

Understanding the Impact of Seeing Gun Violence and Hearing Gunshots in Public Places: Findings From the Youth Firearm Risk and Safety Study

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Abstract

There is a current public health emphasis on finding strategies for reducing the risks associated with children's gun violence exposure. This article examines the impact of seeing and hearing gun violence on youth of different ages and living in urban and nonurban areas. Participants were 630 youth, aged 2 to 17. Youth, ages 10 to 17, completed a self-report survey, and caregivers of young children, ages 2 to 9, completed the survey as a proxy for that child. Participants resided in Boston, MA; Philadelphia, PA; and rural areas of eastern TN. Participants were recruited through a variety of techniques including pediatric clinics, housing authorities, youth-serving agencies, festivals, word of mouth, and local e-mail lists for classified

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advertisements. Data were collected between October 2017 and April 2018 and analyzed in 2019. In total, 41% of youth in this study reported ever seeing or hearing gun violence; 32% had such an experience in the past year. Among exposed youth, 50% took protective action to keep themselves safe, and 58% reported being very or extremely afraid, sad, or upset as a result of the indirect gun violence. More youth living in urban compared with nonurban areas took some protective action. Females and younger children had increased odds of experiencing high fear as a result of the violence. Current gun violence prevention has typically targeted adolescents; however, current findings suggest the need to focus on younger children as well, including the distress resulting from indirect exposure to gun violence.

Keywords

gun violence, witnessing violence, youth, distress

The exposure of children and adolescents to violence has been a topic of research and concern for several decades. Exposure to violence can take the form of indirect exposure (e.g., witnessing domestic violence or community violence) and direct exposure (e.g., experiencing child maltreatment or peer violence). Much research has outlined the negative impact that both indirect and direct exposure to violence can have on youth. Specifically, exposure to violence heightens one's risk of externalizing and internalizing disorders, posttraumatic stress, diminished social competence, school problems, and desensitization to violence (Cummings, 1998; Howell, Barnes, Miller, & Graham-Bermann, 2016; Osofsky, 1995, 1999; Turner, Shattuck, Hamby, & Finkelhor, 2013). Furthermore, research suggests that exposure to multiple forms of violence is more damaging than the influence of any particular type of exposure (Finkelhor, Ormrod, & Turner, 2007). Even with this large body of research on youth violence exposure, relatively little is known about youth exposure to gun violence more specifically.

This is despite policy statements and recommendations from groups such as the American Academy of Pediatrics (Dowd et al., 2012), the American Psychological Association (American Psychological Association, 2013), and the U.S. Department of Health and Human Services (USDHHS) Healthy People 2020 (U.S. Department of Health and Human Services, 2019) that emphasize the importance of finding strategies for reducing the risks associated with children's firearm violence exposure. Such recommendations are warranted; in 2016, 14,415 youth, aged 0 to 19 years (2.25 per 100,000), died by gunshot, and an additional 88,702 (27.45 per 100,000) had a nonfatal

gunshot injury (Centers for Disease Control and Prevention, 2018). Indeed, homicide by firearm is among the top 10 leading causes of injury and death for all youth, even those as young as age 1 (National Center for Health Statistics & National Vital Statistics System, 2010). In 2010, youth firearm-related fatal and nonfatal injuries resulted in an estimated US\$3.9 billion in combined medical and work-loss costs (Centers for Disease Control and Prevention, 2018).

Although many youth are directly exposed to gun violence, they can also be indirectly exposed, by witnessing gun violence or hearing gunshots in their communities. Finkelhor, Turner, Shattuck, and Hamby (2015) found that approximately 8% of all children (ages 2-17) in a nationally representative U.S. sample reported being exposed to a shooting (including hearing gunshots or seeing someone shot) in their lifetimes, with youth, ages 14 to 17 years, reporting the highest rates of combined direct and indirect exposure to a shooting (13%). Mitchell and colleagues found that among youth, ages 2 to 17, 12.5% reported at least one direct victimization with a weapon, and 13.1% at least one indirect (or witnessed) victimization with a weapon (Mitchell, Hamby, Turner, Shattuck, & Jones, 2015). Given the high rates of community violence exposure among urban adolescents (McDonald & Richmond, 2008), rates of direct and indirect gun violence exposure are likely to be substantially higher for this group of youth. Indeed, violent crimes in urban areas are more likely to involve guns than those in rural or suburban areas (Duhart, 2000).

Witnessing gun violence is also quite traumatic for children (Layne, Pynoos, & Cardenas, 2001; Slovak & Singer, 2001). Extant research suggests that exposure to gun violence may result in negative short- and long-term psychological effects, including anger, withdrawal, posttraumatic stress, and desensitization to violence (Garbarino, Bradshaw, & Vorrasi, 2002). Yet, we know little about the impact of seeing or hearing gun violence on youth of different ages, what youth do during incidents of exposure, and the specific types of emotional reactions associated with indirect gun violence. The current study examines the incident-level impact of witnessing gun violence on youth of different ages and living in both urban and nonurban communities.

Method

Participants

Participants of the Youth Firearm Risk and Safety Study (Youth-FiRST) were 630 youth (ages 2-17) from the areas of Boston, MA; Philadelphia, PA; and rural areas of eastern TN, who completed a survey on a wide range of firearm

access and gun violence exposures. The children ranged in age from 2 to 17 years. Youth, ages 10 to 17, completed a self-report survey, and caregivers of young children, ages 2 to 9, completed the survey as a proxy for that child. Details of the sample are depicted in Table 1. Eligibility criteria included (a) English speaking; (b) residing in the areas of Boston, MA; Philadelphia, PA; and rural areas of eastern TN; (c) target child ages 2 to 17; and (d) caregiver consent for youth ages 10 to 17. The sample represented a diverse group of youth covering a wide developmental age spectrum, household income levels, equal gender distribution, and diversity in terms of race and ethnicity.

Procedure

Participants were recruited through a variety of techniques including pediatric clinics, housing authorities, youth-serving agencies, festivals, word of mouth, and local e-mail lists for classified advertisements. All participants received a US\$25 gift card for taking part in the survey. Participants completed an anonymous survey through a computer-assisted self-interview (CASI) on a tablet or through an online link to a web-based survey. Participants were told the aim of the study was to learn more about the situations where youth encounter guns, as well as gun safety practices families use. The recruitment methodology resulted in a convenience sample, in contrast to a probability sample, so a meaningful response rate cannot be calculated. All data were collected under the approval of the University of New Hampshire Institutional Review Board.

Measures

The measures consisted of established scales as well as those designed and tested as part of the current study. Newly developed measures included those assessing lifetime and past-year exposure to guns and gun violence. These questions were developed through a series of focus groups with youth and parents of young children to inform the question development, and then individual cognitive interviews for item comprehension and wording. Input on questions was also provided by a panel of violence experts who served in an advisory capacity throughout instrument development. For each of the measures described below, the youth self-report and caregiver proxy surveys were identical; caregivers were asked to report on the experiences of the referent child, and youth were asked to report on their own experiences.

Indirect gun violence exposure. Youth were prompted to think about:

Table 1. Youth Demographic Characteristics by Indirect Gun Violence Exposure.

Youth Characteristics	All Youth (N = 630) n (%)	No Indirect Violence Exposure (N = 370) n (%)	Any Indirect Violence Exposure (N = 260) n (%)	χ^2
Age (years)				
2-4	126 (20.0)	96 (26.0)	30 (11.5)	64.3***
5-9	175 (27.8)	115 (31.1)	60 (23.1)	
10-12	102 (16.2)	61 (16.5)	41 (15.8)	
13-15	108 (17.1)	51 (13.8)	57 (21.9)	
16-17	84 (13.3)	22 (5.9)	62 (23.9)	
Missing ^a	35 (5.6)	25 (6.8)	10 (3.9)	
Gender				
Male	314 (49.8)	188 (50.8)	126 (48.5)	0.4
Female	305 (48.4)	176 (47.6)	129 (49.6)	
Missing	11 (1.7)	6 (1.6)	5 (1.9)	
Race				
White	329 (52.2)	225 (62.3)	104 (42.3)	23.7***
Black or African American	285 (45.2)	130 (36.0)	155 (63.0)	
American Indian or Alaska Native	21 (3.3)	11 (3.1)	10 (4.1)	—
Asian	13 (2.1)	10 (2.8)	3 (1.2)	—
Native Hawaiian or Other Pacific Islander	10 (1.6)	7 (1.9)	3 (1.2)	—
Hispanic or Latino (any race)	97 (15.4)	48 (13.0)	49 (18.9)	4.1
TANF				
No	355 (57.6)	240 (64.9)	115 (44.2)	9.2***
Yes	191 (31.0)	84 (22.7)	107 (41.1)	
Not sure	70 (11.4)	46 (12.4)	38 (14.6)	
Household income				
Less than US\$20,000	104 (16.5)	60 (16.2)	44 (16.9)	21.7***
US\$20,000-US\$49,999	161 (25.6)	83 (22.4)	78 (30.0)	
US\$50,000-US\$74,999	89 (14.1)	51 (13.8)	38 (14.6)	
US\$75,000-US\$99,999	56 (8.9)	46 (12.4)	10 (3.9)	
US\$100,000 or more	63 (10.0)	45 (12.2)	18 (6.9)	
Not sure/missing	147 (24.9)	85 (23.0)	72 (27.7)	
Number adults in home				
1 adult	138 (21.9)	67 (18.1)	71 (27.3)	7.5**
2+ adults	492 (78.1)	303 (81.9)	189 (72.7)	

Note. TANF = Temporary Assistance for Needy Families.

^aMissing the exact age from 20 proxy surveys and 15 self-report surveys.

** $p < .01$. *** $p < .001$.

Gun violence in your community—people using guns to threaten or hurt others. We are only asking about things you have seen in real life. By real life, we mean things you saw in person, not things you saw on TV, in a movie, on the news, in a video game, or on the internet.

Four *yes/no* items covered a range of lifetime exposures including directly seeing gun violence and hearing gunshots in public places such as the streets, parking lots, or stores. As is the case with a number of different types of stress and adversity indexes (Farel & Hooper, 1998; Reitman, Currier, & Stickle, 2002; Whiteside-Mansell et al., 2007; Wirrell, Wood, Hamiwka, & Sherman, 2008), these items are designed to measure different experiences and, thus, not expected to hold together closely as a scale.

Impact of indirect gun violence. For youth who responded positively to any of the four indirect gun violence questions, six questions were asked that covered taking different types of protective action, and four items assessed their level of anger, fear, sadness, and upset as a result of the gun violence they saw or heard (on a scale ranging from 1 = *not at all* to 5 = *extremely*). These four distress items were recoded to identify youth who were very or extremely angry, afraid, sad, and upset versus all other responses (see Table 2).

Child victimization. Twelve items from the Juvenile Victimization Questionnaire (JVQ) asked about situations expected to be most closely related to firearm violence: conventional crime, peer victimization, and witnessing victimization. The JVQ has demonstrated good psychometric properties in a nationally representative sample (Mitchell, Wolak, & Finkelhor, 2005) as well as within the current study ($\alpha = .79$).

Nonvictimization adversity. Six items covered lifetime adversities due to non-violent traumatic events and chronic stressors, such as homelessness, parental imprisonment, family substance abuse, and drug overdose (Turner & Butler, 2003).

Sense of safety. Seven items that measure feelings of safety at home, in or on the way to school, and in the neighborhood were included. Respondents were asked to indicate how frequently they feel safe in these situations on a scale of 1 (*never*) to 3 (*always*) (Henry, 2000). This scale was found to have good reliability in the current study ($\alpha = .96$).

Community disorder. Eight items measured social and physical neighborhood disorder; participants were asked to indicate the extent to which each was a

Table 2. Impact of Indirect Gun Violence Exposure.

	All Participants n (%)	Children Ages 2-9 n (%)	Youth Ages 10-17 n (%)	Nonurban Area n (%)	Urban Area n (%)	χ^2
Any indirect gun violence						
Lifetime	260 (41)	93 (29)	167 (54)	84 (29)	176 (51)	30.6***
Past year	201 (32)	78 (24)	123 (40)	67 (23)	134 (39)	17.33***
Action taken						
Hid somewhere until it was over	73 (29)	27 (30)	46 (29)	13 (16)	60 (35)	9.71**
Limited the places I go alone	56 (22)	11 (12)	45 (28)	14 (17)	42 (25)	1.68
Carried a gun for protection	8 (3)	2 (2)	6 (4)	2 (3)	6 (3)	0.19
Asked to move to a different place to live	29 (12)	15 (17)	14 (9)	1 (1)	28 (17)	12.38***
Went a different way to get somewhere	34 (14)	8 (9)	26 (16)	6 (7)	28 (17)	3.79*
Stayed home from school	10 (4)	1 (1)	9 (6)	2 (3)	8 (5)	0.7
Any of the above	130 (50)	43 (46)	87 (52)	25 (31)	104 (60)	18.7***
Distress: very/extremely						
Angry	54 (21)	17 (19)	37 (23)	15 (18)	40 (23)	0.81
Scared	129 (51)	60 (67)	69 (43)	28 (33)	102 (58)	13.79***
Sad	84 (33)	39 (43)	45 (28)	22 (26)	63 (36)	2.38
Upset	89 (35)	41 (45)	48 (30)	21 (25)	69 (39)	5.07*
Any of the above	150 (58)	60 (65)	90 (54)	35 (42)	115 (65)	13.1***

Note. Boldface indicates statistical significance.

* $p < .05$. ** $p < .01$. *** $p < .001$.

problem in their own neighborhood (Perkins, Florin, Rich, Wandersman, & Chavis, 1990). Response options range from 0 (*no problem*) to 3 (*a serious problem*). Responses were summed and then divided by the total number of items. Higher scores indicate higher levels of perceived disorder in residents' neighborhood. The original scale (Perkins et al., 1990) included 13 items with good reliability ($\alpha = .90$) as was also found in the current study ($\alpha = .93$) with the reduced eight-item scale.

Demographic characteristics. Items measured child age, sex, race, and ethnicity, urban versus nonurban area, the number adults and children in the home, and household income.

Statistical Analysis

We reported on the frequency of different ways youth took protective action as a result of gun violence they saw or heard. Differences were analyzed between younger child (ages 2-9) and older youth (ages 10-17) as well as between youth living in urban and nonurban areas using chi-square cross tabulations. Then, five logistic regressions examined child and community characteristics related to (a) taking any protective action, (b) experiencing high anger, (c) high fear, (d) high sadness, and (e) high upset as a result of the gun violence.

Results

Forty-one percent of youth reported ever experiencing indirect gun violence; 32% had such an experience in the past year (Table 2). More of the older (54%) than younger (29%) youth ($\chi^2 = 40.8, p \leq .001$) and more youth living in urban (51%) compared with nonurban (29%) areas ($\chi^2 = 30.6, p \leq .001$) had this experience. Most indirect gun violence exposure involved hearing gunshots in public places, whereas 16% of youth saw gun violence.

Among youth who reported indirect gun violence, 50% took some protective action to keep themselves safe, including hiding somewhere until it was over, limiting the places they went alone, going a different way to get somewhere, asking to move to a different place to live, and, to a lesser extent, staying home from school and carrying a gun for protection (Table 2). More youth living in urban (60%) compared with nonurban (31%) areas took some protective action ($\chi^2 = 18.7, p \leq .001$). Having a lower sense of safety (odds ratio [OR] = 0.78, 95% confidence interval [CI] = [0.68, 0.89], $p \leq .001$), history of more types of victimization (OR = 1.05, 95% CI = [1.00, 1.09], $p \leq .05$), any nonvictimization adversity (OR = 1.42, 95% CI = [1.07, 1.87], $p \leq .01$), and higher community disorder (OR = 1.39, 95% CI = [1.15, 1.69], $p \leq .001$) were related to taking protective action (Table 3).

Table 3. Logistic Regressions of Youth Taking Any Action and High Distress to Indirect Gun Violence Exposure.

Characteristic	Took Any Action, OR [95% CI]	High Anger OR [95% CI]	High Fear OR [95% CI]	High Sadness OR [95% CI]	High Upset OR [95% CI]
Child male	0.88 [0.70, 1.10]	0.73 [0.47, 1.15]	0.71 [0.55, 0.90]**	0.67 [0.47, 0.94]**	0.73 [0.52, 1.03]
Child 10-17 years	1.14 [0.89, 1.47]	1.33 [0.76, 2.31]	0.71 [0.55, 0.93]**	0.72 [0.49, 1.08]	0.78 [0.54, 1.14]
Child Hispanic	1.07 [0.81, 1.42]	1.37 [0.78, 2.39]	1.11 [0.84, 1.47]	1.37 [0.92, 2.02]	1.07 [0.70, 1.62]
Child Black	1.22 [0.93, 1.61]	1.26 [0.73, 2.18]	1.32 [0.99, 1.77]	1.29 [0.86, 1.95]	1.17 [0.78, 1.76]
Low income	0.82 [0.61, 1.11]	1.44 [0.81, 2.55]	1.0 [0.74, 1.34]	0.95 [0.61, 1.47]	1.06 [0.71, 1.58]
Saw gun violence	1.18 [0.93, 1.48]	1.32 [0.79, 2.21]	0.87 [0.67, 1.12]	0.89 [0.61, 1.30]	1.04 [0.73, 1.48]
Sense of safety	0.78 [0.68, 0.89]***	0.82 [0.65, 1.04]	0.89 [0.78, 1.02]	0.82 [0.67, 0.99]**	0.90 [0.75, 1.09]
No. types of victimization	1.05 [1.00, 1.09]*	1.09 [1.01, 1.18]*	1.01 [0.97, 1.06]	1.04 [0.97, 1.10]	1.0 [0.94, 1.06]
Any nonvictimization adversity	1.42 [1.07, 1.87]**	1.50 [0.88, 2.55]	1.41 [1.09, 1.83]**	1.30 [0.91, 1.86]	1.64 [1.13, 2.38]**
Urban community	1.30 [0.93, 1.81]	0.92 [0.49, 1.75]	1.21 [0.84, 1.73]	0.82 [0.51, 1.33]	1.06 [0.65, 1.72]
Community disorder	1.39 [1.15, 1.69]***	1.01 [0.67, 1.53]	1.08 [0.87, 1.34]	1.30 [0.95, 1.77]	1.31 [0.97, 1.76]

Note. Boldface indicates statistical significance. OR = odds ratio; CI = confidence interval.

* $p < .05$. ** $p < .01$. *** $p < .001$.

More than half (58%) of youth reported being very or extremely distressed as a result of the indirect gun violence (Table 2). Forms of distress included fear, anger, sadness, and generalized upset. More of the younger children compared with older youth were scared (67% vs. 43%, respectively, $\chi^2 = 13.4$, $p \leq .001$), sad (43% vs. 28%, respectively, $\chi^2 = 6.3$, $p \leq .01$), and upset (45% vs. 30%, respectively, $\chi^2 = 6.4$, $p \leq .01$). More youth living in urban (65%) compared with nonurban (42%) areas reported high distress ($\chi^2 = 13.1$, $p \leq .001$), particularly in relation to being scared (58% vs. 33%, respectively, $\chi^2 = 13.79$, $p \leq .001$). Females (OR = 0.71, 95% CI = [0.55, 0.90], $p \leq .01$) and younger children (OR = 0.71, 95% CI = [0.55, 0.93], $p \leq .01$) had increased odds of experiencing high fear (Table 3). Experience with nonvictimization adversity was related to elevated odds of high fear (OR = 1.41, 95% CI = [1.09, 1.83], $p \leq .01$) and high upset (OR = 1.64, 95% CI = [1.13, 2.38], $p \leq .01$).

Discussion

Current gun violence prevention has typically targeted adolescents; however, current findings suggest efforts need to focus on younger children as well. Young children were less likely to witness gun violence but were more likely to feel high fear, sadness, and upset when they did. The finding that youth with adversity histories were more likely to report strong distress reactions suggests youth who are experiencing more complex trauma history may be more vulnerable to indirect gun violence. Such exposure may very well add to their cumulative stress burden. Given the complex cluster of social and economic problems faced by these families, a diverse range of individual, family, and community-based interventions may be needed. For example, among youth who present with a complex array of difficulties and are in need of clinical intervention, Trauma-Focused Cognitive-Behavioral Therapy (Scheeringa, Weems, Cohen, Amaya-Jackson, & Guthrie, 2011), mindfulness (Galla, Kaiser-Greenland, & Black, 2016; Nadler, Cordy, Stengel, Segal, & Hayden, 2017; Sibinga, Webb, Ghazarian, & Ellen, 2015), or (for younger children) helping them role-play responses, use puppets, sand trays, and art, may reduce the potential for distress (Desmond, Kindsvatter, Stahl, & Smith, 2015). Intervention efforts for these youth should be flexible and may need to cover a range of goals including safety, self-regulation, traumatic experience integration, and positive affect enhancement (Kinniburgh, Blaustein, Spinazzola, & Van der Kolk, 2017).

As has been documented in past research on witnessing community violence (Campbell & Schwarz, 1996; McDonald & Richmond, 2008), witnessing gun violence in urban areas was common in this study and points to the need to incorporate community-level violence programs to increase youth

safety and well-being. Such programs are being implemented in different communities. For example, Cure Violence is a violence prevention program that uses a public health approach, involving trained street violence outreach workers, public education campaigns, and community mobilization to reduce shootings and killings (Butts, Roman, Bostwick, & Porter, 2015). Educational programs that provide concrete steps about what to do when gun violence is witnessed or gunshots heard, as well as ways to stay safe, may also prove helpful for youth.

Sense of safety appears to play an important role in youth responses to gun violence. The current study found that youth who had a higher sense of safety were less likely to take specific protective actions, such as hiding or avoiding risky places, and less likely to experience extreme sadness as a result of the indirect gun violence exposure. Feeling safe in one's environment may serve to buffer the impact of indirect exposure to gun violence, resulting in feeling less need to take protective measures. Neighborhood interventions to increase safety and reduce disorder may help alleviate fears in the aftermath of gun violence. Older youth may also benefit from education that empowers youth to promote change (Lakin & Mahoney, 2006).

The current research identified older, Black youth who were living in urban communities as the most likely to experience indirect gun violence. This supports earlier research on factors associated with youth violence exposure. Findings across multiple studies indicate that males, ethnic minorities, and urban residents are at increased risk for witnessing violence (Buka, Stichick, Birdthistle, & Earls, 2001). Moreover, carrying a weapon (Baxendale, Cross, & Johnston, 2012; Kingery, Coggeshall, & Alford, 1998), and carrying a firearm in particular (Dahlberg, 1998), is a key risk factor for youth violence. Male adolescents are approximately 5 times more likely to carry guns and weapons in general than females (Cao, Zhang, & He, 2008; DuRant, Krowchuk, Kreiter, Sinal, & Woods, 1999; Hayes & Hemenway, 1999; Vaughn et al., 2012), and carrying increases with age during adolescence (DuRant et al., 1999; Molnar, Miller, Azrael, & Buka, 2004). Race/ethnicity is also a factor, with African American (Brener, Simon, Krug, & Lowry, 1999; Hayes & Hemenway, 1999) and Hispanic (Brener et al., 1999) students more likely to carry a firearm than White students.

Although witnessing gun violence was more common in urban communities, such exposure was notable among youth living in nonurban communities in this study as well. Findings add to the building documentation of the widespread adversity and victimization experienced by people living in low-income, rural communities. Indeed, rural youth between the ages 15 and 17 are about 4 times more likely to be victimized than youth of the same age in

urban and suburban areas (Bureau of Justice Statistics, 2014). Based on U.S. vital statistic data, children in the most rural U.S. counties have also been found to have firearm mortality rates that were statistically indistinguishable from those for children in the most urban counties; reflecting, however, a greater homicide rate in urban counties offset by greater suicide and unintentional firearm death rates in rural counties (Nance, Carr, Kallan, Branas, & Wiebe, 2010). At the same time, victims are less likely to have access to help in rural areas (including a lack of social services and limited foster care) compared with suburban and urban areas (Human & Wasem, 1991; Merwin, Hinton, Dembling, & Stern, 2003).

Limitations

Findings from the current study should be considered in the context of its limitations. The purpose of this study was to design and pilot-test the Youth-FiRST in three higher risk communities. As such, the results are not meant to be generalizable to all youth living in the United States, nor all youth in urban and nonurban areas. In addition, caregivers of younger children reported on their child's experiences and may not be fully aware of all exposures. This appears to be less of a problem with younger children (Ceballo, Dahl, Aretakis, & Ramirez, 2001), however, because parents of younger children spend more time directly caregiving, supervise activities more closely, and because younger children disclose more to their parents than older children. Still, some of the rates of exposures noted for younger children could be underestimates. Small sample sizes within subgroups such as gender, race, or urban-nonurban residence within age groups precluded more detailed analyses at these levels. Finally, data are cross-sectional; the nature of the impact of witnessing gun violence needs to be explored further in longitudinal studies.

Conclusion

Gun violence is a national health issue of heightened concern right now. The current study provides new insight into the impact of indirect gun violence exposure on youth and on young children, in particular. Findings highlight the importance of being sensitive to community and developmental issues when considering avenues for addressing gun violence prevention and intervention.

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Lisa M. Jones, PhD, is a research associate professor of psychology at the UNH CCRC. She has more than 18 years of experience conducting research on child victimization focusing on epidemiological research, measurement development, and evaluations of child victimization prevention and intervention efforts. She has published more than 50 research articles and reports on child victimization in medical and psychology journals and presents regularly on topics of child victimization and evidence-based prevention, nationally and internationally.

Heather A. Turner, PhD, is professor of sociology at UNH. Her research has concentrated on the effects of violence and victimization, including child maltreatment, on the social and psychological development of children and adolescents. She has 20 years of

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Cheryl L. Beseler, PhD, is an epidemiologist with a master's degree in statistics and more than 20 years of statistical experience. She has been involved in extensive efforts to assess the dimensionality of the substance abuse and dependence diagnoses in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.) using latent variable modeling. She was also the evaluator for several large, statewide youth programs. These programs target suicide prevention and reducing delinquency, substance use, sexual violence, and bullying in Colorado's youth. Her publications reflect the variety of statistical methods that she has utilized to better understand problems related to mental health, cancer, substance abuse, and dependence and occupational injuries.

Sherry Hamby, PhD, is director of the Life Paths Appalachian Research Center, located in Monteagle, Tennessee. She was co-investigator on the National Survey of Children's Exposure to Violence (NatSCEV) and was a developer of the Juvenile Victimization Questionnaire (JVQ), the measure at the core of NatSCEV. NatSCEV is the United States' primary surveillance mechanism for youth victimization that is not reported to authorities and the only national data available on nonreported victimizations involving children under age 12. NatSCEV is also the primary source of data on children's witnessing of violence.

Roy Wade, Jr., MD, PhD, MPH, MSHP, is an instructor of pediatrics at the University of Pennsylvania and a general pediatrician at Children's Hospital of Philadelphia. He completed a Commonwealth Fund Harvard Minority Health Policy Fellowship at the Harvard School of Medicine and Harvard School of Public Health and completed a Robert Wood Johnson Foundation Clinical Scholars Fellowship at the Perelman School of Medicine at the University of Pennsylvania. His research focuses on the intersection between childhood poverty, adversity, and well-being. Through his work, he strives to translate research on the science of childhood adversity and toxic stress into effective strategies to improve community-level systems of care in economically distressed communities.