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The Longitudinal Effects of Chronic Mediated Exposure to Political Violence on Ideological Beliefs About Political Conflicts Among Youths

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Abstract

This study examines the effects of chronic (i.e., repeated and cumulative) mediated exposure to political violence on ideological beliefs regarding political conflict. It centers on these effects on young viewers, from preadolescents to adolescents. Ideological beliefs refers here to support of war, perception of threat to one's nation, and normative beliefs concerning aggression toward the out-group. A longitudinal study was conducted on a sample of Israeli and Palestinian youths who experience the Israeli-Palestinian conflict firsthand ($N = 1,207$). Two alternative hypotheses were tested: that chronic exposure via the media increases support for war and aggression and elevates feeling of threat, or that chronic exposure via the media strengthens preexisting beliefs. Results demonstrated that higher levels of exposure were longitudinally related to stronger support for war. Regarding normative beliefs about aggression and threat to one's nation, mediated exposure reinforced initial beliefs, rendering the youths more extreme in their attitudes. These results mostly support the conceptualization of the relation between media violence and behaviors as “reciprocally determined” or “reinforcing spirals.” The results are also discussed in light of the

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differences found between the effect of exposure to political violence firsthand and exposure via the media.

Keywords

beliefs about war; adolescents; exposure to violence; reinforcing spirals model; political conflict

Introduction

Members of societies that suffer from political conflict tend to develop beliefs about the enemy/out-group very early—as early as two years of age (Bar-Tal, 1996; Barrett & Oppenheimer, 2011; Hammack, 2008). The existence of such beliefs is highly important because they allow the “maintenance of the status quo through the continuation of the conflict” (Lavi, Canetti, Sharvit, Bar-Tal, & Hobfoll, 2012, p. 593). But what directs/orients the development of such beliefs? It has been repeatedly demonstrated that adults and children who are exposed to higher levels of political violence in person show elevated feelings of threat, hostility toward the enemy, ethnocentrism, and support for war (e.g., Barenbaum, Ruchkin, & Schwab Stone, 2004; Beber, Roessler, & Scacco, 2012; Canetti-Nisim, Halperin, Sharvit, & Hobfoll, 2009; Hobfoll, Canetti-Nisim, & Johnson, 2006). In the current study, we examine the role of exposure to political violence via the *media* in shaping such beliefs and in priming existing beliefs regarding violence toward the out-group.

A vast body of research has been devoted to the effects of fictional violent media on the development of aggressive attitudes among children and youths (Bandura, 1977; Bushman & Huesmann, 2006; Huesmann & Kirwil, 2007). In contrast, mediated exposure to political violence has not been previously investigated in this context (for exceptions, see Huesmann, Dubow, Boxer, Souweidane, & Ginges, 2012; Walma van der Molen, 2004), although its effects might be extensive given the size of the mass media audience (Buijzen, Walma van der Molen, & Sondij, 2007). We focus on chronic mediated exposure to political violence, which refers to cumulative exposure to violent political acts via the media (Dvir Gvirsman et al., 2013). The focus is on chronic exposure because attitudes are more likely to be influenced by multiple experiences (Bohner & Dickel, 2011).

The investigation focused on the Israeli-Palestinian conflict. We studied the beliefs of Israeli and Palestinian children about the glories of involvement in war (i.e., that war is a good solution and that they wish to take part in a war; Punamäki, 1996); their beliefs about threat to their nation (i.e., that their people are under constant threat from other nations; Eidelson & Eidelson, 2003); and their beliefs about aggression toward the out-group (i.e., that aggressive acts are acceptable if they are directed toward the out-group; Dubow, Huesmann, & Boxer, 2009).

Past studies that tested the relation between exposure to political violence and beliefs about the out-group among children were limited in their ability to establish causality (Barber, 2013; Cairns & Dawes, 1996; Dubow et al., 2009). To address the problem of temporal relations, we offer a longitudinal perspective that takes into account the preexisting beliefs

of both parents and children. Children and their parents were interviewed every year for a period of three years. Such survey data allowed us to test two predictions: (a) Mediated chronic exposure may lead to encoding pro-violent beliefs (Huesmann & Taylor, 2006; Slater, 2007); and (b) mediated chronic exposure primes existing beliefs about violence toward the out-group, thus reinforcing them and rendering them more extreme.

The Effect of Chronic Mediated Political Violence on Children's Beliefs

As just noted, a vast body of research has found that both children and adults who were exposed to political violence in person held more hostile and aggressive attitudes toward the out-group (e.g., Barenbaum et al., 2004; Beber et al., 2012; Berrebi & Klor, 2006; Canetti-Nisim et al., 2009; Carnagey & Anderson, 2007; Hobfoll et al., 2006).¹ Following from these findings, one might deduce that exposure to political violence via media would also cultivate such beliefs. Indeed, it was found that exposure to news about the September 11 terror attack on the United States was positively associated with negative perceptions of Islamic individuals (Lett, DiPietro, & Johnson, 2004). Likewise, in an experimental setting, exposure to news clips about terror attacks was associated with prejudice (Das, Bushman, Bezemer, Kerkhof, & Vermeulen, 2009; for similar findings in the context of video games, see Saleem & Anderson, 2013). However, Das and colleagues' (2009) study dealt with the results of a brief exposure to political violence, and no study has thus far documented the effects of mediated chronic exposure, as does the present one.

Mediated chronic exposure refers to cumulative exposure to violent political acts that may vary in their severity (Dvir Gvirsman et al., 2014).¹ It is substantially different from short-term exposure in the lab or acute exposure to a major traumatic event, such as a terror attack (September 11 and the Oklahoma City bombing are commonly studied). In contrast to the latter types of exposure, the cumulative nature of chronic exposure is—to a certain degree—the result of the child's viewing preferences. Thus, it is similar in nature to other viewing patterns, such as preference for fictional violent media and violent video games (Huesmann & Kirwil, 2007; Slater, 2004). Consequently, it is suggested here that a more accurate model of the way mediated chronic exposure shapes violent beliefs about the out-group must incorporate past work on the effects of fictional violent media.

Scholars describe media effects as a reinforcing spiral, suggesting that although media may shape attitudes, their greater strength lies in their ability to foster pre-existing attitudes and behaviors (Bandura, 1977; Huesmann & Taylor, 2006; Slater, 2007, 2014; Valkenburg & Peter, 2013). Thus, Huesmann and Taylor (2006) argued that “for youth in middle childhood, who already have conceptualization of the world around them, materials that ‘contrast’ too much with their existing conception will have less effect than materials that they can assimilate into their world schema” (p. 307). Indeed, previous research on youths' reactions to media messages regarding sex, alcohol, and violence documented certain preliminary factors that made some children more vulnerable than others to these messages (for a detailed theoretical overview of the Reinforcing Spiral Model, see Slater, 2014; for specific examples, see Peter & Valkenburg, 2009; Slater, 2004; Slater, Hayes, & Ford, 2007;

¹The concept addressed here—mediated chronic exposure—is a specific type of indirect exposure. Other types of indirect exposure could also be found in the literature, for instance work on interpersonal communication (Lyll, Blair, & Imai, 2013).

Stoolmiller, Gerrard, Sargent, Worth, & Gibbons, 2009). Additional support for the influence of prior beliefs on the way exposure to violence shapes attitudes among adults can be found in some of the literature about conflict resolution. For instance, Lyall, Blair, and Imai (2013) demonstrated the importance of social identity in Afghan civilians' responses to political violent acts, especially when the violence was not directly experienced. Similar findings were seen among Israeli adults and Palestinian adults, as well as Iraqi adults (Berrebi & Klor, 2008; Condra & Shapiro, 2012; Jaeger, Klor, Miaari, & Paserman, 2008).

One possible mechanism that underlies such reinforcing models is chronic priming and chronic accessibility (Bushman, 1998; Huesmann & Kirwil, 2007; Slater, 2014; Todorov & Bargh, 2002). Priming builds on the idea that our memory is organized as a network of concepts that are linked to one another by associations created by past experience (associative network). In this network, a given stimulus may activate a concept stored in memory, making it more accessible; because this concept is linked to other concepts, this activation will continue to spread (i.e., spreading activation). For instance, if an ethnic group is associated in childhood memory with certain beliefs, these beliefs will be activated and become accessible when the child is exposed to the image of a member of this ethnic group (Huesmann & Taylor, 2006; Valentino, Traugott, & Hutchings, 2002). Chronic priming describes a scenario in which prolonged exposure to a stimulus causes linked beliefs that are chronically accessible and influences how the social environment is interpreted (Dixon & Azocar, 2007; Todorov & Bargh, 2002). In the context of this study, chronic priming and accessibility suggest that when a child is exposed to political violence, prior beliefs about the out-group—whether beliefs that support or oppose aggression—become accessible. Once accessible, they color the way the child interprets media reports. When exposure becomes chronic, so too do those beliefs become chronically available. The endpoint of this process is reinforced beliefs (Arpan, Rhodes, & Roskos-Ewoldsen, 2007; Knobloch-Westerwick, 2012).

Thus, when binding together the evidence accumulated on the effect of real-life exposure to political violence and mediated exposure, two predictions emerge: (a) Chronic exposure to ethnic-political violence may lead to encoding new pro-violent beliefs because it makes violence seem more normative (Bushman & Huesmann, 2006; Huesmann & Kirwil, 2007; Saylor, Cowart, Lipovsky, Jackson, & Finch, 2003); and (b) if children have already developed beliefs regarding violence toward the out-group (influenced by their parents and past experiences; Bar-Tal, 1996; Barrett & Oppenheimer, 2011; Hammack, 2008), a reinforcing process will occur (Slater, 2014).

The Current Study

In order to study the effects of exposure to political violence, we conducted a longitudinal study on a sample of youths growing up in Israel and Palestine. Ethnic-political violence and conflict is prevalent and ongoing in Israel and Palestine, where since the beginning of the second Intifada in September 2000 through the end of May 2013, 7,931 people have been killed, including 1,505 minors. Concentrating on this population allows for the analysis of the effects of mediated exposure to ethnic-political violence on youths for whom the violence is highly relevant to their everyday lives. The two major study hypotheses are:

H1: Chronic exposure to mediated political violence will be associated with subsequently higher levels of pro-violent beliefs about war (glorification and involvement), about threat to the nation, and acceptance of aggression toward the out-group.

H2: Chronic exposure to mediated political violence will reinforce existing beliefs about war (glorification and involvement), about threat to the nation, and acceptance of aggression toward the out-group. The effect of initial beliefs on later beliefs will be stronger among those with high exposure to mediated political violence in comparison to those with low exposure.

Method

Sample

The data are part of a three-wave longitudinal study of the effects of exposure to conflict and violence on mental health in three cohorts (ages 8, 11, and 14 at Wave 1) of youths growing up in Palestine ($N = 600$ children) and in Israel ($N = 901$; 451 Jewish and 450 Arab children). Data were collected three times, at one-year intervals, from both children and parents during the years 2007 – 2010. Different recruitment strategies were used to obtain these samples (i.e., door-to-door only for the Palestinian sample; door-to-door, telephone, and snowball sampling for the Israeli Jews and Israeli Arabs); the different methods were selected based on logistic conditions and best practices in each region, as directed by regional survey experts.

Palestinian sample—Using census maps of the West Bank and Gaza provided by the Palestinian Central Bureau of Statistics, residential areas were sampled proportionally to achieve a representative sample of the general population (West Bank, 64% of the sample; Gaza Strip, 36% of the sample). The Palestinian sample includes 600 children: 200 8-year-olds (101 girls, 99 boys), 200 11-year-olds (100 girls, 100 boys), and 200 14-year-olds (100 girls, 100 boys), and one of their parents (98% were mothers). One hundred percent of the parents reported their religion as Muslim and 99% were married. One-third of the parents reported having at least a high school degree; 47% reported their incomes as below the Palestinian average, 33% reported it as average, and 20% reported it as above average. Parents reported that on average, there were 4.89 ($SD = 1.86$) children in the home. These statistics are representative of the general population of Palestinians based on the 2007 census (Palestinian Central Bureau of Statistics, 2008; for complete sampling procedures see Appendix A in Supplemental Material).²

Israeli sample—In comparison to the level of conflict and violence in Palestine, the level of conflict and violence is relatively low in the major population centers of Israel. Our goal was to ensure adequate representation of exposure to ethnic-political conflict and violence. Consequently, our regional colleagues designed a sampling procedure to oversample high

²Since the Israeli sample was not representative, all analyses were re-computed using a weighted sample. We weighted the Israeli sample according to geographic areas, we calculated the percent of the population of Israel in 2008, when the study began. The results of the weighted and un-weighted analyses were substantially similar, therefore we reported on the un-weighted results.

conflict areas (areas of the north, areas around Gaza, and areas around the settlements). Thus, we do not intend our results to suggest generalization to the population of Israeli children.² Of the Arab sample, 7% live in Jerusalem, 70% live in the north (close to the Lebanese border), and 23% live in central Israel (low conflict area). Of the Jewish sample, 15% live in Jerusalem, 25% live in the north, 23% live in the south (around the Gaza Strip), 24% live in the occupied West Bank, and 14% live in central Israel (for complete sampling procedures see Appendix A in the Supplemental Material).

The Israeli sample included 901 children and their parents. The Arab group consisted of 450 children: 150 8-year-olds (66 girls, 84 boys), 149 11-year-olds (69 girls, 80 boys), and 151 14-year-olds (79 girls, 72 boys), and one of their parents (68% were mothers). The Jewish group consisted of 451 children: 151 8-year-olds (79 girls, 72 boys), 150 11-year-olds (73 girls, 77 boys), and 150 14-year-olds (94 girls, 56 boys), and one of their parents (87% were mothers).

Among the Israeli Jewish sample, 91% of the parents were married, more than 80% had graduated from high school, and 42% reported their incomes as below the Israeli average, 28% reported it as average, and 30% reported it as above average. Parents reported that on average, there were 3.59 ($SD = 1.83$) children in the home.

Among the Israeli Arab sample, 92% of the parents were married; 55% to 60% did not graduate from high school; and 43% reported their incomes as below the Israeli average, 37% reported their income as average, and 21% reported it as above average. Parents reported that on average, there were 3.17 ($SD = 1.39$) children in the home.

Interview Procedures

The family was compensated at the Wave 1 rate of \$25 for the one-hour interview. The interviews of the parent/child were conducted in the families' homes separately and privately; the interviewers read the surveys to the respondents, who indicated their answers, which were then recorded by the interviewer. Interviewers worked in pairs; one interviewed the parent and one interviewed the child (for consent procedures see Appendix B in the Supplemental Material).

The interviews were conducted in three yearly waves at one-year intervals. Although the timing of waves in Palestine and Israel were similar, they did not overlap precisely. Wave 1 was conducted from May 2007 through September 2007 in Palestine, and from May 2007 through October 2007 in Israel. Wave 2 was conducted from May 2008 through September 2008 in Palestine, and from May 2008 through December 2008 in Israel. Wave 3 was conducted from May 2009 through August 2009 in Palestine, and from May 2009 through April 2010 in Israel. It should be noted that data collection did not occur in Palestine during the major 2008 incursion of Israeli troops into Gaza (Operation Cast Lead), which began operationally on December 27, 2008.

Measures

All measures described next were presented with no variation between waves of data collection. Measures were presented in appropriate native languages by region and ethnicity

(i.e., Hebrew for Israeli Jews and Arabic for Palestinians and Israeli Arabs; Israeli Arabs were able to select Hebrew or Arabic). Original English measures were translated and back-translated for accuracy by native-speaking research teams at the two data collection sites.

Demographic variables—To assess socioeconomic status, parent's education was coded on a scale ranging from 1 = illiterate to 10 = doctorate or law degree. For income, parents were asked, “The average Palestinian/Israeli income is XXX per month. Is your income: 1 = below average to 5 = way above average?” As for children demographics, we included child's age and gender.

Exposure to ethnic-political conflict and violence—Parents of 8-year-olds reported on their children's exposure to political conflict and violence, whereas 11- and 14-year-old children provided self-reports of their exposure to political conflict and violence. Based on the exposure to political conflict and violence scale by Slone, Lobel, and Gilat (1999), we created a 6-item scale assessing *mediated exposure to ethnic-political violent acts* (6 items, $\alpha = .83$ for parent report, $\alpha = .72$ for self-report; e.g., “How often have you seen video clips or photographs of injured [in-group members: Palestinians, Israelis] on stretchers or the ground because of an [out-group: Israelis or Palestinians] attack?”). Respondents indicated the extent to which they or their child experienced the event in the past year along a 4-point scale (0 = never to 3 = many times). For the purpose of the regression analysis presented next we calculated a composite exposure score across Waves 1 and 2 by summing the participants' scores ($M = 3.2$, $SD = 1.9$, $r = .70$, $p < .01$).³

In the same manner we also measured *exposure to political conflict and violence in real life* (i.e., witnessed actual violence) (4 items, $\alpha = .48$ for parent report, $\alpha = .52$ for self-report; e.g., “How often have you seen right in front of you [in-group members: Palestinians, Israelis] being held hostage, tortured, or abused by [out-group: Israelis or Palestinians]?”). For the purpose of the regression analysis presented next we calculated a composite exposure score across Waves 1 and 2 by summing the participants' scores ($M = .34$, $SD = .46$, $r = .44$, $p < .01$).

Beliefs: Parent and child normative beliefs about aggression toward the out-group—We adapted Huesmann and Guerra's (1997) Normative Beliefs About Aggression measure for the purposes of assessing beliefs about aggressing toward the out-group. Huesmann's and Guerra's (1997) original scale asks children to rate the extent to which certain aggressive behaviors are “okay” or “wrong” (e.g., “In general, it is wrong to hit other children.”). For the present study, we created a 7-item measure of approval of aggressive acts that target the “out-group” (i.e., the ethnic out-group for Israeli Jewish youths was Palestinians, while the ethnic out-group for both Palestinian and Israeli Arab youths was Israeli Jews). Parents and children were asked to indicate their approval or disapproval of aggression that targets out-group members along a 4-point scale (1 = “always wrong”; 2 = “almost always wrong”; 3 = “sometimes okay”; 4 = “always okay”). Sample items were “In general, is it okay for Palestinians [Israelis] to curse at Israelis [Palestinians]?”; “Is it okay

³Full measures are available upon request.

for Palestinians [Israelis] to damage Israeli [Palestinian] property?"; and "Is it usually okay for Palestinians [Israelis] to harm Israelis [Palestinians]?" Higher scores reflect stronger support that aggression against the out-group is justified (parents: $\alpha = .96$; children: Wave 1: $\alpha = .96$, Wave 3: $\alpha = .95$).

Beliefs: Parent and child normative beliefs about war—The scale includes seven items taken from Punamäki (1996) (parents: $\alpha = .70$; children: Wave 1: $\alpha = .59$, Wave 3: $\alpha = .67$). Children and parents stated if they agree (1) or disagree (0) with each item. Punamäki (1996) divided the items into two subscales: glorification of war, which includes items such as "It is an honor to die for our country" and "You admire freedom fighters [soldiers]," and patriotic involvement, which includes items such as "Wars are sometimes needed" and "War is always bad" (reversed). Factor analysis revealed similar results in the current sample (glorification of war, four items, 24% of the variance; patriotic involvement, three items, 20% of the variance). However, to simplify the presentation of the results, we combined the two subscales into one.⁴ Thus, each year, we calculated a score based on the mean of the items. Higher scores reflect stronger support for war.

Beliefs: Parent and child normative beliefs about nation—The scale includes three items based on Eidelson and Eidelson (2003). Parents and children were asked to indicate their agreement along a 5-point scale (1 = "strongly disagree" to 5 "strongly agree"). Statements included "Other nations are often unfair to [in-group: Palestinians, Israelis, Israeli Arabs]"; "[Our in-group] should be suspicious of other peoples"; and "[Our in-group] must always be fearful of danger to their security or safety." Each year, we calculated a score based on the mean of the items (parents: $\alpha = .64$; children: Wave 1: $\alpha = .53$, Wave 3: $\alpha = .76$).

Panel Attrition

For the Palestinian sample, the attrition rate was 5% (2% at Wave 2 and additional 3% at Wave 3). By Wave 3, non-resampled children reported higher levels of exposure to mediated political violence at Wave 2, $t_{(587)} = 2.5, p < .01$. For the Israeli Arabs, the attrition rate was 14% (14% at Wave 2, none at Wave 3). Non-resampled children had higher exposure to real-life violence, $t_{(447)} = 1.9, p < .10$ and stronger beliefs about war, $t_{(448)} = 3.0, p < .01$. For Israeli Jews, the attrition rate was 37% (32% at Wave 2, and additional 5% at Wave 3).⁵ Attrition was associated with lower levels of average parental education at wave 1, $t_{(449)} = 3.31, p < .01$, and lower beliefs about threat to the nation among parents at Wave 1, $t_{(449)} = 2.1, p < .05$. Despite these differences, none of the key study variables showed a substantial restriction in range due to attrition. To establish that attrition did not change the results reported next, a sensitivity analysis was computed. Following Enders (2010; see also, Little, Card, Preacher, & McConnell, 2009), we assessed both Missing at Random (MAR) and Missing Not at Random (MNAR) models, with no effect found for

⁴Given the dichotomous nature of the scale, the combination of the two subscales also helped achieve more variance in responses. Correlation between scales – children: Wave 1, $r = .33, p < .01$; Wave 3, $r = .32, p < .01$; parents: $r = .33, p < .01$.

⁵The decrement in the number of participants interviewed among Israeli Jews was mostly due to "refusals." The refusing participants reported that they did not feel the monetary reimbursement was sufficient to justify their time. In fact, due to significant exchange rate changes over the course of the study, the amount of money offered to each participant was significantly less in Waves 2 and 3. Because Arab Israelis had much lower average incomes, the amount was perceived as sufficient by most of them.

attrition (see Appendix C in the Supplemental Material for full description as well as a full list of the variable means, t-test results, and robustness tests).

Statistical Procedures

For preliminary analyses, we present sample descriptive statistics of the major study variables.

To examine our hypotheses we computed three separate regression analyses, one for each of the beliefs addressed. The models predicted child beliefs in the third wave of data collection from chronic exposure to mediated political violence and other predictors. To obtain the best assessment of chronic, repeated mediated exposure to political violence, we summed children's scores on exposure to mediated violence in Waves 1 and 2.⁶

In the first step of the regressions, we included exposure to mediated political violence, demographic variables, the beliefs at Wave 1, and the corresponding parent's beliefs.⁷ In the second step of the analysis, we entered an interaction representing the hypothesized moderation of chronic exposure to mediated political violence by initial level of beliefs. We employed PROCESS, which enables testing for moderation, using bootstrapping (5,000 iterations; Hayes, 2013).⁸ PROCESS also implements commonly employed procedures for testing moderation, like the Johnson-Neyman technique that evaluates conditional effects, computation of regions of significance, and confidence bands (Bauer & Curran, 2005). Following Aiken and West (1991), we centered all variables entering into interaction terms. In the second step we also controlled for any possible effect of the interaction between exposure to real-life political violence and initial beliefs.

Results

Descriptive Statistics

Table 1 presents the descriptive statistics of the key variables, in addition to further analyses of differences between the ethnic groups and between males and females. A three-way ANOVA revealed two general trends: Israeli Arabs demonstrated the strongest dislike of war and aggression; they scored significantly lower on all measures. Palestinian children reported stronger beliefs about aggression toward the out-group than Jewish children. Males were more likely to support aggression and war than females. All the differences accounted for here are in accordance with findings reported in previous studies (Lavi et al., 2012; Shamir & Shikaki, 2002).

Like their children, Palestinian parents reported the strongest normative beliefs about aggression and about war, followed by Israeli Jewish parents, then by Israeli Arab parents.

⁶We also ran an analysis in which exposure in Wave 1 and Wave 2 were separated, with no significant difference in results.

⁷In an additional analysis we also controlled for exposure to conflict/violence in the context of the community, school, and family. See Appendix D in Supplemental Material for full description of measurements.

⁸PROCESS is a SPSS macro supplied by Andrew Hayes, which can be found at <http://www.afhayes.com/>.

The Longitudinal Relation Between Mediated Exposure to Political Violence and Children's Subsequent Beliefs

To test whether mediated exposure to political violence shapes subsequent beliefs (Hypothesis 1), we computed a regression model (see Table 2). We predicted Wave 3 beliefs about threat to the nation, about war, and about aggression toward the out-group from exposure to mediated violence aggregated over the first two waves. We included youth's initial level of beliefs in Wave 1 as a predictor so we would be predicting *change* in these belief outcomes over time. Demographic variables and exposure to political violence in real life were also included.

Table 2 shows that in the first step of the analysis (Model 1), the model accounted for 14% of the variance in Wave 3 beliefs about nation, 42% of the variance in Wave 3 beliefs about war, and 66% of the variance in Wave 3 beliefs about aggression. There were significant main effects for Wave 1 beliefs (nation: $B = .27$, $SE = .03$; war: $B = .14$, $SE = .03$; aggression: $B = .36$, $SE = .02$), reflecting the stability in beliefs over time. Chronic mediated exposure significantly predicted only attitudes about war; higher levels of mediated exposure predicted higher levels of Wave 3 beliefs. Mediated exposure was not longitudinally related to subsequent beliefs about nation and beliefs about aggression, once the other predictors were included in the initial model. Exposure to political violence in real life, however, was longitudinally related to subsequent beliefs about nation and beliefs about aggression, but was not related to beliefs about war. We also note that parents' beliefs glorifying war at Wave 1 predicted children's subsequent beliefs about war at Wave 3, but parents' beliefs about nation and aggression toward the out-group were not associated longitudinally with children's corresponding beliefs at Wave 3.

The Moderating Effect of Initial Beliefs on the Relation Between Exposure to Mediated Political Violence and Subsequent Beliefs

Hypothesis 2 was that chronic exposure to mediated political violence would reinforce subsequent beliefs about war, threat to one's nation, and acceptance of aggression toward the out-group, rendering them more extreme over time. To test this hypothesis, we added an interaction term (chronic exposure with initial beliefs) to the former regression model (see Model 2, Table 2). In two out of the three cases—beliefs about nation and normative beliefs about aggression toward the out-group—the interactions were significant, and in the direction hypothesized. Including the interaction term in the model resulted in a 2% increase of the explained variance in Wave 3 beliefs about nation and a 1% increase of the explained variance in Wave 3 beliefs about aggression (the results of the Wald test suggested that the addition of an interaction term significantly increased the explained variance: beliefs about aggression $F[1,1190] = 170$, $p < .01$; beliefs about nation $F[1,1191] = 18.0$, $p < .01$). The interactions between real-life exposure to violence and initial beliefs were not significant in all cases.

Figure 1 shows the effect of initial beliefs on the relation between mediated exposure to political violence and later beliefs (based on Johnson-Neyman technique). As predicted, for youths with initially higher acceptance of aggressive behavior toward the out-group (1 *SD* above the centered mean, Figure 1A) or beliefs in threat to the nation (Figure 1B), there was

a significant *positive* relation between exposure to mediated political violence and Wave 3 beliefs (nation: $B = .11$, $SE = .05$; aggression: $B = .15$, $SE = .05$); children with strong ideology who were exposed to mediated political violence demonstrated even stronger beliefs at Wave 3. In contrast, among children with weak beliefs, there was a significant *negative* relation between exposure to mediated political violence and Wave 3 beliefs (1 SD below the centered mean nation: $B = -.17$, $SE = .05$; aggression: $B = -.16$, $SE = .04$); children with weak ideology who were exposed to mediated political violence demonstrated even weaker beliefs at Wave 3.⁹

Taken together, these results support the prediction that exposure to mediated political violence mostly strengthens children's preexisting beliefs. Here, the results suggest that this is the case whether the initial beliefs are pro-violence or peaceful.

Discussion

Political violence affects many children around the world in various ways (e.g., see the 2010 special issue of *Child Development*, volume 81, issue 4). Yet the effect of this type of violence on the development of children's worldviews, especially in the context of media portrayals, remains under-researched (but, see Huesmann et al., 2012). This lacuna in scholarly knowledge is surprising given the importance of communication about war-related matters in helping children achieve a sense of security and reduce distress (Barenbaum et al., 2004; Punamäki, 1996).

In the present study, we investigated the effect of chronic exposure to mediated political violence on children's beliefs about violence toward the out-group. The use of a longitudinal analysis that took into account both the initial beliefs of children and those of their parents allowed us to examine temporal relations (Barber, 2013; Cairns & Dawes, 1996; Dubow et al., 2009). The results demonstrated that chronic mediated exposure to ethnic-political violence increased children's pro-war beliefs regardless of their initial beliefs, suggesting that chronic mediated exposure may have shaped new pro-violent beliefs (Bushman, 1998; Huesmann & Taylor, 2006). In addition, chronic mediated exposure to ethnic-political violence solidified preexisting beliefs about threat to the nation, and solidified preexisting beliefs about the approval of aggression toward the out-group. This is consistent with the idea that chronic mediated exposure to ethnic/political violence primes existing beliefs about the out-group and about the normativeness of aggression toward the out-group, which in the long run makes those beliefs and beliefs supporting aggression more chronically accessible. Thus, children who demonstrated initial support for violence became even more supportive of it, and children who initially objected to violence became even more opposed to it. Likewise children who demonstrated initial sense of threat became even more threatened, while children who had initially not felt threatened became even less threatened.

⁹Using the Johnson-Neyman technique demonstrated that the relation between beliefs about nation Wave 1 and beliefs about nation Wave 3 was not significant among those with chronic exposure lower than 2.2 SD below the mean (see Appendix E in Supplemental Material, for full chart). The relation between beliefs about aggression toward the out-group Wave 1 and Wave 3 was significant in all levels of exposure, and the effect size increased as exposure increased.

Beliefs About Threat and Aggression

Our results concord with recent models describing media influence (Eveland & Cooper, 2013; Slater, 2004, 2007, 2014; Valkenburg & Peter, 2013). Common to all these models is the conceptualization of the role prior beliefs, values, and personal traits play in facilitating the effects of media content (Bandura, 1977; Slater, 2007, 2014). Although one might suspect that media has such a reinforcing effect only on adults whose beliefs have become more crystallized, it seems that media influences on children and adolescents may follow the same path (Huesmann & Taylor, 2006). In the case here, results support previous work that suggested that among children living under the perils of political conflict, beliefs about the out-group appear at an early age (Bar-Tal, 1996; Birnbaum, Deeb, Segall, Ben-Eliyahu, & Diesendruck, 2010). Such early development of beliefs may also explain why our results showed that parents have limited influence on their children's beliefs. It might be that the impact of the parents occurred when the children were younger than those in the current study. Following such an explanation would suggest that parents carry part of the responsibility for their children's initial beliefs (Bar-Tal, 1996; Barenbaum et al., 2004; Castelli, Zogmaister, & Tomelleri, 2009). These beliefs in turn shape the way children interpret footage of political violence in later stages of development.

Previous studies found that the effect of *acute* mediated exposure to political violence mimics the effects of real-life exposure to political violence (Saylor et al., 2003). Interestingly, that was not found here: exposure to *real-life violence* increased pro-violent beliefs regardless of initial beliefs. Thus, it might be that the similarity in effects lies between different types of media content, and not between the mediated representation of the event and the real event. It is important to note that such a claim might be limited to the case of *chronic exposure*. Past literature could be divided according to two dimensions: (a) Exposure to real-life violence versus fictional violence, and (b) chronic versus acute exposure. Most studies addressed the effects of acute exposure to real-life violence (crime, terror, etc.), or the effects of chronic exposure to fictional violence. In the present study the unique combination of chronic exposure to real violence was studied, and it was found that its effects resemble those of chronic exposure to fictional media, rather than the effects of acute exposure to mediated real violence.

Support for War

Mediated exposure escalated the acceptance of war among all children regardless of the extent to which they initially supported war. What could account for the difference in the pattern found for beliefs about threat to the nation and about aggression toward the out-group in comparison to the pattern found for beliefs about war? One explanation could be that beliefs about the nation and general beliefs about aggression are more firmly tied to one's conception of the self as a good person and that these are core moral beliefs, while beliefs about war are more situational and less tied to morality. Thus, beliefs about war are easier to change. It might also be that beliefs about war are shaped at an older age and are therefore not yet chronically accessible. The fact that parents' beliefs about war did affect children's beliefs supports both these ideas. Another explanation could be that media depictions of political conflict have been frequently characterized as governed by war-journalism frames (e.g., Allan & Zelizer, 2004). Such frames describe the conflict as "them

vs. us in a zero-sum game” (Lee & Maslog, 2005, p. 316). It might be that given one dominant frame, media shaped children attitudes, regardless of their original beliefs. Such an explanation is supported by the findings that while mediated exposure affected pro-war beliefs, the effect of real-life exposure to political violence did not. This may suggest that media narration is important in the formation of pro-war attitudes and that the process underlying the effect is one of social learning (Bandura, 1977; Dubow et al., 2009; Huesmann & Kirwil, 2007). When exposed to war violence, all children internalize scripts (based on media narration) that suggest the normative acceptance of war. Further research is needed in order to determine the plausibility of these explanations.

Further research should also concentrate on obtaining direct evidence for priming and accessibility, and especially should take note of what it is that is being primed. Studying priming requires an experimental design in which participants are exposed to a stimulus and their reaction to it is measured (response latency, associations and so on; for instance, see Bushman, 1998). Given the current research design, such investigation was not possible here. Research to follow should use such experimental designs to discover which beliefs are primed by exposure to political violence, and whether there is a difference in these beliefs between light and heavy viewers (Dixon & Azocar, 2007) or between children with different perspectives about the political conflict at hand.

Research Limitations and Conclusions

The analysis presented here is based on a sample of children and parents who live in the conflict zones of Israel and the Palestinian Authority. Such a sample carries advantages but also suffers from drawbacks. First, the main advantage of such samples is in the ability to demonstrate that media content influences beliefs even among those who have direct contact with political conflict and violence. At the same time, it is harder to anticipate whether our findings will hold for individuals who live in conflict-free zones. Today, many conflicts around the world take place far from home (for instance American involvement in Afghanistan and Iraq [Gartner, 2004]). In such cases, children might develop beliefs regarding the conflict, yet may respond differently to media reports of political violence. Such children may show lower involvement with media coverage, and weaker emotional responses to it because the reports are less directly related to their lives.

Second, because exposure to political violence is common throughout Palestine, we obtained a representative sample of that entire population. For the Israelis, however, a representative sample would not have provided us with sufficient numbers of participants who were exposed to persistent violence. Consequently, we designed a sampling procedure to oversample high-exposure areas to ensure adequate representation of exposure to ethnic-political conflict and violence. Thus, the Israeli sample is not representative of the total Israeli population, making the results less generalizable to the Israeli population than those regarding the Palestinians are to the Palestinian population. Although this is a limitation when it comes to drawing conclusions about the Israeli population, it is not a limitation when it comes to drawing conclusions about how variations in exposure to violence are related to variations in attitudes (see Note 2). In addition, due to differences between the Palestinian and Israeli populations, different sampling and recruitment strategies were

implemented. While the Israeli sample was first approached by phone, this was not an option in the case of the Palestinian sample. Due to the small geographic area populated by the Palestinian sample, door-to-door recruitment was possible. This difference, although obligated by the circumstances of the research, limits the ability to generalize and compare between the samples.

Third, our data on exposure to violence were based on child and/or parent reports. Blending parent reports of exposure for younger children and self-reports for older children is not optimal, although reporter (child or parent) appeared not to matter in our data.¹⁰ Future studies should utilize multiple converging sources of information on children's experiences, especially given findings suggesting that parents and children can differ in systematic ways in their reports of children's exposure (Kuo, Mohler, Raudenbush, & Earls, 2000). Another measurement-related limitation is that in two cases—both beliefs about threat to the nation and beliefs about war—internal consistency reliability was somewhat low, although similar to what is documented in the literature (Punamäki, 1996).

Fourth, our definition of media exposure is limited to the frequency of exposure. Important elements of media content are excluded from such a narrow perspective. The data presented here do not take into account the media sources to which the children were exposed, nor do we conduct a content analysis of media coverage. Thus, potential differences in narration, interpretation, framing, news genres, media platform, sources' nationality, and type of broadcasting were not captured here. As suggested by ample research on the subject, such differences might be crucial. For instance, YouTube content may be far more violent and graphic in comparison to that featured in primetime news, yet our measure would not detect such differences. In the same vein, our study lacks information on children's and parents' more general viewing patterns and preferences. For instance, whether the children viewed violence with or without their parents present might be of importance to the children's interpretation process.

In sum, an increasing number of children watch news on the TV and Internet over the past two decades (Buijzen et al., 2007). During the same period, a pattern of increasingly graphic ethno-political violence presented in the news has been documented (Slattery, Doremus, & Marcus, 2001). The results of the present study suggest that such exposure may strengthen the preexisting worldviews of children on political conflicts and aggression, and may even increase support for war. This study only begins to scratch the surface of the possible effects of mediated chronic exposure to political violence. Nonetheless, our results contribute to scholarly understanding of children's lives under political conflict and imply that the media play an undeniable role in socializing children into the environment of an intractable conflict.

¹⁰Parents of children in the 8-year-old cohort provided reports of their children's exposure to ethnic-political conflict in each wave, but children in the older cohorts (11- and 14-year-olds in Wave 1) provided self-reports. We followed this strategy because our Institutional Review Board had concerns about the 8-year-olds' emotional reactions to reporting on their own exposure. Also, given time constraints on interviews with young children, having parents report on these items decreased the length of the interview for 8-year-olds. To examine the comparability of children's and parents' reports of children's exposure to political conflict/violence, we administered the measures to both children and parents of the youngest cohort in Wave 3 and found them to be highly correlated ($r = .68$).

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Figure 1.

Initial beliefs as a moderator of the relation between mediated exposure to political violence and beliefs at Wave 3. Weak and strong beliefs/ low and high exposure are defined as one SD below and above the mean scores on beliefs and mediated exposure. Error terms reflect twice the St. Error. Presented are change in beliefs about (A) aggression toward the outgroup and (B) the nation.

Table 1

Descriptive statistics for the key study variables

	Palestinian Arab			Israeli Jew			Israeli Arab			Total			Ethnicity		Gender	
	<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>		<i>Diff</i>	η^2	<i>Diff</i>	η^2
Beliefs about nation																
W1	3.3	0.86	3.3	0.85	3.1	0.84	3.3	0.86	P = IJ > IA	0.02	–	0.00				
W3	3.2	0.85	3.5	0.83	2.9	1.08	3.2	0.95	IJ > P > IA	0.06	–	0.00				
Parent	4.0	0.73	4.0	0.82	3.3	0.88	3.8	0.87	P = IJ > IA	0.02	–	0.00				
Beliefs about war																
W1	0.61	0.19	0.62	0.22	0.30	0.20	0.52	0.25	P = IJ > IA	0.35	M > F	0.02				
W3	0.62	0.19	0.66	0.22	0.29	0.22	0.53	0.26	P = IJ > IA	0.38	M > F	0.01				
Parent	0.68	0.19	0.56	0.26	0.26	0.19	0.52	0.27	P > IJ > IA	0.36	–	0.00				
Beliefs about aggression																
W1	2.9	1.01	1.8	0.86	1.3	0.61	2.1	1.10	P > IJ > IA	0.40	M > F	0.02				
W3	3.0	0.97	1.8	0.79	1.1	0.24	2.1	1.14	P > IJ > IA	0.54	M > F	0.01				
Parent	3.1	0.89	1.5	0.69	1.3	0.56	2.1	1.13	P > IJ > IA	0.42	–	0.00				
Exposure to mediated political violence (W1 + W2)	2.5	0.51	1.2	0.74	0.8	0.64	1.6	0.96	P > IJ > IA	0.60	M > F	0.03				
Exposure to real-life political violence (W1 + W2)	0.61	0.54	0.12	0.23	0.13	0.28	0.32	0.46	P > IJ = IA	0.29	M > F	0.03				

Notes. A three-way (age $\times$ sex $\times$ ethnic group) ANOVA was computed for each variable; Ns range from: Palestinian Arab: Wave 1 – 600, Wave 3 – 572; Israeli Jew: Wave 1 – 450, Wave 3 – 282; Israeli Arab: Wave 1 – 450, Wave 3 – 385; Total: Wave 1 – 1,500, Wave 3 – 1,238. Post hoc multiple comparison (least significant differences) tests were computed between means of subgroups defined by sex, and ethnic group. *M* = Mean; *SD* = Standard deviation; η^2 = Partial eta-squared value for effect; diff = direction of observed significant differences ($p < .05$); P = Palestinian, IJ = Israeli Jew, IA = Israeli Arab; M = Male, F = Female.

Table 2

Regression analyses predicting Wave 3 beliefs

	Normative beliefs about nation				Normative beliefs about war				Normative beliefs about aggression toward the out-group			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Constant	3.14	0.21	3.13	0.21	0.38	0.05	0.38	0.05	1.17	0.16	1.29	0.16
Demographics												
Gender ^a	0.04	0.05	0.04	0.05	0.04**	0.01	0.04**	0.01	0.39	0.02	0.36	0.02
Age	0.03**	0.01	0.03**	0.01	0.01**	0.00	0.01**	0.00	0.01	0.03	0.03	0.03
Parents' education levels	0.03	0.02	0.02	0.02	0.00	0.01	0.00	0.01	-0.07	0.04	-0.03	0.04
Household income	-0.03	0.03	-0.02	0.03	0.00	0.01	0.00	0.01	0.17**	0.05	0.13**	0.05
Palestinians ^b	-0.16	0.10	-0.19+	0.10	-0.07**	0.02	-0.07**	0.02	0.76**	0.09	0.67**	0.09
Israeli Arabs ^b	-0.59**	0.08	-0.60**	0.08	-0.28**	0.02	-0.28**	0.02	-0.54**	0.06	-0.64**	0.06
Beliefs												
Child's beliefs (W1)	0.27**	0.03	0.27**	0.03	0.14**	0.03	0.14**	0.03	0.39**	0.02	0.36**	0.02
Parent's beliefs (W1)	-0.04	0.02	-0.02	0.02	0.11**	0.03	0.11**	0.03	0.01	0.03	0.03	0.03
Exposure to mediated political violence (W1+W2)	-0.08+	0.05	-0.05	0.05	0.02*	0.01	0.02+	0.01	-0.07+	0.04	-0.03	0.04
Exposure to real-life political violence (W1+ W2)	0.16*	0.07	0.12+	0.07	0.01	0.02	0.01	0.02	0.17**	0.05	0.13**	0.05
Interaction												
Exposure to mediated violence (W1+W2) × Belief about nation (W1)			0.16**	0.03								
Exposure to mediated violence (W1+W2) × Belief about war (W1)							0.00	0.03				
Exposure to mediated violence (W1+W2) × Belief about aggression (W1)											0.13**	0.02
Adj. R ²	0.14**		0.16**		0.42**		0.42**		0.66**		67**	

Notes. Model 1 presents the results of a regression model that includes demographic variables as well as exposure to political violence. Model 2 adds an interaction term (exposure to media violence × initial beliefs). Beliefs: Nation: A higher score indicates a stronger feeling of threat to the nation. War: A higher score indicates glorification of war and a stronger sense of involvement. Aggression towards the out-group: A higher score indicates support for aggression. The models presented in the table also control for (a) exposure to violence in school, community, family and (b) the effects of additional interaction terms (not shown in the table) between real-life exposure and initial beliefs (beliefs about nation: B = -.02, SE = .07, n.s.; beliefs about war: B = .00, SE = .07, n.s.; normative beliefs: B = -.04, SE = .04, n.s.).

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d_0 = female, 1 = male;
Ethnicity was coded: Palestinians and Israeli Arabs versus Israeli Jews.
 d_0
*
*
 $p < .01$.
*
 $p < .05$.
+
 d_0 > .10.