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## **Post-Traumatic Stress Disorder among Children survivors of 2007/2008 Post-Election Violence in Nakuru County, Kenya**

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### **Abstract**

*Recent advances in psychological research indicate that traumatic events can have effects on the victims, perpetrators and those who witness such events. This is on the premise that no one who experiences a disaster is untouched by it. In the 2007/2008 post-election violence in Kenya, children were exposed to and witnessed various traumatic events. Some may have developed behavioral and anxiety disorders. The study sought to assess levels Posttraumatic Stress Disorder severity among the children. The study was guided by Cognitive Behavioral Theory. The study target population was 77,768 children. A sample size of 460 respondents was derived from 10 divisions in Nakuru County which were hard hit by post-election violence. The sample comprised of 400 children who included primary and secondary survivors of the violence and 20 deputy head teachers in the schools sampled and 40 parents who took part in focused group discussions. Expost facto comparative research design was utilized and multi-stage sampling approach was*

*used to derive the sample. Data for the study was obtained using questionnaires, interview schedules and focused group discussions. A pilot study was conducted in Subukia division involving 80 children, four deputy head teachers and two focused group discussions. The hypotheses were tested at significance level of 0.05. The study found high PTSD levels children survivors of post- election violence. This study recommended psychological debriefing and trauma counseling as interventions needed for the survivors.*

**Key words:** *Post-Traumatic Stress disorder traumatic experiences, post-election violence, secondary survivors, primary survivors*

## **Introduction**

Traumatic events such as being involved or witnessing a serious road accident, military combat, violent personal assault, terrorist attack, community violence, being diagnosed with a life-threatening illness and even hearing about an unexpected injury or violent death of a family member or close friend can cause both short term and long term stress reactions. Many people who experience long term stress reactions continue to function at optimal levels but those who are unable to function at normal range and have difficulties in one or more areas may have Post Traumatic Stress Disorder [PTSD] (Leach, 1994). The characteristic symptoms resulting from the exposure to the extreme trauma include persistent re-experiencing of the traumatic event, intrusive recollections of the event and increased arousal. The official recognition of PTSD came about only in 1980s when it was recognized as an adult disorder in Diagnostic Statistical Manual – III-R (1987), previously it was described as bereavement syndrome, camp psychosis and traumatic war neurosis.

However, in 1987, DSM-III-R added notes on variation of symptom presentation in children after studies indicated that traumatic events affect children in a much more profound way than adults since they have not yet developed personality or psychological structures to deal with horrors and trauma. Moreover, childhood traumatization is greater than that of adult because it disturbs the child's developmental process, affects behavior and long term potential (Green, 1992). Children who have been traumatized see the world as a frightening and dangerous place and if the trauma is not resolved, this fundamental sense of fear and helplessness may carry over into adulthood setting stage for further trauma (Levine, 1997).

Nevertheless, children and adolescents vary in the nature of their responses to traumatic experiences. The reactions may be influenced by their developmental level, ethnicity or cultural factors, previous trauma exposure, available resources, and pre-existing child and family problems (Garrison, 1995). However, nearly all children and adolescents express some kind of distress or behavior change in the acute phase of recovery from a traumatic event (Sue, 1990). Some of the reactions include development of new fears, separation anxiety, sleep disturbance, sadness, and loss of interest in normal activities, anger, and decline in school work, irritability and somatic complaints.

Research indicates that in community samples more than two thirds of children report experiencing a traumatic event by the age of 16 (Gist, 1989). A comparative study in urban African schools in Cape Town and Nairobi revealed that more than 80% of secondary schools children reported exposure to severe trauma either as victims or witnesses (Seedat, Nyamai, Njenga, 2004). Clark, (2001) gave estimated rates of witnessing community violence range from 39% - 85%.

A study by Thabet (2000) in Gaza strip among children aged between 6 – 16 years revealed that 59% of the children were diagnosed with PTSD while there was no significant difference between boys and girls in reported anxiety, PTSD and depression. As far as age was concerned, there was no significant difference in reported anxiety, PTSD and depression. Children also reported to have witnessed traumatic events which included, watching mutilated bodies on TV, hearing shootings and bombardments. It also included hearing sonic sounds of Jet fighters, witnessing shooting of relative and being threatened by shooting (Thabet, 2008). Nevertheless in Rwanda, a study carried out by Palmer (1997) after the most brutal genocide the world has ever witnessed indicates that symptoms of PTSD are widely spread around children and adolescents. About 54–62% of the children interviewed exhibit probable PTSD.

Nonetheless, in 2007, Kenya's general election was accompanied by violent conflict dubbed 'land' and 'ethnic' clashes. These conflicts mostly affected parts of Coast, Western, Nyanza and Rift Valley regions and Nairobi slums. In Nakuru County in the Rift Valley region, tensions started building up before elections and the announcement of the results for presidential election was preceded by a lot of anxiety and eventually the breakup of the violence. During the post-election violence, many atrocities were committed and human rights violated (Centre for Rights Education and Awareness, 2008). The violence took the form of ethnically targeted killings, forced eviction, maiming, burning of houses and Business premises. Traumatic and forced circumcision, penile amputations were some of the worst forms of violence inflicted on male victims from certain communities (Waki report, 2008).

According to ministry of education report (2008), education sector was not spared, schools were not spared, some schools were burnt, classrooms and offices destroyed; school property such as furniture and teaching materials were stolen. Many children came back to school after staying home for long time while others left due to unfriendly environment (Daraja Civic Initiative Forum Report, 2008). During the violence some schools were completely burnt down. In addition,

64,697 primary school pupils in the country were displaced; 32,847 boys and 30,652 girls from the secondary schools, a total of 9294 children have been displaced; 4682 boys and 2979 girls.

Nakuru County had experienced ethnic and political conflicts in 1992 and 1997 prior to general elections held in those years. However, in 2007 violence erupted after the announcement of results though tension had started to build up before the elections. The post -election violence of 2007/2008 adversely affected Nakuru County, there was losses in human life, property and livelihoods. Injuries were also sustained. Further, thousands of people were displaced. According to Waki Report (2008), 1564 houses were burnt and 263 lives were lost during the initial and retaliatory attacks that took place in Nakuru County. Recent advances in psychological research indicate that traumatic events can have effects on the victims, perpetrators and those who witness them.

In addition, studies have indicated that traumatic events affect children in a much more profound way than adults since they have not yet developed personality or psychological structures to deal with horrors and trauma. This raises a concern; how much did the children witness? How did it impact on their mental health? Did it have a potential of causing PTSD?

PTSD impacts negatively on children who may have experienced trauma. They may have learning difficulties; interfere with their ability to communicate verbally, regulations of emotions, concentration and problem solving skills (Baker, 1990). Survivors of violence may adopt behavior coping mechanisms that affect their ability to develop constructive relationships with peers and adults. Some behaviors may be either directed inward against self, which may include alcohol and drug abuse, suicide, eating disorders and feelings of sadness and hopelessness. Other behaviors may also be directed towards others, for example, repetitive conflicts, getting into trouble with the law and involvement in school violence (Zivcik, 1993).

The negative psychological impacts of violence among children in childhood may persist overtime and sometimes into adulthood if not managed well when they occur. These effects may include depression, anxiety, sexual dysfunctions, substance abuse and PTSD. It is estimated that approximately one third of children and adolescents victims of violence experience PTSD as adult survivors (Saylor, 1993). It is in the view of this that the researcher set out to investigate the possibility of development of PTSD among children survivors of post –election violence of 2007/2008 in Nakuru County.

## Objectives

To assess the level of PTSD severity of the primary and secondary survivors in areas affected by post- election violence of 2007/2008 in Nakuru county.

## Hypothesis

H<sub>02</sub>: There is no significant difference between primary and secondary survivors in levels of PTSD severity in areas affected by post- election violence in Nakuru County.

## Research methodology

The study employed ex-post factor and correlational research designs. The study was carried out in Nakuru County in the Rift Valley region of Kenya. The county has an area size of 74,905km<sup>2</sup> and administratively divided into four sub counties namely: Nakuru North, Nakuru central, Molo and Naivasha. The target population for study was 77,768 children. The study used a sample of 400 children survivors of the post- election violence, 20 deputy head teachers and 40 parents from 20 schools. To get the sample, multi stage sampling strategies were adopted. At the first stage, purposive sampling was used to get the 10 divisions that were hardest hit by the post-election violence of 2007/2008 which included; Naivasha, Keringet, Njoro, Molo, Olenguruone, Mausummit, Kuresoi, Mau Narok, Rongai and Mauche. In the second stage, day schools were purposively selected. In the third stage, simple random sampling was used to get the specific schools. In the fourth stage, purposive sampling was used to get the specific children who are residents of the sampled divisions during the Post-election violence. In the final stage, simple random sampling was used to get the final sample.

The deputy head teachers were selected from the 20 schools selected in the second stage. The parents were picked from two schools randomly selected in areas which were hardest hit by the violence. A questionnaire was used to collect data from the children survivors while the interview schedule was used for the deputy head teachers and focused group discussion guidelines for the parents. To establish the reliability of the research instruments, a pilot study was carried out in Subukia division which possessed same characteristics as the divisions sampled. It involved 80 children, four deputy head teachers and two focused group discussions. Split - half method was used to analyze data from the pilot study and yielded a reliability coefficient of 0.8. The results from the pilot study revealed the research instruments were reliable and possessed both content and face validity. Descriptive analysis was

used to establish the mean and standard deviation of survivors’ scores on the Impact of Event Scale while independent t-test was used to test the hypotheses. Qualitative results were based on information obtained from 20 deputy head teachers in 20 schools and 40 parents who participated in focused group discussions.

**Results and Discussion**

To assess the level of PTSD severity, the Impact of Event Scale was utilized. It had 22 items adopted from Weiss (2007) Impact of Event Scale. The scale considered the three categories of PTSD symptoms namely; re-experiencing, avoidance and hyper arousal. The Impact of Events Scale tool was used to determine the level of PTSD severity among the children. The tool is constructed on a 5-point likert scale with scores ranging from Zero (0) to four (4) .The scoring range is from 0 – 88. A score of 0 -23 indicates absence of PTSD while a score of 24 – 32 is of clinical concern with partial PTSD. A score between 33 and above means confirmed existence of PTSD.

Descriptive analysis found mean score of all sampled children to be (38.4) and a standard deviation of (18.3) on the Impact of Event Scale as indicated on table 1. This was interpreted to mean that on the overall, the scores of all children who participated in the study were high and on the average and majority of the children had confirmed PTSD. Presence of PTSD symptoms among the children studied was supported by results from focused group discussions and interviews from deputy head teachers. Results from focused group discussions further pointed out that parents had noted change in their children’s behavior. They identified excessive irritability, sleep disturbances, immature behavior and fear of being alone among children who had been exposed to post-election violence.

*Table 1: Impact Event Scale Scores of Students*

Category	N	Minimum	Maximum	Mean	Std deviation
Primary survivor	197	1	83	43.3	17.7
Secondary survivors	197	0	77	33.5	17.6
overall	394	0	83	38.4	18.3

*Source: Field data*

This study through focused group discussions also reported that children had developed fear of going beyond the immediate environment. Some members reported that there are certain paths children fear using especially those that used by gangs and prefer using alternative longer routes instead. Avoidance of any conversation about post- election violence is common among the children. In addition deputy head teachers reported learning difficulties among children, higher levels of aggression, truancy, poor concentration and revenge seeking behaviors among children involved in the post -election violence.

In conclusion, reports from the children, observations by the parents in the focused group discussions and report by deputy head teachers support the presence of PTSD symptoms in the children sampled. This finding supports findings of other studies on PTSD among children survivors of community violence. A study by Yule (1999) among children after military operation in Iraq found that PTSD was reported in 87% of the children sampled. A similar study by Allwood (2002) to examine relationship between violent and non- violent war experiences found 41% of the children sampled had clinically significant PTSD symptoms. In a study in Southern Darfur among displaced children reported 75% of the children studied met the criteria of PTSD. Thabet and Vostanis (2004) further agree with the findings of the current study as reported in their study among Palestinian children during war conflict reported high levels of PTSD in the sampled children. However, although the highest score on Impact of Event Scale was 83 out of 88 which is the highest score, the lowest score was zero (0) as indicated on table1, meaning absence of PTSD symptoms in the survivor. This implies that after witnessing the traumatic events there are some children who did not exhibit PTSD symptoms. This finding corroborates the study by Foy (1994), Clark (2001), and Norris (2001) who found that 15-30 percent of Vietnam War prisoners endured long term deprivation and torture without developing PTSD. This therefore means that not everyone who experiences traumatic event develops PTSD.

Further analysis was performed to determine the scores of primary survivors and secondary survivors separately. The secondary survivors had lower mean score on the Impact of Event Scale. The mean score of the primary survivors was (43.3), with a standard deviation of (17.7), while that of the secondary survivors was (33.5) and a standard deviation of (17.6) as shown on table 1. An independent t-test revealed statistically significant difference between the mean of primary and secondary survivor on the Impact of Event Scale with primary survivors with higher scores. The primary survivors had ( $m=43.3$ ,  $s= 17.7$ ),  $t(392) = 5.54$ ,  $P = 0.000$ ,  $a =$

.05 And that of the secondary survivors was ( $m = 33.5$ ,  $s = 17.6$ ),  $t(392) = 5.54$ ,  $P = 0.000$ ,  $\alpha =$

.05, as shown on the table 2. Therefore, the null hypothesis that states that there is no significant difference in level of PTSD severity between the primary and secondary survivors is rejected and the alternative is adopted that states that there is significant difference between primary and secondary survivors in level of PTSD severity.

This finding collaborate those of other studies. Phebe and Tucker (2007) in a comparative study among children survivors of Oklahoma City bombing found that those children who reported death of a friend or neighbor had more PTSD symptoms than those who watched the events on television coverage. Pfefferbaum (2001) in a study to establish the prevalence of PTSD reactions in New York City following the September 11, 2001, terrorist attack found that post-traumatic stress was significantly prevalent in the primary survivor group than in the comparison group.

**Table 2: Relationship between Primary and Secondary Level of PTSD Severity Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
<b>Impact of event scores</b>	Equal variances assumed	.000	.986	5.540	392	.000	9.843	1.777	6.349	13.336
	Equal variances not assumed			5.540	391.996	.000	9.843	1.777	6.349	13.336

*Source: Field data*

Further analysis was carried out to determine the level of PTSD among the children based on the following scale; A score between 0-23 means no PTSD; 24-32 means partial PTSD and a score of 33 and above means confirmed PTSD. The study found that majority of the survivors had confirmed PTSD (251) which constitutes (64%) of all the respondents as indicated on table 3. This therefore means that there was presence of PTSD in both the primary and secondary survivors. This finding is consistent with findings of a study by Seedat and Njenga (2004) among adolescents in urban African schools which found that experiencing a traumatic event either as a victim or witness produces traumatic effects. The study found that 69 percent of children in Nairobi and 59 percent of children in Cape Town who had witnessed or experienced sexual related trauma exhibited high rates of PTSD.

However, some differences were found between the primary and the secondary survivors. The primary survivors had a higher number of those confirmed than secondary survivors. However there were also some children who had minimal PTSD symptoms among the primary survivors as well as the secondary survivors.

This finding collaborate those of other studies. Phebe and Tucker (2007) in a comparative study among children survivors of Oklahoma City bombing found that those children who reported death of a friend or neighbor had more PTSD symptoms than those who watched the events on television coverage. Pfefferbaum (2001) in a study to establish the prevalence of PTSD reactions in New York City following the September 11, 2001, terrorist attack found that post-traumatic stress was significantly prevalent in the primary survivor group than in the comparison group. On the overall, the study found that majority of the children had confirmed PTSD. This was further confirmed by reports from parents who participated in focused group discussions supported the fact that there was change in their children's behavior after post-election violence. The identified changes in sleeping habits, relationships and some had regressed to immature behavior. Reports from deputy head teachers interviewed reported learning difficulties poor concentration and truancy among children affected by post -election violence. All these reports suggest the presence of PTSD among the children sampled.

The study found a significant difference between primary and secondary survivors on the Impact of Event Scale (level of PTSD) with primary survivors recording higher scores as indicated on table 2.

### **Conclusion**

PTSD was confirmed in 76% of the primary survivors and 51% of the secondary survivors as shown on table 3. On the overall, 64% of the respondents had confirmed PTSD symptoms as indicated on table 3. Further, presence of PTSD among the children was supported by results from focused group discussions and interviews from deputy head teachers. Parents reported change in some aspects of their children's behavior that include; academic performance, eating habits and sleeping habits. In addition, reports from deputy head teachers reported learning difficulties, truancy and high levels of aggression among the survivors which indicate presence of PTSD symptoms.

Implication of this is that studies have established a correlation between childhood PTSD and psychological disorders in adulthood. If childhood PTSD is not addressed, the disorder may manifest in substance abuse, separation anxiety, attention deficit disorder and sexual dysfunctions in adulthood. It is therefore

important to address trauma issues among the children survivors of post-election violence because of the significant far-reaching physical, social, cognitive and behavioral problems associated with childhood PTSD.

In addition, the study found a significant difference between the primary and secondary survivors in levels of PTSD severity with higher levels among primary survivors. The study found 51% of the secondary survivors had confirmed PTSD. Secondary survivors did not have direct exposure to the violence but watched the events unfolding. This therefore means people who witness traumatic events involving others suffer psychological consequences. Therefore, psychological interventions should be extended to victims of the traumatic events (primary survivors) as well as those who observe the events occur (Secondary survivors).

This study recommends that an eclectic approach to counseling be initiated among children affected by post-election violence. They include psychological debriefing and trauma counseling. Trauma counseling should be conducted with the aim of restoring safety, enhancing control and reducing fear and anxiety. This may be accomplished through identifying the causes of anxiety, accommodating the effects and providing information.

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