RESEARCH ARTICLE

SOCIAL SUPPORT AND RESILIENCE TO POST TRAUMATIC STRESS DISORDER AMONG CHILDREN IN ELDORET SUB-COUNTY, KENYA

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ABSTRACT

Social support undoubtedly increases resilience following an adversity. This study examined the buffering effect of social support and resilience to post traumatic stress disorder among children in Eldoret Sub-County, Kenya. The study applied ex post facto correlational research design. The study drew its population from the 1,218 class eight children in 8 purposively selected public schools categorized as urban, peri-urban, rural and slum schools in Eldoret Municipality. Stratified random sampling method was utilized to give a sample of 192 pupils. Further, 32 teachers were purposively selected to participate in the study, making a total sample of 224 respondents. The instruments for data collection used in this study were the Impact of Event Scale Revised Version for the screening of PTSD in children, a Child Behavior Checklist for teachers and a social support tool. Data was analyzed using descriptive and inferential statistics with the aid of the Statistical Package for Social Sciences (SPSS) for Windows Version 17. The findings of the study indicated that approximately 5 years after exposure to post election violence in Eldoret, children were still exhibiting PTSD symptoms. The findings of this study showed that social support (especially from family, peers and school) played a pivotal role in building the capacity for resilience of the children. Consequently this study recommends formation of social support groups in schools, churches and the community as a trauma-focused psycho-therapeutic foundation for traumatized children.

INTRODUCTION

Violence exposes children to a whole host of risks, some of them life threatening consequences. The most severe risks include of orphanage, injury, displacement or separation from family. The loss of access to health services also puts children at great risk as this can mean death or long-term effects following a simple injury or illness that has not been or cannot be treated. Although children show incredible strength and resilience in their reaction to violence, their young age makes them more vulnerable than adults. When directly or indirectly exposed to war and conflict, children experience a variety of stressors, and develop both short-term and long-term post-traumatic stress reactions (Barenbaum, Ruchin and Schwab-Stone, 2004). Common symptoms and reactions in the aftermath of a traumatic event include sadness, anger, fear, numbness, anxiety, moodiness, irritability, and change in appetite, difficulty in sleeping, nightmares, avoidance of situations that are reminders of the trauma, impairment of concentration, and guilt because of survival or lack of harm during the event (DSM-IV, 2000).

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PTSD is a debilitating illness characterized by symptoms of intrusion/re-experiencing, avoidance, emotional numbing and hyper-arousal resulting from an emotionally traumatic event with actual or perceived threat (American Psychiatric Association, 2000). PTSD first appeared in the DSM-III in 1980. The impetus for the development of this diagnostic category arose primarily from the need to account for the characteristic array of symptoms exhibited by Vietnam veterans in the United States, and as such PTSD was conceptualized around traumatized adults. However, since that time there has been increasing recognition that children, too, can develop severe and debilitating reactions to traumatization (Giaconia, Reinherz, Silverman and Pakiz, 1995).The buffering role of social support in children exposed to violence has been documented. Kenya experienced a severe political crisis after the 2007 general elections that degenerated to widespread violence when the political opposition rejected the declared results. In Uasin Gichu County, the effects of the riots were heavily felt as families were killed, maimed, raped and houses set on fire. Mistrust and hatred amongst the communities was high and there were spontaneous attacks selectively targeting specific communities (BBC News, February 28, 2008). In terms of social relatedness, the post-election violence seriously disrupted social ties and individual's ability to access not only their extended community, but family members as well. Due to

relocation of many people from their homes, supporting relationships at the family, neighborhood, church, and school levels of organization were interrupted. Moreover, families were often separated and dispersed to different geographical locations. Clearly the adverse conditions precipitated by post-election violence threatened the goal and need for a bond of mutual value, caring, and concern. These traumatic events were difficult to bear even among adults, who have the mental capabilities to process and articulate their experiences, but worse for children who are more vulnerable to traumatic experiences. Some of the effects of post election violence which directly touched children included destruction of schools, forcing them to stay at home while others, whose homes were destroyed, became internally displaced persons (IDPs). During this period of great difficulty, displaced persons, religious groups, as well as other community groupings came together in support of each other as they dealt with the vice. The direct or indirect effect that this social support had on children in the area of the study was examined in this research (BBC News, February 28, 2008) The National Cancer Institute's Dictionary of Cancer Terms defines social support as a network of family, friends, neighbors, and community members that is available in times of need to give psychological, physical and financial help (www.cancer.gov).

Social support is important for maintaining good physical and mental health. Overall, it appears that positive social support of high quality can enhance resilience to stress, help protect against developing trauma-related psychopathology, decrease the functional consequences of trauma-induced disorders such as posttraumatic stress disorder (PTSD) and reduce medical morbidity and mortality (Southwick, Vythilingam and Charney, 2005). Barbarin, Richter and deWet (2001) in their study of South African children exposed to violence, explored the extent to which coping resources protected the children from negative psychological adjustment. They found that the children's experiences of violence depended on their families' ability to act as barriers to the violence and the quality of family relationships and other social support resources available (Howe, Aquan-Assee, Bukowski, Lehoux, and Rinaldi, 2001). Additionally, good peer relations have been found to protect psychological adjustment among bereaved children and those exposed to community violence (Ringler and Hayden, 2000)). Similarly, support from friends also contributes to good psychosocial adjustment during parental divorce (Greeff and van der Merwe, 2004) and in conflicting family environments by guaranteeing urgently needed self esteem, consolation and feeling of competence. Another form of social support is that offered by teachers. Teachers and other school personnel spend more hours with students than they do with their families. Social support from school personnel can also play a protective role for children and youth (Ozer and Weinsten, 2004). Schools serve as an important context for child and youth development and often function as a place of relative safety within violent communities. It is with no doubt that social support systems play a key role in the aftermath of trauma (Calhoun and Tedeschi, 2006). Following a stressful event, an individual's ability to cope is determined by both, the type and degree of trauma, as well as the availability of social support (Bal, Crombez, Oost, and Debourdeaudhuij, 2003). A number of studies have shown that the availability of social support during and after a traumatic event can reduce levels of depression, anxiety, and other mental and physical disorders amongst those exposed to a range of traumatic events (De Zulueta, 2007; Halcomb, Daly, Davidson, Elliott and Griffiths, 2005; Keane, Marshall and Taft, 2006; Walsh, 2007). Child literature has also emphasized the importance of social support following a disaster. Keppel-Benson, Ollendick and Benson, (2002) found that higher levels of social support led to better outcomes in a study of 50 children who had all experienced motor vehicle accidents. Involvement in these accidents ranged from being a passenger, to being hit by a car while on a bike or while walking. For these individuals, social support was found to be a significant predictor of decreased levels of PTSD symptoms.

Another study of 46 children following Hurricane Floyd, social support was found to be a significant contributor to positive outcomes (Cryder, Kilmer, Tedeschi and Calhoun, 2006). Also, borrowing from the adult literature, it was shown that those who had experienced lower levels of resource loss, along with higher levels of social support, exhibited higher levels of resilience following the terrorist attacks on September 11, 2001 (Bonanno, Galea, Bucciarelli and Vlahov, 2007). Looking at specific types of social support, earlier studies have indicated that parent support is linked to decreased levels of aggression and violent behavior (Blum, Ireland and Blum, 2003) and may counter the effects of stress on adolescent aggression and violent behavior (Brookmeyer, Henrich and Schwab-Stone, 2005). Wolchik et al., (2008) further examined post traumatic reactions in a sample of 50 bereaved adolescents. In this study, the researchers also measured social support from four different sources: parents, adults other than parents, peers, and siblings. The studies confirmed that the higher the level of social support, the lower the levels of PTSD symptoms. Siblings as well play an important role as far as social support is concerned. In their study, Howe, Aquan-Assee, Bukowski, Lehoux and Rinaldi, (2001) found warmth and intimacy in "siblingship" to be associated with emotional understanding and self-disclosure in middle childhood and these factors served as a source of emotional support in early adolescence during extremely stressful situations. On the contrary, negative sibling relationship was found to be associated with adjustment problems (Deater-Deckard, Dunn and Lussier, 2002), anxiety (Fox, Barrett, and Shortt, 2002) and depression (Kim and Cicchetti, 2003) both in childhood and adolescence. A section of this study examined social support offered by parents and siblings and its effect in dealing with PTSD in children who were exposed to post election violence. According to Ozer and Weinsten, (2004), social support from school personnel can also play a protective role for children and youth. Schools serve as an important context for child development and often function as a place of relative safety within violent communities. Feelings of connectedness to school have been found to positively influence adolescent adjustment (Resnick et al., 1997) as well as to decrease aggressive behavior (Haynes, Emmons and Ben-Avie, 1997). Internally displaced children in Eldoret were taught in makeshift schools at the IDP camps. Social support in schools during this period and after resuming to school will be studied in order to shed light on the availability and effect of social support on PTSD in these children who were exposed to PEV.

School support is further made whole by peer support. There is general evidence of the beneficial role of peer acceptance, the ability to make and maintain friendships, and participation in social networks in contributing to children's optimal development and well-being (Gifford-Smith and Brownell, 2003). Longitudinal findings confirm that positive peer relations promote good social-behavioral adjustment (Brendgen, Vitaro, Bukowski, Doyle and Markiewicz, 2001), sense of emotional safety and high self esteem (Sherman, Lansford and Volling, 2006) especially during adversity. It has been noted that the optimal source of social support may depend on the developmental stage of the person who is receiving the support. For example, parental support has been indicated to be more valuable in early adolescence than it is in late adolescence (Stice, Ragan and Randall, 2004). In a sample of childhood sexual abuse survivors, a combination of self-esteem support (the individual perceives that he or she is valued by others) and appraisal support (the individual perceives that he or she is capable of getting advice when coping with difficulties) was most useful in preventing the development of PTSD (Hyman, Gold and Cott, 2003). In this study social support that parents offered to children and its correlation to PTSD will be studied.

In conclusion, social support is one of the most essential external variables affecting a child's ability to display resilience. In fact, in a recent meta-analysis borrowed from the adult literature, social support was found to be a moderate predictor of post traumatic growth (Prati and Piertrantoni, 2009). The authors attributed these findings with the fact that social support promoted effective coping strategies, which in turn promotes positive outcomes. The objectives of the study were to (i) Determine the presence of PTSD in children exposed to post election violence, (ii) Determine the moderating effect of the social support availed to children exposed to post election violence trauma. (iii) Establish the difference in management of PTSD among children (with or without social support) exposed to post election violence in Eldoret Sub County Public Primary Schools.

MATERIALS AND METHODS

This study applied an *ex post facto* (correlational) research design. The sample of the study comprised of 192 class seven children in selected Public Primary Schools in Eldoret Sub-County, Uasin Gishu County, who were exposed to Post Election Violence and 32 teachers from the same schools. They were drawn from 8 schools in the categories of Rural, Urban, Peri-urban and Slum as provided by the Sub-County. Data was collected by use of an Impact of Event Scale-R for assessment of PTSD and social support scale for screening perceived and actual social support.

RESULTS AND DISCUSSION

Presence of PTSD in children exposed to post election violence

The first objective sought to determine the presence of PTSD in children exposed to post election violence in Eldoret Sub-County Public Primary Schools. The impact of event scale

revised (IES-R) was used to measure the presence of PTSD symptoms mainly avoidance, intrusion/re-experiencing and hyper arousal. Examples of items for each symptom cluster include, intrusion/re-experiencing: "having bad dreams or nightmares", avoidance/ numbing: "trying to avoid activities, people or places that remind the individual of the traumatic event"; and hyper-arousal; "having trouble falling or staying asleep". Responses were recorded on a 4-point likert type scale, ranging from 0 (not at all), 1 (rarely), 2 (sometimes)), to 3 (often). This study adopted a cut-off of 33 consistent with other recommendations. For example, Weiss (2007) recommends a total IES-R score of 33 or over as a likely presence of PTSD. In this study, consistent with Weiss (2007), an IES-R score of 33 signified the likely presence of PTSD. Subsequently both the mean score in each group, i.e., intrusion, avoidance and hyper-arousal symptoms along with the standard deviation (SD), as well as the sum of the scores were considered while analyzing the data.
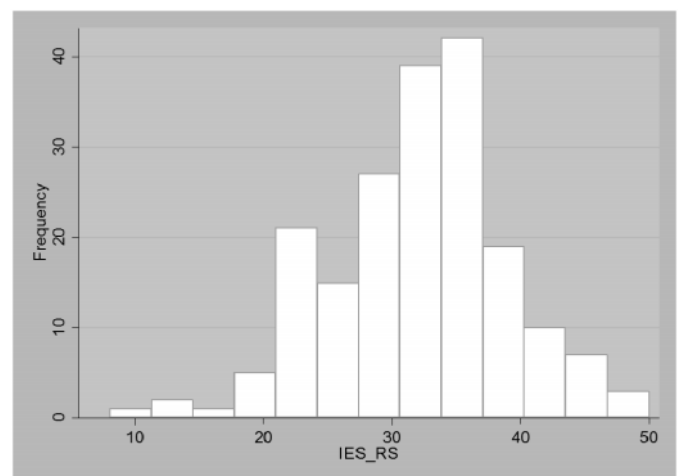

Figure 1. Distribution of PTSD Scores (IES-R)
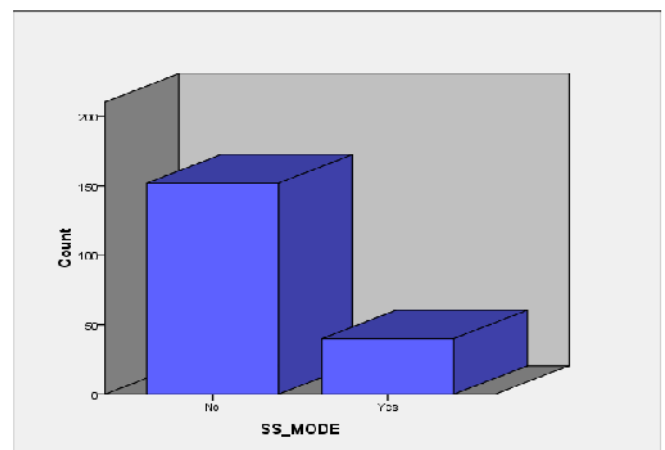

Figure 2. Distribution of Social Support

Figure 1 presents a histogram showing the distribution of overall PTSD scores (avoidance, intrusion/re-experiencing and hyper-arousal symptoms) among the respondents. The findings indicate that majority of the respondents lie between an IES R score of 29.4 and 44.
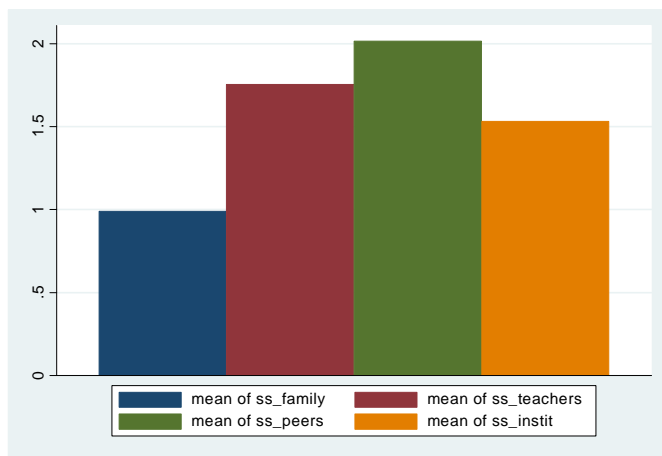
Figure 3. Distribution of sources of social support

Table 1. Distribution of PTSD Scores across Social Support

	N	Mean (PTSD Score)	Standard Deviation
Without Social support	152 (79.2%)	37.32	1.043
With Social support	40 (21.8%)	31.03	0.90871

Table. 2 Independent Samples test for IES R-scores with Social Support as Grouping Variable

	t-test for Equality of Means	
	t-stat	Sig. (2-tailed)
IES R-SCORE	5.358	.000

This is an average of 36.7 total score of PTSD. Results from this study show that exposure to post election violence was positively related to PTSD. These findings were not a surprise as numerous precedent studies have documented associations between exposure to violence and post traumatic stress disorder symptoms including re experiencing the trauma (e.g. nightmares and flashbacks), avoidance of stimuli associated with the trauma, and increased arousal (Berman, Silverman and Kurtines, 2000; Turner, Finkelhor and Ormrod, 2006; Zahradnik *et al*., 2010). Children and adolescents often exhibit higher levels of psychological distress to disasters than adults despite seeming to perform normally on a superficial level (Maeda, Kato and Maruoka, 2009; Norris, Friedman and Watson, 2002). On the same, studies have revealed that violence exposure was associated with major depressive episode, posttraumatic stress disorder, and/or substance abuse and dependence (Kilpatrick *et al*, 2000; Kilpatrick *et al.,* 2003).

The moderating effect of social support availed to children exposed to post election violence

The second objective sought to determine the moderating effect of the social support availed to children exposed to post election violence trauma in Eldoret Sub-County Public Primary Schools. Social support was examined using a social support section of the questionnaire that encompassed a 16 item scale. Items in the questionnaire sought to establish availability of social support from significant others and its influence in the management of PTSD. It is good to note that social support could be perceived or actual. The items were divided into 4

sections;1-4 related to family sources of social support, items 2-8 related to teachers as a source of social support, items 9-12 related to peers and lastly from 13–16 related to other institutions that offered support. First it was necessary to assess availability of the social support. Results in figure 2 indicate that 79 % (150) of the respondents reported not receiving adequate social support while 21% (40) of the respondents received adequate social support. These results suggest that social support was available to children exposed to post election violence but it was inadequate.

Second the moderating effect of social support in management of PTSD among children exposed to post election violence was examined. The results in figure 3 show that the main sources of social support during PEV came from peers, teachers, other institutions and family, in that order. A response of yes showed acknowledgment of support from the particular source. Majority of the respondents sought and/or received social support from peers and teachers compared to family and social institutions. Further findings show that social support (family, teachers, peers and other institutions) was available for the children during post election violence and had an effect on PTSD. These findings conform to findings of preceding literature. The effects of social support are double-sided in the sense that social support holds great potential for buffering against psychological distress and alleviating trauma-related strain, whereas inadequate or lack of support may contribute to the maintenance or aggravation of psychopathological symptoms (Ehntholt, 2006, Charuvastra, 2009). An earlier meta-analysis on PTSD risk factors in adult populations, found that individuals, who gave appraisals of either absent or low levels of social support in the aftermath of trauma exposure, displayed higher rates of current PTSD and increased PTSD symptom severity (Ozer, 2003)

Table 1 presents the distribution of PTSD scores across social support. Results in table 1 show that majority of the respondents (79.2%) did not receive adequate social support and had a mean score of 37.32 and a standard deviation of 1.043. The score was statistically higher than the PTSD mean score for the 40% of the respondents who received adequate social support at 31.3 and a standard deviation of 0.91. Based on the above findings, it is clear that there was a statistically significant relationship between social support and management of PTSD among children exposed to post election violence in Eldoret Sub-County Primary Schools. The conclusion therefore is that social support served as a buffer or protective means of dealing with PTSD by using active coping mechanisms when dealing with traumatic events. The results in this study conform to previous studies. Many studies indicate that children with a good relationship with parents and peer report less symptoms of post traumatic stress disorder on exposure to violence (Salami, 2010).

Specifically, the family is the best resource available for children whenever there is a problem. For example, O'Donnell, Schwab-Stone, and Muyeed, (2002) found that both parents and school support were significantly positively associated with resilience in children who had been exposed to community violence. This is the reason why one of the most well studied protective factors for children exposed to stress

and trauma is effective parenting (Howell, Graham-Bermann, Czyz and Lilly, 2010). Warm family relationships and positive home environments were associated with both emotional and behavioural resilience (Bowes *et al.,* 2010). Zakeri, Jowkar, and Razmjoee, (2010) also investigated the relationship between the parenting styles and resilience. The results of their study showed that there was a positive and significant association between warm parenting style and resilience. Siblings on the other hand can have an essential protective role in children's adjustment over time, by pleasing the social needs of children and providing an additional source of support (Bowes, Maughan, Caspi, Moffitt, and Arseneault, 2010). It can therefore be concluded that the family plays an important role in building children's resilience and in the prevention of risky behavior (Veselska *et al.*, 2008). Another important source of support can be school. School-related factors (positive school environment, positive school attitude, good relationships with teachers and peer, after school activities) become relevant for school-aged children (Eriksson, Cater, Andershed and Andershed, 2010). Children in disadvantaged families are more likely to demonstrate resilient characteristics if they had good relationships with peer and if they attend schools that have good academic record and caring teachers. In some cases, school environment can compensate a dysfunctional family environment. In the absence of supportive conditions in the home environment, the school is considered the next resource that should be available for children in need (Mampane and Bouwer, 2011).

There are studies that have noted the importance of school integration as a protective factor for children (Panter-Brick, Goodman, Tol and Eggerman, 2011). Brackenreed (2010) agrees that schools should offer opportunities for children to establish good relationships with adults and should ensure that they do not make the situation worse by using faulty practices. Other studies have also shown the important role that teachers can play in resilient children's lives (Werner and Smith, 1992; Daniel, Vincent, Farrall**,** Arney and Lewig, 2009). Teachers play an important role by supporting caring relationships, ensuring that school is a positive experience, and promoting the self-esteem of children hence increasing their resilience. Positive peer relationships on the other hand are significant protective factors for children. A number of studies indicate that positive peer relationships may contribute to resilience (Davis, Martin, Kosky and O'Hanlon, 2000). In a study of African American children exposed to community violence, family support was found to be important only in reducing anxiety, teacher support was linked only to social competence in the classroom, while peer support had an effect on both anxiety and classroom social competence (Hill and Madhere, 1996). Also, Waaktaar, Christie, Borge, and Torgersen (2004) reported that young people with stressful background experiences demonstrated resilience when they had positive peer relations, self-efficacy, creativity, and coherence. It was also necessary to compare the PTSD scores for children with adequate social support and those without social support.

Difference in management of ptsd among children (with or without social support) exposed to post election violence

The third objective sought to establish the difference in management of PTSD among children (with or without social

support) exposed to post election violence. Social support and management of PTSD was evaluated by testing whether the mean of PTSD scores for respondents who received adequate social support was significantly greater than the mean of respondents who did not receive adequate social support from family, peers, teachers and other social institutions. Table 2 presents results of an independent sample t-statistics that was used at 5 percent level of significance. The results shows that the t-statistics are 5.358 and corresponding p-value of 0.000. Since the estimated p-values are less than the critical p-value at 5% significance level, the assumption of equality of means is rejected meaning that the average PTSD score for socially supported respondents was significantly less than that of respondents who did not receive social support. These results led to a conclusion that social support served as a psychological buffer for the children exposed to violence hence increasing their resilience. Consistent with the findings of this study, many studies indicate that social support, a good relationship with parents and peers are all associated with wellbeing in children and adolescents (Kliewer, Murrelle, Mejia, Torres and Angold, 2001). With adequate social support, fewer symptoms of post traumatic stress disorder in children exposed to violence have been reported (Salami, 2010).

Kuterovac-Jagodic (2003) found that poor social support was a main predictor of posttraumatic stress symptoms for younger children, particularly those symptoms that persisted months and years after the exposure to trauma. The ability of the caregiver to help the child make meaning of negative events is critical in the child's process of adjustment. Particularly for children, the process of interpreting the negative experiences is characterized by a dynamic interaction whereby the child looks to the reaction of immediate caregivers as a means of interpreting the threat (Ainsworth, Blehar, Waters, & Wall, 1978). To successfully help children in need, it is important to have an empathetic attitude towards the child, to recognize his emotions and to help children talk about their feelings (Pretis and Dimova, 2008). This is especially so with teachers whose social support was found to have played an important role in this study. Cove, Eiseman and Popkin, (2005), put it well that sources of social support and dimensions of the child's environment (parental warmth, presence of non-parental caretakers, informal sources of emotional support, peer relationships, rules in the household, shared values, access to services) are external protective factors that promote resilience. Parents, families, schools, communities, and nonfamily adults are essential elements for building resilience in children and adolescents (Brooks, 2006).

Conclusions and Recommendations

From the findings, it can be concluded that there was a positive correlation between lack of adequate social support and development of PTSD among children in the region. Adequate social support from peers, teachers, parents, and other social institutions played a significant role in the management of PTSD amongst the children exposed to post election violence. This study recommends an introduction of social support programs and networks. Social support programs should be enforced in public primary schools for children as protective

shields in cases of traumatic experiences. Above all, the study recommends a multi-level prevention approach consisting of measures to prevent exposure to violence from happening, activities focused on early identification and intervention. Second, reducing the risk of adverse mental outcomes and responding after the adverse event to lessen the damage is recommended for preventing children and adolescents' exposure to violence.

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