discourage the use of physical punishment (I: 83% vs. C: 31%). These are the primary strategies encouraged by the intervention. The magnitude of the effect size was very large for each of these three strategies, ranging from  $d = 1.1$  to 2.3. *Conclusions:* A brief

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intervention can improve the counseling behavior of primary care physicians regarding persistent childhood aggression. The findings have implications for child abuse prevention, violence prevention, medical education, and how to improve anticipatory guidance within primary care.

### **Keywords**

aggression, violence prevention, counseling, intervention, child, mother

### **Introduction**

Emotional regulation and the use of nonviolent behaviors are learned in the early years of life. Experts agree that persistent early childhood aggression is one of the best predictors of aggression and violence in adolescents and adults (Broidy et al., 2003; Campbell, 1994; Moffitt, Caspi, Dickson, Silva, & Stanton, 1996; Olweus, 1979; Shaw, Keenan, & Vondra, 1994; Shaw, Owens, Giovannelli, & Winslow, 2001; Tremblay et al., 2005). Research suggests that the way parents respond to childhood behavior, such as coercive strategies, may play a key role in children's likelihood of having persistent aggressive behavior (Tremblay et al., 2005). Nonphysical strategies for responding to hurtful behavior have been embraced; some of these options include setting the rule, redirecting, caring for others, and time outs (American Academy of Pediatrics [AAP], 1998; National Association for the Education of Young Children, 1998).

Well child visits during the early years offer an excellent opportunity to counsel parents about options to respond to childhood aggression. Unfortunately, there are gaps in pediatricians' ability to offer advice to parents (Scholer, Nix, & Patterson, 2006b). Studies have found that interventions can improve the counseling repertoires of physicians (Scholer, Brokish, Mukherjee, & Gigante, 2008), but none have examined whether an intervention can actually affect physician counseling behavior. Practical interventions are needed to address shortcomings in counselor behavior. One such program is a brief interactive, media-rich program that teaches the basics in aggression management in young children (Scholer, 2002; Scholer, Reich, Boshers, & Bickman, 2005; Scholer et al., 2006a; Scholer & Goad, 2003).

The objective of this study was to determine whether a brief intervention could affect how pediatric residents counsel the mother of a child with persistent aggression in a real-world situation. Advising behavior was measured by evaluating pediatric residents' audio-taped responses to a phone call from a mother of a child with aggressive behavior. We hypothesized that residents

who were presented with the intervention would provide more comprehensive counseling and would recommend the professionally accepted strategies encouraged on the intervention.

## Method

*Participant.* The participants were 19 pediatric house staff in their second of 3 years of training at the Vanderbilt University Medical Center. Eligible second-year residents were scheduled to be in their primary care continuity clinic either during the 2 weeks preceding the intervention or during the week after the intervention. Vanderbilt pediatric residents spend half a day per week in a primary care clinic in which they provide medical care to a cohort of patients that they follow for the duration of their residency. Approval for collecting and reporting data was obtained by the Vanderbilt Institutional Review Board.

*Group assignment.* A priori, it was decided that all residents who did not attend the intervention would be grouped into the control group, even if they were called post-intervention. Randomization was not possible due to this a priori decision and scheduling factors inherent in the residency schedule. Six residents were not scheduled to be in continuity clinic both in the 2 weeks prior (five residents) to the intervention and in the 1 week after the intervention (one resident), preventing randomization of these residents. The most likely reasons for not being in clinic or missing the intervention include being on vacation, being on an intensive care unit rotation, having been on call the previous night, or having other clinical obligations.

*Intervention group.* The intervention group was comprised of all six second-year pediatric residents who had not already participated in the phone interview (see below) and who attended the noon lecture intervention. These six residents were called during the week following the intervention.

*Control group.* The control group consisted of 13 second-year pediatric residents, including eight residents whose data were collected during the 2 weeks preceding the intervention and five residents who did not attend the intervention and whose data were collected during the week after the intervention.

*Intervention.* The intervention was a 40-min lecture that was provided on August 21, 2003 to pediatric residents as a routine part of their noon lecture series. The presentation consisted of a preintervention questionnaire (5 min), a demonstration of the *Play Nicely* multimedia program (25 min), speaker comments during the program (5 min), and a post-intervention questionnaire (5 min). The program is based on current evidence and theory that suggests

**Table 1.** *Play Nicely* Program Content Compared With Resident Counseling Differences**Strongly recommended as great options in *Play Nicely***Setting the rule<sup>a</sup>Redirecting (e.g., use your hands to help, not to hurt)<sup>a</sup>Promoting empathy<sup>a</sup>**Recommended as good options if others have failed**

Say what to expect if behavior persists (i.e., a warning)

Time out

Take away a privilege—for school-age children

**Strongly discouraged**Physical punishment<sup>a</sup>

Ignoring hurtful behavior

Yelling/using profanity

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a = Large resident counseling difference (i.e., large effect size) for this *Play Nicely* content.

that addressing early childhood aggression may decrease the likelihood of violence later in life (Tremblay, Boivin, Zoccolillo, & Montplaisir, 1999). The program advocates for nonphysical punishment strategies such as setting the rule, redirection, and promoting empathy. The program also focuses on providing a variety of options for managing aggression. Table 1 describes the main messages of the program and additional details have been published previously (Scholer, 2002; Scholer et al., 2005; Scholer & Goad 2003). Residents completed a 14-item multiple choice questionnaire pre/post presentation to assess knowledge (Scholer et al., 2005).

**Phone call data collection.** A telephone interview was used to assess each resident's ability to counsel the mother of a child with hurtful behavior. The phone calls were made either during the 2 weeks prior to the intervention or during the week after the intervention. Phone calls were made by two research assistants. However, to prevent study bias (see discussion), residents were told by their continuity attending physician that the caller was a mother of a new patient who is scheduled for a visit with them. Residents were directed to a telephone in an empty patient room. The research assistants used a standard script for soliciting advice regarding childhood aggression management. Standardized responses were developed to anticipated questions from the residents (e.g., how is your child's development? What is his home life like?). The following standard introduction was used by both research assistants.

Caller: Hi Dr., my name is Janet Ross, and I am having a problem with my son, Josh. He is 2 1/2, and he just keeps hitting the other kids at preschool. The preschool has been complaining about it and now they are threatening to kick him out if it doesn't stop. So, I don't know what to do. I have noticed it at home too when he is playing with my neighbor's kid, he kicks and hits him too. I have made an appointment with you, but I can't come in for a few weeks, so I am hoping you could just give me some ideas of what I could do.

If the resident averted the question in some way (e.g., referred the mother for counseling), the research assistant persisted with a follow-up question such as, "Until I am seen, what can I do now?" Residents were debriefed immediately after the call by one of the attending physicians (SS). Debriefing included an explanation of the rationale of the study, the importance of collecting data in a way that does not introduce bias, the ability of the resident to opt out of the study, and a request not to tell colleagues about the study for at least 2 months. Residents were provided with a phone number and told that they could call the number and tell the person on the other end to erase the last audio tape made. Residents were told that no one would be able to link their identity to whether the tape was retained or erased. Additionally, the research assistants recording the phone call never knew the name of the resident on the phone, and the attending physician who debriefed the participants would not be told when a person opted for his or her tape to be erased. None of the residents expressed disapproval of the study methods during the debriefing. There were no negative comments from the residents. None called to decline participation. Except for gender, no background information about the residents was recorded to protect anonymity. The research assistants were blinded to the knowledge of the residents' group membership.

*Measures.* The outcome measure was a blinded assessment of the tape-recorded residents' responses during the phone call. Each call was transcribed and coded by type of strategy recommended (e.g., redirecting, time out, no spanking). The research assistant who called the resident also recorded a written summary of the conversation, which was a valuable reference due to technology problems during two recordings (i.e., the taped message was not audible—1 resident in each group). Group assignment was not reported in the transcripts to protect against bias in coding. Two raters, blind to research condition, coded each of the transcribed tapes and handwritten notes. Interrater reliability for all of the response categories were high, with kappas ranging from .89 to 1.0 (Table 2). Coding of the phone calls occurred several

**Table 2.** Coding Categories, Examples From Phone Calls, and Corresponding Kappa Coefficients

Topic	Definition	Examples from this study's recorded transcripts	Kappa
Time out	Time away from current activity.	Send him to a corner so he can sit by himself and think about what he did for like a couple of minutes. They usually say one minute per year.	1.0
Set the rule	State that aggression is unacceptable.	Say, "no hitting." Don't just say "no," because "no" they hear that a million times a day.	0.90
Take away	Take away a privilege such as a toy or desirable activity.	"When you hit, we don't get to do fun things like watch cartoons or go to the park today or you don't get to go play at somebody's house today."	0.89
Redirect	Engage the child in a different, non-aggressive activity.	Redirect, say "are your hands for hitting or for coloring?"	1.0
Promote empathy	Ask the child how he would feel as the recipient of his own actions.	You say, "what is that other kid feels or how do you feel when you get hit" and try to get an empathy thing out.	1.0
Do not spank	Advise to not use corporal punishment strategies such as hitting.	From a pediatrician's standpoint, we don't like spanking very much because it is sort of telling them "OK you can't hit, but we can hit you."	1.0

**Table 3.** Effect of the *Play Nicely* Program Presentation on the Frequency of Pediatric Residents' Counseling Recommendations to the Mother of a Boy With Hurtful Behavior

Strategy recommended	Control group N = 13	Intervention group N = 6	Difference	Effect size (d)	p
Time out	11 (85%)	4 (67%)	-18%		.56
Set the rule	4 (31%)	6 (100%)	+69%	Large (1.7) <sup>a</sup>	.01
Redirect behavior	1 (7.7%)	5 (83%)	+75%	Large (2.3) <sup>a</sup>	.003
Promote empathy	0 (0%)	3 (50%)	+50%	Large (1.7) <sup>a</sup>	.02
Ignore the behavior	4 (31%)	0 (0%)	-31%		.25
No spanking	4 (31%)	5 (83%)	+52%	Large (1.1) <sup>a</sup>	.057
Take away a privilege	3 (23%)	4 (67%)	+44%		.13

Note: *d* indicates the magnitude of the treatment effect. A *d* of .5 indicates a moderate treatment effect and a *d* > .8 equates to a large treatment effect.

<sup>a</sup> Indicates that there was a significant treatment effect.

*p* value calculated using Fisher's exact test, two-tailed. For no spanking, *p* = .05 with one-tailed Fisher's exact test.

months after the completion of data collection and no dates appeared on the transcriptions to ensure that group assignment was unknown.

**Statistics.** We compared the types and number of strategies offered by the residents in the intervention group with those offered by the control group. We calculated the difference between how often the intervention group recommended a specific strategy and how often the control group recommended that same strategy. To test for statistical significance, we calculated the treatment effect size using Cohen's *d* (Cohen, 1988) and *p* values using two-tailed Fisher's Exact Test.

## Results

Nineteen second-year residents participated in the study with six in the intervention group and 13 in the control group. There were three males in each group.

There were significant differences in the counseling provided by the residents in the intervention group compared with the residents in the control group (Table 3). Compared with the control group (C), residents in the intervention (I) group were more likely to recommend setting the rule (I: 100% vs. C: 31%, *p* = .01), redirecting (I: 83% vs. C: 8%, *p* = .003), and promoting

empathy (I: 50% vs. C: 0%,  $p = .02$ ); the magnitude of the effect size was very large for each of these three strategies, ranging from  $d = 1.7$  to  $2.3$  (Table 3). Residents in the intervention group were also more likely to discourage the use of physical punishment (I: 83% vs. C: 31%), again with a large treatment effect size of  $d = 1.1$ .

The average number of strategies recommended by pediatric residents in the intervention group (mean = 7.2) was significantly higher ( $p < .001$ ) compared with the average number provided by the control group (mean = 4.2).

The differences in resident counseling (Table 1) were also compared to the intervention's content regarding how to respond to aggression. There were large resident counseling differences (i.e., large effect size) for the strategies that are most strongly recommended in the intervention, including setting the rule, redirecting, and promoting empathy. There was also a large resident counseling difference for advising parents to not use physical punishment; in the program, physical punishment is strongly discouraged.

## **Discussion/Conclusions**

This is the first study to demonstrate that a relatively brief intervention can improve the counseling behavior of primary care providers related to childhood aggression. Compared with residents in the control group, residents who participated in the intervention offered the mother of a child with hurtful behavior a wider range of appropriate strategies for managing that aggression. Specifically, residents in the intervention group were more likely to recommend setting the rule, redirecting, promoting empathy, and not using physical punishment. The results have implications for how to improve education related to violence prevention at a formative time in the careers of health care providers.

Limitations of the study include generalizability to other geographic locations and other types of learners. It would be expected that the effect of the program would be weaker had more time elapsed between the intervention and the post intervention phone calls. This study was controlled but not randomized, primarily due to resident scheduling issues. We are aware of no systematic group assignment differences that would be likely to affect the results. However, this is a possible confounder in the absence of random assignment. The study had an intervention and a control group, but other intervention arms such as a standard lecture or role play were not included.

Because of the significant findings in this study (i.e., significant  $p$  values using Fishers Exact test and large treatment effect (Cohen's  $d$ )), the small number of participants should not necessarily be viewed as a limitation. An

effect size of  $d = 0.5$  is considered moderate and an effect size of  $d > 0.8$  is considered large (Cohen, 1988). For counseling mothers about setting the rule, redirecting, promoting empathy, and not using physical punishment, we found that the magnitude of the treatment effect was very large, with effect sizes ranging from  $d = 1.1$  to  $d = 2.3$ . It is much more clinically relevant to find a large treatment effect with few participants than to find a very small treatment effect with a large number of participants. The finding of a large treatment effect with a small number of participants speaks strongly to the power of the intervention. Although the current study maintains high internal validity, future studies should include large, more diverse samples to ensure better external validity.

These data complement previous studies focused on the utility of a brief multimedia program that addresses early childhood aggression. The *Play Nicely* program has been found to effectively teach alternative forms of managing aggression and increase knowledge of why and how to manage aggression (Scholer et al., 2005; Scholer & Goad, 2003). Parents reported that the program helped them manage aggression in their own child 1 year after receiving it from their pediatrician (Scholer et al., 2006a).

A notable strength of this study is that we measured behavior under realistic circumstances in an unobtrusive manner rather than self-report or a simulation. Testing recall by way of a questionnaire is very practical but may be inadequate because people behave differently in real situations. Ample research has shown that people's actual behaviors are often incongruent with what they report they would do in the abstract (Adair, 1970; Duncan, Rosenberg, & Finkelstein, 1969; Minor, 1970; Orne, 1962; Page, 1968; Paulus & Murdoch, 1971; Rosenberg, 1965; Rosenberg, 1969; Silverman, 1968; Suls & Rosnow, 1988). We avoided these potential biases by collecting data in a "real world" situation—physicians speaking on the phone with someone who they understood to be a concerned mother of a young child with hurtful behavior. When debriefed, all participants agreed that the unobtrusive measurement was important given the research objective and none declined to participate.

This study has important implications. Persistent childhood aggression is one of the strongest risk factors for violence later in life (Broidy et al., 2003; Campbell, 1994; Moffitt et al., 1996; Olweus, 1979; Shaw et al., 1994; Shaw et al., 2001; Tremblay et al., 1999). Moreover, almost all young children exhibit hurtful behavior at some point during early childhood (Tremblay et al., 1999, 2005) and between 4% and 11% of boys have persistently high levels of physical aggression that extend through the adolescent years (Broidy et al., 2003). The American Academy of Pediatrics

and the Canadian Paediatric Society recommend routine counseling of parents about discipline during primary care visits and discourage the use of physical punishment (AAP, 1998; CPS, 2004). Health care professionals are in a unique position to intervene in the early years (AAP, 1999), but efforts are needed to remedy their currently limited approach to counseling (Scholer et al., 2006b, 2008).

We found a large treatment effect for physicians counseling parents about not using physical punishment. This is particularly noteworthy because associations have been documented between the use of physical punishment and many adverse outcomes later in life (Gershoff, 2002). Given these findings, it would be best for all physicians to discourage the use of physical punishment. However, of concern, it appears that many physicians may actually endorse the use of physical punishment (McCormick, 1992).

Research suggests that that it may be possible to change short-term attitudes about physical punishment with brief interventions. In a another study, pediatric residents viewed the program independently; compared to baseline, residents were more likely to recommend not using physical punishment 2 months post intervention (25% pre vs. 50% post;  $p < .001$ ; Scholer et al., 2008). For caregivers, there is also evidence to suggest that a brief program can shift attitudes toward using less physical punishment (Scholer, Mukherjee, Gibbs, Memon, & Jongeward, 2007, Scholer et al., 2010a, 2010b). Nine percent of consecutive parents of 1- to 5-year-old children exposed to the intervention in clinic planned to use less spanking compared with 0% in a control group (Scholer et al., 2010b). Using a validated scale in another study, the program shifted attitudes toward using less physical punishment in an intervention group but not a control group (Scholer et al., 2010a). This study adds to the literature by demonstrating for the first time that a brief intervention may be able to change physician counseling behavior related to physical punishment.

Professional organizations have emphasized using nonphysical methods to discipline children. Given that some physicians may actually endorse physical punishment, it should not be taken for granted that primary care providers are willing and/or able to help parents develop alternatives to physical punishment; educational interventions are needed to help in this process. Brief educational programs may be able to increase the likelihood of residents delivering this message to parents. A relatively short multimedia presentation to health care professionals may play a role in helping to address two of the strongest risk factors for violence later in life, inappropriate parenting and persistent early childhood aggression.

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## Declaration of Conflicting Interests

The authors declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: The Play Nicely program is owned by Vanderbilt University and Dr. Scholer is on the authors of the program. The program can be viewed at no cost at [www.playnicely.org](http://www.playnicely.org).

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## References

- American Academy of Pediatrics. (1998). Guidance for effective discipline. American Academy of Pediatrics (AAP) Committee on Psychosocial Aspects of Child and Family Health. *Pediatrics*, *101*, 723-728.
- American Academy of Pediatrics. (1999) The role of the pediatrician in youth violence prevention in clinical practice and at the community level. American Academy of Pediatrics (AAP) Task Force on Violence. *Pediatrics*, *103*, 173-181.
- Adair, J. G. (1970). Pre-experiment attitudes toward psychology as a determinant of experimental results: verbal conditioning of aware subjects. *Proceedings of the 78th annual convention of the American Psychological Association*, *5*, 417-418.
- Broidy, L. M., Nagin, D. S., Tremblay, R. E., Bates, J. E., Brame, B., & Dodge, K. A. (2003). Developmental trajectories of childhood disruptive behaviors and adolescent delinquency: A six-site, cross-national study. *Developmental Psychology*, *39*, 222-245.
- Campbell, S. B. (1994). Hard-to-manage preschool boys—externalizing behavior, social competence, and family context at 2-year follow-up. *Journal of Abnormal Child Psychology*, *22*, 147-166.
- Cohen, J. (1988) *Statistical power analysis for the behavioral sciences*. Hilldale, NJ: Lawrence Erlbaum.
- Canadian Paediatric Society. (2004). Effective discipline for children. Psychosocial Paediatrics Committee, Canadian Paediatric Society (CPS). *Paediatrics and Child Health*, *9*, 37-50.

- Duncan, S., Rosenberg, M. J., & Finkelstein, J. (1969) Paralanguage of experimenter bias. *Sociometry*, *32*, 207-219.
- Gershoff, E. T. (2002). Corporal punishment by parents and associated child behaviors and experiences: A meta-analytic and theoretical review. *Psychological Bulletin*, *128*, 539-579.
- Mccormick, K. F. (1992) Attitudes of primary care physicians toward corporal punishment. *Jama-Journal of the American Medical Association*, *267*, 3161-3165.
- Minor, M. W. (1970) Experimenter-expectancy effect as a function of evaluation apprehension. *Journal of Personality and Social Psychology*, *15*, 326-332.
- Moffitt, T. E., Caspi, A., Dickson, N., Silva, P., & Stanton, W. (1996) Childhood-onset versus adolescent-onset antisocial conduct problems in males: Natural history from ages 3 to 18 years. *Development and Psychopathology*, *8*, 399-424.
- National Association for the Education of Young Children. (1998). *Accreditation criteria and procedures of the National Association for the Education of Young Children*. Washington, DC: Author.
- Olweus, D. (1979). Stability of aggressive reaction patterns in males—A Review. *Psychological Bulletin*, *86*, 852-875.
- Orne, M. (1962). On the social psychology of the psychological experiment: With particular reference to demand characteristics and their implications. *American Psychologist*, *17*, 776-783.
- Page, M. M. (1968) Modification of figure-ground perception as a function of awareness of demand characteristics. *Journal of Personality and Social Psychology*, *9*, 59-66.
- Paulus, P. B., & Murdoch, P. (1971) Anticipated evaluation and audience presence in enhancement of dominant responses. *Journal of Experimental Social Psychology*, *7*, 280-291.
- Rosenberg, M. J. (1965) When dissonance fails: On elimination evaluation apprehension from attitude measurement. *Journal of Personality and Social Psychology*, *1*, 28-42.
- Rosenberg, M. J. (1969) The conditions and consequences of evaluation apprehension. In R. Rosenthal & R. L. Rosnow (Eds.), *Artifact in behavioral research* (pp. 280-349). New York, NY: Academic.
- Scholer, S. J. (2002). *Play Nicely Program: Recommendations for managing aggression in young children*. Nashville, TN: Vanderbilt University.
- Scholer, S. J., Brokish, P. A., Mukherjee, A. B., & Gigante, J. (2008) A violence-prevention program helps teach medical students and pediatric residents about childhood aggression. *Clinical Pediatrics (Philadelphia)*, *47*, 891-900.
- Scholer, S. J., Cherry, R., Garrard, H., Mace, R., White, N., & Mallard, R. (2006a) A multimedia program helps parents manage aggression in their young children. *Clinical Pediatrics*, *45*, 835-840.

- Scholer, S. J., & Goad, S. (2003) Feedback on a multimedia violence prevention program. *Clinical Pediatrics, 42*, 789-796.
- Scholer, S. J., Hamilton, E. C., Johnson, M. C., & Scott, T. A. (2010a) A brief violence prevention intervention may affect parents' attitudes towards using less physical punishment. *Family and Community Health, 33*(2), 106-116.
- Scholer, S. J., Hudnut-Beumler, J., & Dietrich, M. S. (2010b) A brief primary care intervention helps parents develop plans to discipline. *Pediatrics, 125*, e242-e249.
- Scholer, S. J., Mukherjee, A. B., Gibbs, K. I., Memon, S., & Jongeward, K. L. (2007) Parents view a brief violence prevention program in clinic. *Clinical Pediatrics, 46*, 724-734.
- Scholer, S. J., Nix, R. L., & Patterson, B. (2006b) Gaps in pediatricians' advice to parents regarding early childhood aggression. *Clinical Pediatrics (Philadelphia), 45*, 23-28.
- Scholer, S. J., Reich, S. M., Boshers, R. B., & Bickman, L. (2005) A multimedia violence prevention program increases pediatric residents' and childcare providers' knowledge about responding to childhood aggression. *Clinical Pediatrics, 44*, 413-417.
- Shaw, D. S., Keenan, K., & Vondra, J. (1994) The developmental precursors of antisocial behavior: Ages 1-3. *Developmental Psychology, 30*, 355-364.
- Shaw, D. S., Owens, E. B., Giovannelli, J., & Winslow, E. B. (2001) Infant and toddler pathways leading to early externalizing disorders. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 36-43.
- Silverman, I. (1968) Role-related behavior of subjects in laboratory studies of attitude change. *Journal of Personality and Social Psychology, 8*, 343-348.
- Suls, J. M., & Rosnow, R. L. (1988) Concerns about artifacts in psychological experiments. In J. G. Morawski (Ed.), *The rise of experimentation in American psychology* (pp. 163-187). New Haven, CT: Yale University Press.
- Tremblay, R. E., Boivin, M., Zoccolillo, M., & Montplaisir, J. (1999) The search for the age of "onset" of physical aggression: Rousseau and Bandura revisited. *Criminal Behaviour and Mental Health, 9*, 8-23.
- Tremblay, R. E., Nagin, D. S., Seguin, J. R., Zoccolillo, M., Zelazo, P. D., Boivin, M., . . . Japel, C. (2005) Physical aggression during early childhood: trajectories and predictors. *Canadian Child and Adolescent Psychiatry Review, 14*, 3-9.

## Bios

**Seth J. Scholer** is an associate professor of pediatrics at Vanderbilt University. Dr. Scholer completed medical school at Indiana University and a residency in pediatrics at Duke University. He obtained a master of public health at Indiana University. Since starting at Vanderbilt University in 1995, he has been an active clinician, educator, and researcher. His research focuses on how to improve pediatric primary care services in the area of injury and violence prevention.

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**Robyn B. Boshers** is the Program Director for the In Search of Genius Foundation, which provides innovative science and mentoring programs to underserved elementary school students in the Chicago area. She earned her Bachelor's from Vanderbilt University in Nashville, TN and her Master's in Sociology from Northwestern University in Evanston, IL. Her research focused on poverty, welfare policy, and public opinion. She is passionate about working to level the playing field through educational interventions in inner-city communities.

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