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Journal of Interpersonal Violence
2016, Vol. 31(18) 3017–3038
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DOI: 10.1177/0886260515584337
jiv.sagepub.com
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Exposure to Violence and Children's Desensitization Attitudes in Lebanon

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Abstract

Children exposed to multiple sources of violence may become desensitized, increasing the possibility of them imitating the aggressive behaviors they watch and considering such behavior as normal. The purpose of this article is to assess the association between exposure to various types of violence (including war) and desensitization in Lebanese children. A cross-sectional design with 207 school-aged children assessed exposure to violence using three surveys: (a) violence in the media (the Media Preference survey), (b) exposure to violence (the KID-SAVE survey), and (c) desensitization attitudes (the Attitude Toward Violence–Child Version). Children were between 8 and 12 years old, 56% were males, and 70%were from middle socioeconomic status (SES) backgrounds. Seventy-six percent of children reported being exposed to violence, with more exposure in males and in the lower SES group. Impact, however, was greater on girls. The predictors of attitude toward violence were "Frequency" of exposure, "Impact" of exposure, and the amount of violence viewed on television. Children are massively exposed to violence in Lebanon resulting in desensitization, which may habituate them to accept violence as normal and put them at risk for imitating violent behaviors.

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Keywords
violence, media and community violence, war, Lebanon

Introduction

Substantial evidence suggests that exposure to violence, whether in the media, the community, or at home, places children at a greater risk of a multitude of psychological and mental health consequences. Some of these consequences include depression, anxiety, posttraumatic stress (PTS) symptoms and aggression (Dubow et al., 2012; Itani, Haddad, Fayyad, Karam, & Karam, 2014; Madan, Mrug, & Wright, 2014). In terms of media violence, a vast majority of studies show that violent imagery increases the likelihood of children emulating the behavior they see, resulting in aggressive antisocial or fearful behaviors, and in desensitization to the real-life consequences of violence, especially in boys (Christakis & Zimmerman, 2007; Funk, Baldacci, Pasold, & Baumgardner, 2004; Ybarra et al., 2008). Researchers have further found a link between exposure to violent media and decreased activity of brain structures needed for the regulation of aggressive behavior and for empathy for other people's pain (Carnagey, Anderson, & Bartholow, 2007; Guo et al., 2013). More recently, research using functional magnetic resonance imaging (MRI) to study short- and long-term effects of exposure to violent video games found that young adults who preferred violent games showed active suppression of the brain regions related to emotions (Gentile, Li, Khoo, Prot, & Anderson, 2014). However, reviewers have drawn equivocal conclusions, with some indicating that there is insufficient and contradictory evidence on the association between media violence and aggression in children (Mitrofan, Paul, & Spencer, 2008), while others conclude that exposure to violent video games is a causal risk factor for increased aggressive behavior and for decreased empathy (Anderson et al., 2010).

Studies have shown that children exposed to violence in their community, school, or home develop a variety of negative emotional and behavioral reactions, including fear, anger, anxiety, depression, PTS symptoms, aggressive behaviors, and substance abuse (Al-Mahroos, Abdulla, Kamal, & Al-Ansari, 2005; Giacaman, Shannon, Saab, Arya, & Boyce, 2007; Itani et al., 2014; Lansford et al., 2010; Massad et al., 2011; Thabet, Karim, & Vostanis, 2006). Violence is defined as any behavior or acts by an individual or group of individuals who aim to harm another person or group of people. Children can experience the violence directly or indirectly by witnessing violence (Zimmerman & Farrell, 2013). The impact of violence on children is influenced by age, with younger children reporting greater depression than older

youth (Dubow et al., 2012; Fitzpatrick, Barnett, & Pagaini, 2012) and females displaying more depression and psychosomatic illness than boys (Zimmerman & Farrell, 2013). A meta-analysis by Fowlers, Tompsett, Braciszewski, Jacques-Tiura, and Baltes (2009) concluded that direct victimization and witnessing violence were equally significant in terms of predicting posttraumatic stress disorder (PTSD) symptoms.

Similarly, children exposed to ethnic political wars, such as children in Palestine, Israel, Afghanistan, Sri Lanka, and Lebanon have increased incidence of stress, rebelliousness, depression, aggression, and PTSD (Dubow et al., 2012; Haj-Yahia, Leshem, & Guterman, 2013; Qouta, Punamäki, Miller, & El-Sarraj, 2008; Thabet et al., 2006; Zahr, 1996). Few studies that examined the additive impact of exposure to a variety of violent events, including war, have demonstrated an additive effect of exposure on children's psychological well-being (Catani, Jacob, Schauer, Kohila, & Neuner, 2008; Dubow et al., 2012; Panter-Brick, Eggerman, Gonzalez, & Safdar, 2009).

Despite the growing public and scientific interest in the problem of exposure of children to violence and its impact on mental health, few studies to date have assessed the combined impact of violence, including war and civil strife, as well as media violence on the attitude of children toward violence. Social cognitive theories suggest that exposure to violence may affect empathy by desensitizing viewers who would feel less sympathy for victims and who do not realize the consequences of violent behaviors. Desensitization is defined as "the reduction of cognitive, emotional, and/or behavioral responses to a distressing situation leading to apathy concerning others" (Funk, 2015, p. 65). Desensitization may be a coping response to violence exposure that may disrupt moral evaluation (Anderson et al., 2010; Bushman & Anderson, 2009; Funk et al., 2004). The desensitization process suggests that children adapt to violence and respond to it by emotional numbing, especially when exposure is chronic or frequent (Cooley-Quille, Boyd, Frantz, & Walsh, 2001; Ng-Mak, Salzinger, Feldman, & Stueve, 2004). The classic work by Drabman and Thomas (1974) noted that children who viewed aggression in a movie had increased tolerance for violent behavior.

Lebanon has been and remains an arena where regional struggles are played out. After the 15 years of civil war from 1975 to 1990, the political crisis between rival Lebanese parties continues. The city of Beirut, which includes approximately 2.5 million people, was divided by the civil wars between the West side, which is predominantly Muslim, and the East side, which is predominantly Christian. The 33-day Israeli–Lebanese war in 2006 shook the whole country killing at least 1,000 people and displacing approximately 1 million Lebanese. Today, the Muslim Shiite–Sunni conflict was added to the recent split over war in Syria. Car bombs, street fighting, and

kidnapping have been occurring for more than 10 years, with constant bombarding of these events over the news media. The vast majority of children in Lebanon, especially those living in the West side of Beirut, have been exposed to several years of war, as well as to low levels of chronic violence on the streets perceived to be as a normal regular daily occurrence (Usta & Farver, 2005). A recent study in Lebanon noted that more than 80% of adult females and males reported being exposed to a traumatic event, with war as the most common event, and most of these events occurred before age 18. The consequences of these traumatic events were evident in mental disorders such as PTSD, major depressive disorder (MDD), separation anxiety disorder (SAD), and overanxious disorder (OAD; Karam et al., 2014). In addition to war and civil strife, a World Health Organization (2005) survey carried out in 100 private and public schools throughout countries in the Eastern Mediterranean region showed that Lebanon had the highest number of students who reported being physically attacked by adult family members; in another study of 1028 children, boys reported more incidents of violence during war, but girls were more psychologically affected than boys (Usta & Farver, 2010). Similarly, a study of 1,177 schoolchildren between the ages of 10 to 18 years in private and public schools in Lebanon found that males reported more physical and verbal abuse in schools than girls (El Bcheraoui, Kouriye, & Adib, 2012). Thus, girls may experience more violence in their homes, while boys may experience more violence at school and in their communities.

The educational system emerged from the violence in Lebanon largely intact with Lebanon ranking 10th in overall quality of education (Lanvin & Dutta, 2013; The World Bank, 2006). Six years of primary school are compulsory for children aged 6 to 12 years with most schools teaching two to three languages; Arabic, English, and French, and net enrollment ratios of girls and boys in primary school are roughly equal (96.8% for males, and 93.9 % for females), while for secondary education, it is 57% for girls compared with 48% for boys (Bacha & Bahous, 2011; World Health Organization, 2005). Although the Lebanese constitution in 1926 stated that all Lebanese people are equal before the law, in rights as in obligations, with the elimination of all forms of discrimination against women, this is not the case in day-to-day reality where women remain victims of discrimination in various settings and spheres (Hakim, 2013).

Although exposure to violence has been related to many types of behavioral, emotional, and health problems in children, the main purpose of this study was to determine whether children in Lebanon manifest a cognitive desensitization attitude toward violence and whether there is a cumulative effect of exposure to various forms of violence on desensitization attitudes. The following research questions were examined:

Research Question 1: What types of violence are children in Lebanon exposed to?
Research Question 2: What is the relationship between demographic characteristics, the different kinds of violence exposures, and desensitization?
Research Question 3: Which factors are most likely to be associated with desensitization?
Research Question 4: Is there a cumulative effect of exposure to different kinds of violence on desensitization?

It was hypothesized that children with high violence exposure become desensitized to violence and that multiple exposures increase desensitization.

Method

Design

A cross-sectional prospective design was used to collect data between May and June 2010.

Sample

A convenient sample of 219 children between the ages of 8 and 12 years in Grades 3 to 6 were recruited from five schools in the West side of Beirut. A sample size of 200 participants was considered sufficient to detect a medium effect in the regression analysis with alpha set at .05 and beta at .20 (power of .80).

Setting

Five schools were randomly selected from the West side of the city of Beirut where most of the civil strife has occurred: Two were public schools, and three were private schools. This was done to achieve a sample that would be representative of all students attending public and private schools in West Beirut in terms of religion, income, and gender.

Procedure

The principal investigator (PI) first contacted the schools' administrators, explained the study, and obtained their approval to conduct the study. Subsequently, all students (n = 226) at the selected schools and grades were invited to participate by sending letters to their parents briefing them about

the study and asking them to sign an enclosed consent form. Approval to enroll their child in the study was obtained by a signed consent from one of the parents and returned to the school administrators' office. Children were told that their participation was voluntary and filling the questionnaires indicated their consent to participate in the study. The response rate was 98.6% (n = 219). Efforts were made to prevent any disruption of daily academic activities; data were collected during recess or during art or gymnastic sessions, based on the schools' administrator's discretion. Children were asked to fill out three questionnaires related to their exposure to violence anonymously with no identifying information and were advised about the importance of being honest in their responses. If a child needed a clarification about a question, the PI was available to provide an explanation. If a child expressed any distress while filling the questionnaires, he or she was sent to the school nurse's office for evaluation and/or referral.

The study was approved by the ethical committee of Global University in Beirut and by the administrators of the schools.

Instruments

Participants were asked to complete three questionnaires: (a) media exposure using an adaptation of the Exposure to Media Violence Survey, (b) exposure to violence using the KID-SAVE questionnaire, and (c) attitudes toward violence or desensitization using the Attitudes Toward Violence Survey–Child Version (ATVC). Background information related to age, gender, father's education, and religion were also obtained; the latter variable was not included in the analysis as the majority of respondents (93%) were Muslim. Father's education was used as an index of socioeconomic status (SES) taking into consideration the educational level of the Lebanese population (UNICEF, 2012; Williams et al., 2008). The questionnaires were translated into Arabic then back translated into English by a bilingual person who had not seen the original English language version (Bowden & Fox-Rushby, 2003). The questionnaires were pilot tested for comprehension and acceptability on 25 children (5 from each school) with no difficulty in comprehension reported on any of the items. It is worth noting that all children in schools in Beirut are very Westernized with English spoken fluently making translated English terms familiar to them.

Exposure to Media Violence

Exposure to media violence was assessed using a modification of the Media Preference Survey (Funk, Flores, Buchman, & German, 1999). The Media

Preference survey was originally tested on 201 fourth graders who were asked to list up to three favorite video or computer games and then categorize these games into categories including educational, violence, or sports. In the present study, students were asked to rate the violence in three forms of media: (a) television, (b) Internet, and (c) video games from 1 to 6 with 6 indicating high rate of violence watched or played and 1 indicating low violence watched or played.

Exposure to Violence

The KID-SAVE is a 34-item questionnaire that assesses children's exposure to violence in Grades 3 through 7 (Flowers, Lanclos, & Kelly, 2002). The questionnaire measures three kinds of exposures to violence: (a) Traumatic Violence: witnessing a shooting or murder, or being the victim of an assault with a deadly weapon (12 items); (b) Indirect Violence: witnessing less severe interpersonal violence or hearing about violent events (16 items); (c) Physical/Verbal Abuse: hitting among peers and grown-ups, hitting/screaming at the child (6 items). Each exposure is evaluated on a 3-point Likert-type scale ranging from 0 = *never*, 1 = *sometimes*, and 2 = *a lot* for "Frequency" and on three levels, 0 = *not at all upsetting*, 1 = *somewhat upsetting*, 2 = *very upsetting* for "Impact" with maximum score of 68 on each. The KID-SAVE, has established reliability (Cronbach's r = .60-.88) and validity (52.4% of the variance explained by the three subscales) with a mean on the Frequency factor of 22.2 (standard deviation [*SD*] ± 11.3) and on the impact factor of 18.8 (*SD* ± 11.3). For the present study, the mean for the "Frequency" factor was 36.9 (*SD* ± 15.2), and for the "Impact" factor, it was 25.4 (*SD* ± 12.4), while Cronbach's alpha for "Frequency" was r = .67, and for the Impact factor, it was r = .61. Varimax rotation yielded the same three subscales as the original version, which explained 53.5% of the variance.

Desensitization

The dependent variable, desensitization, was assessed using the ATVC. The survey was originally tested on 241 children in Grades 4 to 6, one third of whom self-identified as a victim of violence, the Cronbach's alpha was reported as r = .84 with a mean of 23.18 (*SD* ± 5.89). The questionnaire asks children to agree or disagree (1 = *no*, 2 = *maybe*, 3 = *probably*, 4 = *yes*) with 16 specific statements such as "It's okay to use violence to get what you want" and "If a person hits you, you should hit them back" (Funk, Elliott, Bechtoldt, Pasold, & Tsavoussis, 2003). A total "Proviolence" attitudes score

is calculated with 64 being the highest score for adaptation to violence (Funk et al., 2003). For this study, the Cronbach's alpha was $r = .71$, and the mean was 42.24 ($SD \pm 13.58$).

Data Analysis

The data were analyzed with the SPSS 22 statistical package. The ages of children were categorized into two groups, 8 to 10 years and 10 to 12 years (based on their grade in school), and the education of fathers was used as an index to categorize children into low, middle, or high income SES groups (UNDP 2015; Williams et al., 2008). For Research Question 1—What types of violence are children in Lebanon exposed to?—means and *SD*s were calculated and compared among the different ages, SES groups, and gender using analysis of variance (ANOVA) for both the Media Preference Survey and the KID-SAVE survey. Religion was excluded from the analysis as the majorities were Muslim (81.6%). For Research Question 2—What is the relationship between demographic characteristics, the different kinds of violence exposures and desensitization?—a Spearman rank correlation was used. For Research Question 3—Which factors are most likely to be associated with desensitization?—a multiple linear regression analysis was conducted. For Research Question 4—Is there a cumulative effect of exposure to different kinds of violence on desensitization?—the sample was divided into three groups of children based on their scores of low, moderate, and high exposure to violence and plotted against their "Proviolence" scores.

Results

A total of 219 (98.6% response rate) children completed the questionnaires; the high response rate may reflect their interest in the topic. None of the children expressed any distress while filling the questionnaires. Twelve questionnaires (5.4%) had more than 30% incomplete data and were discarded resulting in a sample of 207 children. For questionnaires with less than 30% missing data ($n = 15$, 6.8%), the missing items were imputed using the mean substitution technique (Polit & Beck, 2008). Children were between the ages of 8 and 12 years with a mean age of 9.58 years ($SD \pm 2.07$) and were divided almost equally between the two age groups (8-10 years and 10-12 years), 116 (56%) were male and 91 (44%) were female. Twenty-six (12.5%) children were from low SES background, 146 (70.1%) were from middle SES background, and 35 (16.9%) were from high SES background. The majority were Muslim (81.6%), 13.5% were Christian, and 5% were Druze. Seventy-six percent ($n = 157$) of the children reported being exposed to violence based on the "Frequency" factor.

Table 1. Characteristics of Sample (n = 207) with Means and Standard Deviations (*SD*s) for the Different Kinds of Media Exposure.

Variable	Number (%)	Television *M* (*SD*)	Internet *M* (*SD*)	Video *M* (*SD*)
Age				
8-10 years	95 (45.9)	3.88 (1.60)	2.41 (0.71)	3.83 (1.81)
10-11 years	112 (54.1)	3.82 (1.59)	3.48 (1.64)**	4.29 (1.73)**
Gender				
Male	116 (56.0)	3.86 (1.63)	2.63 (0.78)	3.12 (1.22)*
Female	91 (44.0)	3.86 (0.91)	2.63 (1.01)	2.67 (1.82)
Socioeconomic				
Low	26 (12.5)	3.56 (2.47)	3.41 (1.76)	3.41 (2.16)
Middle	146 (70.5)	3.86 (1.62)	3.76 (2.17)	3.95 (1.75)*
High	35 (16.9)	3.93 (1.55)	3.62 (1.85)	3.62 (2.01)

*p significant at < .01. **p significant at < .001.

For Research Question 1, and as noted in Table 1, older children watched more violent internet, $F(1/205) = 21.15$, $p = .003$, and played more violent video games, $F(1/205) = 4.74$, $p = .03$. Television violence was similar in both genders. Boys, $F(1/205) = 5.98$, $p = .01$, and children from the middle SES background, $F(2/204) = 3.51$, $p \leq .03$, played more violent video games.

Older children reported witnessing more traumatic violence, $F(1/205) = 11.47$, $p = .001$, but the impact was greater for the younger age group, $F(1/205) = 7.93$, $p = .005$. Boys witnessed more indirect violence, $F(1/205) = 12.76$, $p = .000$, but the impact was greater on girls for both traumatic, $F(1/205) = 5.56$, $p = .003$, and indirect violence, $F(1/205) = 5.03$, $p = .02$ (Table 2). Children from low SES background reported witnessing more traumatic and indirect violence as well as more physical/verbal abuse, $F(2/204) = 6.11$, $p = .003$, $F(2/204) = 6.40$, $p = .007$, and $F(2/204) = 4.23$, $p = .04$, respectively, than children in the middle and upper SES groups; however, the impact was the same in the three groups. The "Frequency" of physical/verbal abuse was similar between genders (Table 2).

For Research Question 2, the Spearman rank correlation in general noted that all types of exposure had a positive correlation to "Proviolence" attitudes; however, the higher correlations were noted in the "Frequency" of exposure and the "Impact" of such exposure to traumatic events, indirect violence, and physical/verbal abuse (Table 3). Age and gender were related to "Proviolence" attitudes but not SES.

For Research Question 3, a multiple regression analyses was performed to examine the relationships between gender, age, media violence (television,

Table 2. Characteristics of the Sample With Means and Standards Deviations (*SD*s) for the Different Types of Violence Exposure.

		Frequency of Violence		Impact of Violence			
Variable	Number (%)	Traumatic *M* (*SD*)	Indirect *M* (*SD*)	Physical *M* (*SD*)	Traumatic *M* (*SD*)	Indirect *M* (*SD*)	Physical *M* (*SD*)
Age							
8-10 years	95 (45.9)	12.36 (6.81)	21.82 (9.62)	2.88 (1.60)	15.41 (10.71)*	19.52 (6.54)	3.23 (1.23)
10-12 years	112 (54.1)	16.44 (9.92)**	24.41 (10.98)	2.77 (1.66)	11.41 (9.81)	17.87 (10.71)	2.98 (2.37)
Gender							
Male	116 (56.0)	15.52 (7.85)	21.61 (9.23)**	2.87 (1.58)	12.68 (8.64)	13.48 (10.74)	3.56 (2.34)
Female	91(44.0)	16.41 (8.21)	16.93 (8.31)	2.82 (1.59)	16.46 (10.76)*	17.72 (6.73)*	2.99 (1.96)
Socioeconomic							
Low	26 (12.5)	19.42 (8.82)*	20.30 (12.53)*	2.56 (1.47)	13.41 (7.76)	14.41 (7.76)	3.22 (3.51)
Middle	146 (70.5)	16.76 (7.13)	15.01 (6.22)	2.86 (1.62)	19.76 (11.77)	13.76 (9.75)	2.89 (2.11)
High	35 (16.9)	12.19 (4.97)	14.08 (3.31)	2.93 (2.55)	20.62 (10.53)	16.62 (6.73)	2.66 (1.98)

*p significant at < .01. *p significant at < .001.

Table 3. Correlation Between Study Variables.

	Age	Gender	SES	TV	Internet	Video Games	Frequency of Traumatic Violence	Impact of Traumatic Violence	Frequency of Indirect Violence	Impact of Indirect Violence	Frequency of Physical/ Verbal Abuse	Impact of Physical/ Verbal Abuse	Proviolence Attitudes
Age	1	.05	.11	.18	.22*	.11	.14	−.19*	.23*	.19*	.11	.14	−.19*
Gender		1	.08	.12	.14	.20*	−.19*	.23*	.19*	.22*	.13	.17	.21*
SES			1	.10	.13	.12	.21*	.18	.21	.10	.12	.17	−.13
Television				1	.14	−.18	.15	.16	.09	.13	.10	.11	.23*
Internet					1	.20*	.14	.17*	.11	.08	.12	.16	.20*
Video						1	.07	.06	.12	.15	.19	.08	.21*
Frequency of traumatic violence							1	.29**	.22*	.19*	.16	.15	.32**
Impact of traumatic violence								1	.29**	.21*	.14	.17	.36**
Frequency of Indirect violence									1	.34**	.10	.13	.29**
Impact of indirect violence										1	.12	.17	.37**
Frequency of physical/verbal abuse											1	.35**	.28**
Impact of physical/verbal abuse												1	.36**
Proviolence attitudes													1

Note. Gender is coded 1 for male, 2 for female. Socioeconomic status (SES) is coded 1 = *low*, 2 = *middle*, and 3 = *high*.
**Correlation is significant at the .05 level, two-tailed.

Table 4. Multiple Regression Analysis With Proviolence as the Dependent Variable.

	Unstandardized Coefficients			
Variables	β	*SD* Error	*t*	*p* Value
Frequency of traumatic violence	.32	0.41	6.67	.01
Impact of traumatic violence	.26	0.06	5.98	.02
Frequency of indirect violence	.24	1.03	5.24	.02
Impact of indirect violence	.22	0.37	4.87	.03
Frequency of physical/verbal abuse	.27	2.01	4.22	.04
Impact of physical/verbal abuse	.21	0.36	3.93	.03
Television violence	.19	2.03	3.13	.04
Video games violence	.16	1.96	1.86	.07
Internet violence	.41	1.38	1.27	.16
Gender	.32	.72	1.01	.19
Age	.24	.99	2.03	.15

Internet, and video games), community violence on the KID-SAVE scale ("Frequency" and "Impact"), and the dependent variable "Proviolence" attitudes. SES was not included in the equation as it was not related to "Proviolence" attitudes in the spearman correlation. The significant predictors for "Proviolence" attitudes were the "Frequency" of the three types of violence exposure, $\beta = .32$, $p = .01$; $\beta = .24$, $p = .02$; and $\beta = .27$, $p = .04$, respectively, and the "Impact" of the three types of violence, $\beta = .26$, $p = .02$; $\beta = .22$, $p = .03$; and $\beta = .21$, $p = .03$, respectively, and television violence ($\beta = .18$, $p = .04$); these variables, combined accounted for 29.4% of the variance in the dependent variable "Proviolence." The two media exposures (video games and Internet) were not significantly associated with "Proviolence" and neither were gender or age (Table 4).

For Research Question 4, the participants were divided into three groups based on their scores on the three measures of exposure to media violence and the two measures of community violence. Low exposure was the number of participants with scores 2 *SD*s below the mean on exposure to violence on the Media Preference survey and KID-SAVE survey ($n = 59$); moderate exposure was the number of participants who had scores 1 *SD* below and 1 *SD* above the mean ($n = 97$); and high exposure was the number of participants with scores 2 *SD*s above the mean on the two scales ($n = 51$). Figure 1 shows that the more the child is exposed to violence, the more the "Proviolence" attitudes.

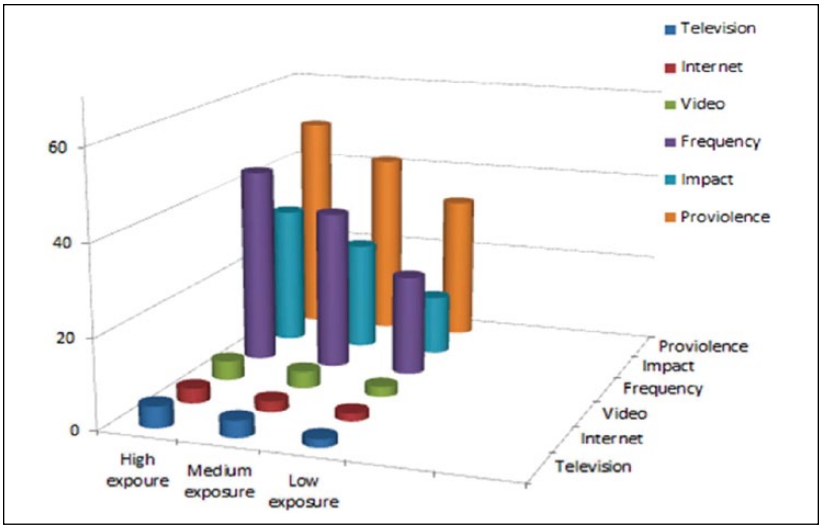

Figure 1. "Proviolence" attitudes with low, medium, and high exposure to violence.

Discussion

This may be the first study in the Middle East to examine relationships between violence exposure, including war and civil strife, as well as screen-based media violence on desensitization as reflected in scores on the ATVC. Most prior research had focused either on the impact of chronic neighborhood violence or screen-based media on children's emotional functioning or on their aggressive behaviors, and some studies assessed the impact of war on children's mental health (Dubow et al., 2012; Funk et al., 2004; Itani et al., 2014; Reid-Quiñones, et al., 2011). In this study, children were from the West side of Beirut; some of them had witnessed the actual Israeli–Lebanese war in 2006, and were living with chronic exposure to violence such as car bombs, shelling, and acts of terror on the streets in Lebanon. Seventy-six percent of the sample reported being exposed to violence, which is comparable with what is published for children living in Palestine where 87.4% of children reported they had witnessed violence in their lifetimes (Haj-Yahia, Leshem, & Guterman, 2013), and in line with a recent study in Lebanon where 80% reported having witnessed traumatic violence (Karam et al., 2014). However, these rates are much higher than what is reported in national samples in the United States where approximately 40% of youth report witnessing violence

in their lifetimes (Zinzow et al., 2009). Boys and those in the older age group watched more internet violence and played more violent video games that are in line with previous research findings in the West (Funk, 2015). Children in the middle SES group played the most violent video games most likely because the lower SES group did not have as much access to video games, and the high SES group may have been involved in other forms of entertainment, or their parents may have been more vigilant in monitoring the media content their children watch.

The mean on the two subscales "Frequency" and "Impact" to exposure to violence were higher than what has been reported earlier in the literature for children living in high crime neighborhoods in the United States where the mean for "Frequency" ranged between 12.4 ($SD \pm 6.9$) to 22.2 ($SD \pm 11.3$), and for "Impact," it was 18.8 ($SD \pm 11.3$; Flowers, Hastings, & Kelley, 2000). The mean on the "Frequency" subscale in this study was 36.9. ($SD \pm 15.2$), and for the "Impact" subscale, it was 25.4 ($SD \pm 12.4$). This implies that children in Lebanon had a much higher exposure to violence and that the effect of this exposure was higher than what has been reported in previous studies. Boys reported having more "Frequency" of exposure, which is rather expected as girls tend to be more sheltered in a Middle Eastern culture and may not have been exposed to the same amount of violence. This is supported by a study on Palestinian children where males and older children were exposed to the greatest amounts of conflict (Dubow et al., 2012). Older children and those from low SES backgrounds reported more exposure to violence, which is supported by several studies in the United States (Mrug & Windle, 2010). The Impact of violence was greatest, however, on the younger age group and on girls, which is consistent with previous findings in both Western and Middle Eastern studies. Several studies in the United States have found that female youth may be more susceptible than male youth to anxiety and depressive symptoms following exposure to community violence (Breslau, Wilcox, Storr, Lucia, & Anthony, 2004; Gaylord-Harden, Cunningham, & Zelencik, 2011). In Lebanon, a recent study reported that while boys were exposed to more incidents of physical, psychological, and even sexual violence, girls had more trauma-related symptoms, somatization disorders, sleep disturbances, PTSD, and anxiety (Usta, Dandashi, & Farver, 2013). Likewise, a study in Palestine by Dubow et al. (2012) noted that although males were exposed to more violence, the younger children and girls displayed the most PTSD symptoms. Unlike earlier studies, however, exposure to physical/verbal abuse was similar across gender and ages with no difference on "Impact." The differences in results could be due to our convenient sample with children mostly from the West Beirut.

The results of the regression analysis reveal that "Frequency" of exposure on the three types of violence and the "Impact" of exposure to violence as well as television violence were significant predictors of desensitization. A previous study found that children repeatedly exposed to violence may become emotionally and cognitively desensitized to the impact of violence on others and as a result may be less restrained to behave aggressively (Funk et al., 2004). Mrug and Windle (2010) noted that children exposed to violence were more likely to have violence-approving attitudes while Ng-Mak et al. (2004) found that high levels of exposure to community violence were associated with more child- and parent-reported aggressive behavior and less child-reported psychological distress, whereas Locher, Barenblatt, Fourie, Stein, and Gobodo-Madikizela (2014) found that childhood maltreatment is associated with impaired empathy. The findings in this study shed light on how chronic exposure to violence has a negative effect on the behavior of children, which may have long-lasting effects on their moral judgments. Gender, SES, age, and Internet and game violence did not emerge as predictors of desensitization probably due to the stronger influence of the other variables entered into the equation. For most children, violence is more prevalent in screen-based media than in community. However, as noted in this study, when community violence is present, it has a stronger effect on attitudes than the media. This may indicate that children are capable of deciphering the difference between different exposures. Several studies have documented that media violence contributes to aggressive behaviors and to negative affect with a possibility of desensitization to violence (Fitzpatrick et al., 2012; Funk et al., 2004; Saleem, Anderson, & Gentile, 2012). However, as noted in this study, desensitization was more likely to be predicted by real exposure to violence. This is not to say that media violence is not disruptive to children; however, in the presence of real violence, the effect of the former is overshadowed. It is worth noting that children in Lebanon are exposed to a significant amount of television violence, as the news reports continuously portray common acts of terror such as car bombs and street fighting. Do children with chronic exposure to violence develop "Proviolence" attitudes with little empathy, and if so, how does it affect moral judgment? Do children become callous to violence in community and do they imitate violent behaviors without remorse? Some researchers have suggested that desensitization leads to emotional numbing to facilitate children's ability to live in dangerous neighborhoods (e.g., Gaylord-Harden et al., 2011; Seidel, et al., 2013), while others have argued that political hardships do not increase psychosocial problems if children have strong ideological commitment (Punamäki, 1996). Thus, desensitization may be both a positive adaptation to chronic violence, or it may result in individuals who lack empathy. Future longitudinal studies are recommended to answer these questions.

Finally, we noted a dose–effect relationship of exposure to violence and high "Proviolence" attitudes, suggesting that cumulative violence has a harmful effect on children's mental health. Although a few earlier studies have reported the cumulative effect of multiple stressors on children's psychological well-being (Catani et al., 2010; Rosenkranz, Muller, & Henderson, 2012), none have assessed media violence in addition to community violence in a country where war and civil strife are common.

Limitations

Despite the strengths of this study, mainly being the first to assess the effect of different types of violence exposure on the desensitization of children living in a chronic war environment, several limitations merit discussion. First several factors, possibly contributing to the attitudes of children to violence, were not assessed in this study such as sexual abuse. Second, aggressive behaviors, which have long been noted to influence proviolent attitudes, were not assessed. Third, the sample size, though moderate, was not large enough to depict stronger magnitudes of associations nor was it representative of all children in Lebanon, a small country with 18 religions groups and 16 major political parties. Fourth, because this study was cross-sectional in nature, causality cannot be inferred. Finally, we assessed children's perceptions of violence and their attitudes based on self-reports, which may not be a true representation of reality. As such, future studies would benefit from longitudinal designs with larger more representative samples that assess parent and child characteristics that may have a strong bearing on children's attitudes or could be protective factors such as resiliency, coping, spirituality, and religion. In addition, future studies are warranted that investigate the mechanisms that underlie protection from the negative consequences of violence.

Implications

The results of this study are important in terms of interventions aimed at children, parents, policy makers, and communities. For example, educating parents to monitor the content and limit the time children spend watching the media or playing video games is critical. Although parents cannot be expected to limit community violence, especially in terms of war events, they can be instructed to avoid watching violent events on the news especially when children are present to prevent dulling children's sensitivity to violent behaviors. It is also recommended that parents discuss violent scenes with their children to help them process the events and to provide emotional support that can mitigate the negative effects of violence. This is especially needed for girls

who seem to be more affected than boys although less exposed to violence (Hardaway, McLoyd, & Wood, 2012). Clinicians should be aware of signs of mental disorders in children such as PTSD, depression, or aggressive behaviors to provide appropriate interventions and referrals especially for maladjusted youth to help promote positive adjustment. The findings in this study also highlight the need for policies that address the risk of adverse mental health outcomes of children in Lebanon as well as other countries where military conflicts have occurred, such as the new law protecting women from domestic abuse that was passed in the Lebanese parliament in April of 2014 after many years or campaigning. School-based mental health services may be an efficacious method of addressing violence, particularly in areas such as the West of Beirut where children have been exposed to various forms of violence and may not have access to mental health. School-wide curricula aimed at addressing violence in an effort to decrease students' exposure and in building students' resilience in the face of violence exposure may serve to prevent the development of mental health problems. Communities could also consider creating safe zones around schools and petitioning for peace.

In conclusion, this study reveals that children in Lebanon are witnessing considerable violence in addition to violence in the media, which may have negative consequences on their mental health. Although it has been suggested that desensitization may be a coping response to chronic violence exposure (Cooley-Quille et al., 2001), it is worrisome that children may become adults who lack empathy, whose moral reasoning is disrupted, and who are indifferent when they see acts of violence leading to a more violent society.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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