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Tests of the Mitigating Effects of Caring and Supportive Relationships in the Study of Abusive Disciplining Over Two Generations

Todd I. Herrenkohl, Ph.D.^{a,*}, J. Bart Klika, M.S.W.^a, Eric C. Brown, Ph.D.^a, Roy C. Herrenkohl, Ph.D.^b, and Rebecca T. Leeb, Ph.D.^c

^aSchool of Social Work, University of Washington, Seattle, Washington

^bCenter for Social Research, Department of Sociology and Anthropology, Lehigh University, Bethlehem, Pennsylvania

^cChild Development Studies Team, Division of Human Development and Disability, National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention, Atlanta, Georgia

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A B S T R A C T

Purpose: To examine evidence of the continuity in abusive discipline across two generations (G1 and G2) and the role of safe, stable, and nurturing relationships (SSNRs) as protective factors.

Methods: Data are from the Lehigh Longitudinal Study, a prospective investigation of the causes and consequences child maltreatment that began in the 1970s with a sample of 457 children and their parents. Data were most recently collected in 2008–2010 from 80% of the original child sample (N = 357) when they were adults age 36 years on average. Of those assessed as adults, 268 participants (G2s) were parenting children and thus comprise the analysis sample. Analyses examined the association between harsh physical discipline practices by G1 parents and G2's reports of similarly severe discipline practices used in parenting their own children. Analyses also investigated the direct and interactive (protective) effects of SSNR variables that pertain to the care, warmth, and support children received from their mothers, fathers, and siblings over their lifetimes. A measure of an adult partner's warmth and support was also included. A case-level examination of G2 harsh discipliners was included to investigate other forms of past and more recent forms of abuse exposure.

Results: Results show a significant predictive association between physical discipline by G1 and G2 parents ($\beta = .30$; $p < .05$; odds ratio, 1.14; confidence interval, 1.04–1.26), after accounting for childhood socioeconomic status and gender. Whereas being harshly disciplined as a child was inversely related to reports of having had a caring relationship with one's mother ($r = -.25$; $p < .01$), only care and support from one's father predicted a lower risk of harsh physical discipline by G2s ($\beta = -.24$; $p < .05$; odds ratio, .74; confidence interval, .59–.92). None of the SSNR variables moderated the effect of G1 discipline on G2 discipline. A case-level examination of the abusive histories of G2 harsh discipliners found they had in some instances been exposed to physical and emotional abuse by multiple caregivers and by adult partners.

IMPLICATIONS AND CONTRIBUTION

There is continuity in harsh physical (abusive) discipline across two generations (G1 and G2). Support from fathers appears independently and inversely related to the likelihood of G2 harsh physical discipline. Further examination of safe, stable, and nurturing relationships as mitigating factors is required so that promising interventions can be developed.

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* Address correspondence to: Todd I. Herrenkohl, Ph.D., Social Development Research Group, School of Social Work, University of Washington, 9725 3rd Avenue NE, Suite 401, Seattle, WA 98115.

E-mail address: tih@u.washington.edu (T.I. Herrenkohl).

Conclusions: There is continuity in physical disciplining over two generations. SSNRs measured in this study did not mediate or moderate the effect of G1 on G2 harsh physical discipline, although care and support from fathers was inversely related to the likelihood of G2 harsh physical discipline. This relationship is independent of abuse in childhood. Research is needed to identify factors that interrupt the intergenerational continuity of harsh physical (abusive) disciplining so that promising interventions can be developed and implemented.

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As noted in the introductory article of this special issue and as referenced in other sources (see review by Herrenkohl [1]), child maltreatment is an enduring societal problem that is both costly and preventable. A report by Fang et al. [2] estimated the lifetime cost of nonfatal child maltreatment incidents at over \$210,000 per victim. Their estimate includes health care and medical costs, productivity losses, and costs associated with special education and criminal justice involvement. Given how frequently maltreatment goes unreported, and therefore undocumented in official records, one can safely assume that the true costs to society are far greater than even the most comprehensive analyses reveal [3].

Findings of both cross-sectional and longitudinal studies of individuals maltreated in childhood show that there are many developmental consequences of abuse and neglect [4]. For example, findings of several studies reveal that children who are physically abused are more likely than are other children over their lifetimes to engage in antisocial (e.g., delinquency and crime) and other high-risk behaviors, such as excessive alcohol use, use of illicit drugs, and heavy smoking [1]. Child maltreatment victims are also more likely than are others to be diagnosed with mental health problems and to experience physical health problems earlier in life [1,5].

In one study of the psychological and emotional consequences of child maltreatment, Herrenkohl and colleagues [6] found that individuals with official reports of abuse and neglect experienced depression in adulthood at more than twice the rate of others in their sample. In another analysis of the same dataset (also used in the current investigation [7]), the authors found that child abuse, measured before age 12 years, predicted lower self-esteem and less life satisfaction when participants, observed from childhood, approached middle age. In that study, officially recorded and parent-reported harsh physical discipline, two complementary measures of abuse used in the study, independently predicted lower wellbeing scores.

Another potential consequence of child abuse is later violence perpetration [1,8–10]. Researchers who have studied the cycle of violence in abusive families have sought to address the question of whether children of abusive parents (G1) carry forward the same tendencies that lead them to abuse their own children (G2) [8,9]. In a recent review of research, Thornberry and colleagues [8] concluded there is insufficient evidence from published studies to know whether in fact this pattern exists. In their review, they were particularly critical of what they deemed a lack of rigor in the design of most studies. Interestingly, Widom and Maxfield [11] offered a similar critique 20 years earlier in their review of research at the time, suggesting that progress in the field has been disappointingly slow or that criteria applied in these reviews are misaligned with the goals and approaches to intergenerational research prioritized by other researchers. In either case, most who work in the field of child welfare believe that child abuse in one generation poses a risk to children of the next

generation, and that further research on the continuity of abuse within families is needed to determine why [12–14].

A study by Pears and Capaldi [14] offers one example of a well-regarded study on this topic. They found a relatively strong and unmediated relationship between parents' reports of having been abused and their children's later accounts of their parents' own abuse of them. Variables, such as G1 age at birth of the first child, consistency of discipline of G2, and G1 depression and post-traumatic stress disorder did not fully account for the direct effect of G1 on G2 abuse. In another study, Heyman and Smith Slep [15] found that exposure to violence in a child's family of origin was related to that person's perpetration of child maltreatment in adulthood. Data for their cross-sectional investigation were from the 1985 National Family Violence Survey. Interestingly, Thompson [16] found that the association between mothers' retrospective accounts of child (physical) victimization and official child welfare reports of maltreatment was largely explained by other variables, including maternal depression and physical victimization during adulthood. In that the data used in the studies of Heyman and Smith Slep and Thompson are cross-sectional, replication of these findings in longitudinal investigations is critical.

If there is indeed an association between physical abuse victimization and perpetration, it is critical that researchers focus on variables that mediate and moderate this relationship [17]. Doing so will provide explanations that can then be translated to goals for prevention and intervention programs. At the same time, practitioners in the field realize they must act now, if only on partial information, to prevent abuse and, secondarily, to provide services to children who have already been abused [10,12].

A review of relevant literature shows that there has been some work on mediators of child maltreatment [18], but less so moderators that might alter the relationship between maltreatment and later outcomes [19]. For example, it is unknown whether positive adult and peer relationships formed in childhood and adolescence can help lessen the long-term social, behavioral, and health-related consequences of an abusive upbringing [1]. One hypothesis is that it is within the context of warm, supportive, and nurturing relationships that abused children learn how to relate nonviolently with others [20]. Warm and supportive relationships may also help children learn ways of expressing emotions that lead in turn to better coping, less depression, and more self-confidence and personal agency, all building blocks of resilience [20].

Current literature on protective factors related to child maltreatment reveals surprisingly little about variables that directly or even indirectly lessen the recurrence of abuse across generations [21]. One recently published study by Valentino and colleagues [22] on the intercontinuity in child abuse risk showed that among 70 teenage mother (G1) and child (G2) pairs followed longitudinally, the association for African-Americans between

G1's retrospectively measured history of child abuse and G2's reports of having also been abused was attenuated by G1's authoritarian parenting values. Interestingly, authoritarian parenting values were protective only for African-Americans, not others in their sample.

The research literature on protective factors and resilience in abused children is also relevant [23]. Results of this work shows that qualities of the individual child—such as low emotionality, positive self-esteem, ego resilience, high sociability, and having an engaging temperament—are commonly associated with better outcomes for abused children at later life stages [24,25]. Resilience in child abuse victims is also associated with an individual's capacity to form positive and lasting relationships with others and to benefit from the support and mentoring that these relationships can provide [18,25,26]. A child's having a stable home environment and experiencing fewer transitions throughout adolescence can also improve outcomes for children exposed to adversity [26].

The current longitudinal investigation includes a series of interrelated research questions on the intergenerational transmission of harsh physical (abusive) disciplining and protection related to the Centers for Disease Control and Prevention (CDC) framework on SSNRs [27]. We focus on parent reports of harsh physical disciplining because these reports are deemed a valid and reliable source of data on the abusive upbringings of children within our sample (e.g., Herrenkohl et al. [28]). There have been numerous publications from the larger study in which these data on abusive discipline have been used.

In the current investigation, we examined the association between parent-reported physical disciplining in one generation (G1) and the next (G2). We then conducted several moderation tests to examine whether SSNRs related to the warmth and support provided by caregivers, siblings, and adult partners reduce the likelihood of abusive disciplining among G2 parents. Case-level analyses are included at the end of the report to help explain who among the participants repeats the abusive disciplining she or he received with her or his own children.

Methods

Sample

Data are from the Lehigh Longitudinal Study, a prospective study of the causes and consequences of child maltreatment, which began in the 1970s with a sample of 457 children and their families. Details of the original study can be found in earlier publications [28]. In brief, we selected some of the families into the study from child welfare agency abuse (referred to below as the "child welfare abuse group") and neglect (referred to below as the "child welfare neglect group") caseloads. Others were selected from several other group settings (Head Start centers and day care and nursery programs) in the same two-county, mostly suburban area within which those in child welfare were living at the time. The first preschool wave of the study took place in 1976–1977, when children recruited to the study were 18 months to 6 years of age. A second school-age assessment was conducted in 1980–1982. A third adolescent assessment was conducted in 1990–1992 with approximately 91% of the original sample. When they were assessed in adolescence, participants were 18 years of age on average. Data were most recently collected in 2008–2010 from about 80% of the original child sample (N = 357), now in their mid 30s.

The original child sample was gender balanced: 248 males (54%) and 209 females. The racial and ethnic composition of the original sample was relatively homogeneous but consistent overall with the makeup of the two-county area from which participants (G1 parents and children) were selected: 1.3% (n = 6) American Indian/Alaska Native, .2% (n = 1) Native Hawaiian or other Pacific Islander, 5.3% (n = 24) Black or African-American, 80.7% (n = 369) White, and 11.2% (n = 51) more than one race. Just over 7% (n = 33) self-identify as Hispanic or Latino. For a small percentage (1.3%; n = 6), the ethnicity of the child was unknown. A total of 86% of children were originally from two-parent households. The income level of 63% of families at the time was below \$700/month. Other families had incomes that ranged to over \$3,000/month. The retained adult (G2) sample (N = 357) remains gender balanced: 186 males (52.1%). An analysis of the currently retained and full sample showed that although more of the original child welfare abuse group was lost to attrition (68% retained compared with 79% in the child welfare neglect group and over 80% in the Head Start, day care, and nursery groups), there were no significant group differences in gender, age, childhood socioeconomic status (SES), or parent-reported neglect or physical discipline. Because the primary focus of this investigation is on the continuity in harsh discipline from G1 to G2, we limit the adult sample to those with children (n = 268), about 75% of the panel recently assessed. This subgroup of participants is composed of 130 females and 138 males, whose ages ranged at the time of the adult assessment from 32 to 41 years (mean, 36.44 years). Of these, 208 were White (78%), 29 were more than one race (11%), 25 were Black/African-American (9%), and a small number were Asian (1), American Indian/Alaska (2) and Native Hawaiian/Pacific Islander (2). The race of one participant in the analysis sample was not provided.

Measures

Measures consisted of G1 reports of harsh physical discipline, an index of physical discipline practices assessed at preschool and school-age assessments of the larger study. As described in earlier publications, (e.g., Herrenkohl et al. [7,29]), questions in the preschool wave were asked of parents (predominantly mothers) about their disciplining of children in the "past 3 months" and, separately, "prior to the past 3 months." In the school-age assessment, parents reported on their disciplining practices over the past year. Each of 39 practices assessed at each wave was rated for severity on a 3-point scale (1 = not severe; 2 = moderately severe; and 3 = abusive) by a group of 24 child welfare workers and child development specialists [28]. These scores were averaged to form a severity weight for each practice, standardized, and then combined as a composite measure. Higher scores on the index reflect more severe (abusive) practices across the three time periods. A total of nine practices with an average rating of ≥ 2.75 were considered physically abusive. These include slapping or spanking a child as to leave a bruise; hitting a child with a strap, rope, or belt; hitting a child with a hard object; and pulling a child's hair. Scores for the analysis sample on the composite G1 harsh physical discipline measure range from -4.10 to 7.26 (mean, $.20$; standard deviation, 2.20).

G2 reports of harsh physical discipline included some of the same practices previously rated as abusive in the earlier waves of the study (i.e., reported by G1 about their disciplining of G2 participants), including slapping or spanking a child so as to leave a bruise; hitting a child with a strap, rope, or belt; hitting

a child with a hard object; and pulling a child's hair. Variables were in this case scored yes or no, indicating the presence or absence of these practices. Affirmative scores were then summed to form a 0–4 (variety) scale, and then reduced to a dichotomy (0 = no harsh physical discipline versus 1 = harsh physical discipline), because so few G2 respondents (33 in all) reported having used one or more of these practices.

Hypothesized SSNR variables were lifetime reports of the care, warmth, and support G2 individuals received from their mothers, fathers, and siblings while growing up. A similar measure of G2 partner's warmth and support covers the year before the adult assessment. Data were in both cases self-report and retrospective.

The G2 lifetime reports were of the care, warmth, and support each individual received from his or her mother (or primary female caregiver), father (or primary male caregiver), and siblings over their lifetimes. A measure of an adult partner's warmth, affection, and emotional support was also included. Scales similar to these were used in the Midlife in the United States national survey [30]. For the few participants without siblings, scores on the sibling care variable were set to missing (see Analyses section below). Missing data for the partner support variable were handled similarly. Each of the mother, father, and sibling care composite variables was composed of six items (scored on a scale of "never" to "frequently"), including "[Mother/Father/Sibling] spoke to you with a warm and friendly voice"; "[Mother/Father/Sibling] seemed emotionally cold to you" (reversed); "[Mother/Father/Sibling] was affectionate with you"; "[Mother/Father/Sibling] enjoyed talking things over with you"; "[Mother/Father/Sibling] could make you feel better when you were upset"; and "[Mother/Father/Sibling] seemed to understand your problems or worries." Scores for each were averaged across the six items. Scale scores for each of the mother, father, and sibling care variables ranged from 1 to 4. The means (and standard deviations) were 3.23 (.80) for mother care ($\alpha = .93$); 3.10 (.78) for father care ($\alpha = .91$); and 2.99 (.77) for sibling care ($\alpha = .90$). Scores for partner care and support ($\alpha = .89$) among participants who were currently partnered and parenting (about half of the analysis sample) ranged from 1.25 to 4, with a mean of 3.67 and standard deviation of .57.

Covariates included child gender (female coded as 1) and child SES, a standardized index of parents' occupational status, income, and number of rooms in the house. The SES scores for the analysis sample ranged from -5.43 to 9.18 , with a mean of $-.32$ and standard deviation of 3.12 , which indicated a wide variation in SES scores, but with a substantial number of cases at the lower end of the score continuum.

Case-level analyses that followed the multivariate tests included additional measures of abusive physical disciplining (by caregivers other than the primary respondent), as well as emotionally abusive disciplining by mothers, fathers, and other G1 caregivers. Emotionally abusive practices include taking meals away from a child, isolating the child in a dark room, and threatening to send the child away. Individual scores of discipline severity by each caregiver were summed and then plotted for each G2 parent who reported having used harsh practices with his own children.

In addition, we investigated dichotomous (yes or no) past-year measures of partner abuse from the Conflict Tactics Scale (CTS-2) [31] for these same G2 parents. Measures include assault (e.g., pushed/shoved, grabbed, slapped), as well as severe (e.g., called fat/ugly, destroyed something, threatened to hit/throw something) and minor (e.g., insulted/swore, shouted/yelled, did something spiteful) forms of psychological abuse. Both

perpetration and victimization scores were considered. Of those in the overall analysis sample with CTS data, 47 (19.3%) perpetrated at least one past-year assault of an intimate partner, and a similar percentage were in this way victimized. In addition, 38 (15.6%) perpetrated severe psychological abuse and 198 (81.1%) perpetrated minor psychological abuse. Approximately 78% of the analysis sample experienced minor psychological abuse.

Analyses

A core set of analyses examined the direct effect of G1 harsh physical discipline on G2's use of some of the same discipline practices, as adults, with their own children. Analyses also investigated the direct and interactive (protective/moderator) effects of the SSNR variables in our analysis sample of 268. We tested interactions of SSNR variables and G1 harsh physical discipline using cross-product terms and multiple-group models. Multiple-group analyses, which require the use of dichotomous grouping variables, separated individuals with high (top 25%) and low (remaining 75%) scores on each SSNR composite measure. Analyses were conducted using MPLUS 7 [32], which includes an option of analyzing categorical data using weighted least-squares estimation (WLSMV estimator in MPLUS). This option provides a way to make full use of all available data and to keep one's sample size constant across model tests. Thus, our analysis sample remained at 268 cases despite some missing data for certain variables. A case-level examination of the family histories and past-year adult relationships of G2 harsh discipliners was incorporated into the current study as a final step to understand whether those in G2 determined to have used harsh discipline practices were exposed to multiple forms of childhood abuse and past-year intimate partner violence. This final exploratory investigation was added to help broaden understanding of the context of family violence and to provide information about what leads some to repeat in their own disciplining the same harsh practices they endured.

Results

Table 1 lists correlations among the variables in the analysis. As shown, harsh physical discipline by G1 and G2 was correlated around .30 ($p < .05$). Being physically disciplined as a child was inversely related to reports of having had a caring relationship with one's mother ($r = -.25$; $p < .01$). Correlations between G1 harsh physical discipline and the other SSNR variables were nonsignificant. The SSNR variables were themselves moderately, significantly correlated (in the .16–.30 range).

Regression results showed a significant effect of G1 harsh physical discipline on G2 harsh physical discipline ($\beta = .30$; $p < .05$; odds ratio, 1.14; confidence interval, 1.04–1.26), after accounting for childhood SES and gender. Subsequent tests examined the conditional effects of the SSNR variables on G2 harsh physical discipline after accounting for G1 harsh physical discipline and the two covariates. Results in Table 2 show that a caring relationship with one's father is associated with lower odds of harsh physical discipline by G2 parents ($\beta = -.24$; $p < .05$; odds ratio, .74; confidence interval, .59–.92). However, no other SSNR variable was significantly and uniquely predictive of the G2 outcome. Also noteworthy was the strength of the relationship between harsh physical discipline by G1 and G2, which was largely unchanged from the model without the SSNR variables entered.

Table 1
Correlations among variables

	Gender	Socioeconomic status	G1 Harsh physical discipline	G2 Harsh physical discipline	Mother care	Father care	Sibling care	Partner support
Gender								
Socioeconomic status	.08							
G1 harsh physical discipline	-.02	-.12						
G2 harsh physical discipline	.21***	-.02	.30*					
Mother care	.05	.16*	-.25**	.07				
Father care	.12	.15***	-.08	-.24*	.30**			
Sibling care	.12	.21**	-.08	.07	.29**	.22**		
Partner Support	-.13	.06	-.09	-.14	.20**	.18**	.16*	

G1 = Generation 1; G2 = Generation 2.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Tests of interactions (using cross-product terms in a regression framework and multiple-group tests in MPlus) between harsh physical discipline in G1 and the SSNR variables produced no evidence of moderation. That is, none of the hypothesized SSNR variables appeared to change (mitigate) the effect of G1 harsh physical discipline on similar practices of G2 parents. Regression coefficients for the cross-product interaction terms of the regression-based moderation tests were: care from mother, $-.09$ ($p > .10$); care from father, $-.01$ ($p > .10$); care from sibling, $-.09$ ($p > .10$); and partner support, $.24$ ($p > .10$).

Finally, to more fully understand the prior and recent circumstances of the 33 (G2) harsh physical discipliners, we investigated additional information on G2's abusive upbringing and more recent experiences of abuse in their adult relationships using data from the CTS-2 [31].

Table 2
Results of regression models for direct effects of safe, stable, and nurturing relationship variables and Generation 2 harsh physical discipline

Variables	Coefficient	Adjusted odds ratio ^a	Lower 5%	Upper 5%
Model 1				
G1 harsh physical discipline	.34*	1.16	1.05	1.28
Mother care	.15	1.20	.97	1.50
Gender	.17**	1.40	1.01	1.95
SES	-.02	1.00	.94	1.05
Model 2				
G1 harsh physical discipline	.29*	1.14	1.03	1.25
Father care	-.24*	.74	.59	.92
Gender	.19**	1.48	1.06	2.06
SES	.04	1.01	.96	1.07
Model 3				
G1 harsh physical discipline	.31*	1.14	1.04	1.26
Sibling care	.08	1.11	.84	1.47
Gender	.17**	1.40	1.00	1.95
SES	-.01	1.00	.94	1.06
Model 4				
G1 harsh physical discipline	.29*	1.14	1.03	1.25
Partner support	-.10	.90	.75	1.08
Gender	.16**	1.39	1.00	1.92
SES	.01	1.00	.95	1.06

SES = socioeconomic status.

^a All analyses controlled for gender and SES.

* $p < .05$.

** $p < .001$.

In most cases, data from the childhood and adolescent waves of the study showed an extensive pattern of abuse by not just (G1) mothers, but also G1 fathers and sometimes other adult caregivers (e.g., extended family members) at the time. For example, according to G2's retrospective accounts (from adolescence) of their fathers' physical disciplining while growing up, 21 of 28 participants for whom data were available (75%) experienced at least one abusive discipline practice, such as being severely slapped or spanked; or hit with a strap, rope, or belt. Of these 21 participants, 16 reported their fathers used two or more abusive discipline practices over the years. For most of these same participants, emotional abuse (e.g., taking meals away, isolating the child in a dark room, threatening to send the child away) by mothers and fathers both was also well documented. In fact, as adolescents, 26 of 32 cases (81%) of the 33 G2 abusive discipliners reported that their mothers had been emotionally abusive to them and 21 of 28 (75%) reported their fathers, too, had been emotionally abusive. In sum, the childhood physical and emotional abuse of the 33 G2 harsh discipliners was in many cases perpetrated by more than one caregiver, and some cases involved multiple forms of abuse.

Our case-level examination of data from the CTS-2 on past-year abuse of and toward an adult partner was also revealing. For example, nearly half (15) of the 33 participants reported they had perpetrated some form of physical assault against an adult partner, and nearly as many (13 of 33) had themselves been physically assaulted (e.g., punched, hit, beaten up). Of the 33 participants, 14 abused their partners emotionally (e.g., called partner fat or ugly, destroyed something belonging to the partner) and just under a third (9 of 33) were mistreated by their partners in this way. Nearly all of the 33 participants had perpetrated or experienced some form of minor to more severe abuse in their adult relationships.

Discussion

Results of the current investigation show a robust association between G1 harsh physical discipline and G2 harsh physical discipline of a similar type; yet, not all children who are abused become abusive toward their own children [20]. Having a caring relationship with one's father was associated with lower odds of harsh physical discipline by G2 parents, which suggests that perhaps the influence of fathers on later approaches to care giving is particularly powerful. Indeed, research points to the highly influential role of father engagement in the wellbeing of children [33,34], although findings do not pertain specifically to the risk of recurrent abuse.

Buffering effects of SSNRs, as defined and analyzed in this study, were generally not found, thus, suggesting the need for more investigation. For example, future research could examine indicators of emotional attachment and support provided to children, as well as the stability of their relationships over time. Analyses could also investigate the role of several combined SSNR variables to determine whether more overall warmth and support promotes better coping and less risk of abuse in G2 parents [20]. In addition, investigators might examine the interaction of SSNRs and child characteristics related to temperament, emotion regulation, or social acuity [35]. Another important consideration is the extent to which a more stable living situation for children lessens risk and promotes protection from abuse recurrence and other negative outcomes [20]. The CDC SSNR framework emphasizes the role of stable, positive relationships, because it is believed that these relationships are pivotal in the lives of abused children. To assist with developing promising prevention programs aligned with the CDC model, researchers must increasingly strive to analyze SSNR-type variables in a manner consistent with definitions of that framework [36].

Findings of our case-level examination of the childhood histories of the 33 G2 harsh discipliners show a consistent pattern of extensive and sometimes severe childhood physical and emotional abuse by two or more caregivers. Analyses also show the presence of abuse, both physical and emotional, in adult relationships, which suggests that harsh disciplining of children may occur in the context of other forms of violence in the home [37].

Realizing that impairments from harsh parenting and childhood abuse can be extensive and long lasting, it is assumed that many of the 33 participants who reported harsh physical discipline of their own children would also experience deficits in other areas, such as in the domain of mental health and psychological wellbeing [7], and may help explain why SSNR variables examined in this study were, by themselves, less influential as mitigating factors in the cycle of violence processes that were examined [35].

Practice and policy implications of the study are consistent with those offered by other researchers and by the CDC SSNR framework [38]. For example, findings suggest the need to leverage support for child abuse prevention and parenting interventions that promote the use of non-physical disciplining of young children [27,39,40]. The research also suggests the need for programs that aim to provide a high level of support to abuse victims before they enter adulthood when they identify a partner and have their own children. However, further work is required to understand precisely where and how to intervene [20,35]. Helping reshape the (negative) learned behaviors of abused children is critical to this process and forefronted in several intervention models, including cognitive behavioral therapy and related methodologies [35]. Also important are interventions that promote self-reliance and self-esteem in children who have been abused, particularly given the prominent role of these variables in resilience and positive youth development [24]. Attending to proximal risk factors for child abuse in G2 parents [37] also could help reduce the incidence of abuse recurrence by removing stressors that impinge on parents' care giving skills and by providing support to parents at particularly vulnerable times in their lives. In that a caring relationship with one's father was shown to predict less risk for abuse in G2 parents, efforts could also focus on strengthening family ties and possibly repairing relationships with male caregivers that were previously strained by violence in the home.

Limitations of the study include a relatively small sample size, a homogeneous sample, and a low base rate of G2 harsh physical disciplining behaviors, which can affect statistical power [41]. Tests of moderator variables may have been restricted by the asymmetric distribution of the main effects for the variables under consideration, which can reduce statistical power for the tests reported. The possibility that findings of our and other studies of this special issue on SSNR effects are influenced by low statistical power is addressed in the meta-analysis summary by Schofield and colleagues (this issue). Schofield et al. found that significant results would be expected with larger samples, given the relative stability of SSNR effects across the various studies.

In addition, although the current investigation spans many years and several developmental periods, analyses did not attend to developmental changes in SSNR influences that might alter an individual's life path in such ways as to reduce the likelihood of abuse recurrence. Moderation tests included a limited number of all possible SSNR variables, and SSNRs were themselves examined as stand-alone, static predictors. Other considerations not directly attended to in the current investigation are whether variables such as age of parents at the time a child is born influence the risk of that child's becoming a target of abuse, or whether behaviors of the child at an early age increase the likelihood of a parent's becoming coercive and possibly abusive [42]. These issues should be addressed in future studies. Future studies might also consider factors that distinguish parents with abuse histories who resort to abusive practices in disciplining their own children from those who rely on more productive and less hurtful strategies, such as limit setting and verbal directives.

Limitations notwithstanding, the prospective design of the study and use of data from multiple sources are notable strengths of the analysis. This study offers an important contribution to the limited literature on intergenerational patterns of abuse and protective influences. Along with other articles in this special issue, findings point to ways to break the increasingly well-documented cycle of violence and abuse across generations.

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